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GLOBAL HEALTH: SCIENCE AND PRACTICE

2019 | Volume 7 | Supplement 2

www.ghspjournal.org



Saving Women's Lives Through Emergency Obstetric Care and Voluntary Family Planning

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Global Health: Science and Practice

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Global Health: Science and Practice (ISSN: 2169-575X) is a no-fee, open-access, peer-reviewed journal published online at www.ghspjournal.org. It is published quarterly by the Johns Hopkins Center for Communication Programs, 111 Market Place, Suite 310, Baltimore, MD 21202. The journal is made possible by the support of the American People through the United States Agency for International Development (USAID). The Knowledge for Health (K4Health) Project is supported by USAID's Office of Population and Reproductive Health, Bureau for Global Health, under Cooperative Agreement #AID-OAA-A-13-00068 with the Johns Hopkins University. GHSP is editorially independent and does not necessarily represent the views or positions of USAID, the United States Government, or the Johns Hopkins University. For further information, please contact the editors at editorialoffice@ghspjournal.org.

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Cover caption: A midwife shows an implant to clients during a family planning education session at a health facility in the Democratic Republic of the Congo. © 2017 Susan Warner/Save the Children.

This supplement was funded through the USAID Postabortion Care Family Planning (PAC-FP) Project.

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Douglas Huber

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Catherine Packer, Allison P. Pack, Donna R. McCarraher

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Benjamin Stephens, Isihaka Jossey Mwandalima, Amani Samma, Jean Lyatuu, Kathryn Mimno, Joseph Komwihangiro

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Anne Pfitzer, Yolande Hyjazi, Bethany Arnold, Jacqueline Aribot, Reeti D. Hobson, Tsigue G. Pleah, Shani Turke, Benita O'Colmain, Sharon Arscott-Mills

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Julianne Deitch, Jean Pierre Amisi, Stephanie Martinez, Janet Meyers, Jean-Baptiste Muselemu, Jean Jose Nzau, Erin Wheeler, Sara E. Casey

Glob Health Sci Pract. 2019;7(suppl 2):S285–S298
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Colin Baynes, Erick Yegon, Grace Lusiola, Rehema Kahando, Esther Ngadaya, Justin Kahwa

Glob Health Sci Pract. 2019;7(suppl 2):S299–S314
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Erick Yegon, Japheth Ominde, Colin Baynes, Esther Ngadaya, Rehema Kahando, Justin Kahwa, Grace Lusiola

Glob Health Sci Pract. 2019;7(suppl 2):S315–S326
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Given the high burden and cost of postabortion care (PAC) in Tanzania, health policy should strengthen voluntary family planning programs and the availability of a variety of contraceptive methods to PAC clients. A particular focus should be placed on decentralizing PAC to lower-level facilities, including health centers and dispensaries, which can provide safe, accessible, and appropriate PAC at the lowest cost including surgical or medical options.

Colin Baynes, Erick Yegon, Godfather Kimaro, Grace Lusiola, Justin Kahwa

Glob Health Sci Pract. 2019;7(suppl 2):S327–S341
<https://doi.org/10.9745/GHSP-D-19-00035>

FIELD ACTION REPORTS

Exploring Barriers: How to Overcome Roadblocks Impeding the Provision of Postabortion Care to Young People in Togo

Before providers were trained in offering youth-friendly postabortion care (PAC), including provision of voluntary contraceptive methods, no youth PAC client chose a modern method before leaving the facility. After training, over a 6-month period 41% of youth PAC clients chose a modern method, most commonly oral contraceptive pills followed by implants and injectables.

Stembile Mugore

Glob Health Sci Pract. 2019;7(suppl 2):S342–S349
<https://doi.org/10.9745/GHSP-D-18-00437>

Postabortion Care and the Voluntary Family Planning Component: Expanding Contraceptive Choices and Service Options

Douglas Huber^a

Universal access to voluntary postabortion family planning is a critical and compelling component of postabortion care. Such access should be joined with postpartum family planning services in national programs, health information systems, and training programs. The same providers and facilities deliver both services, and integration could yield cost efficiencies and increased coverage for women receiving postabortion care.

■ POSTABORTION FAMILY PLANNING WITHIN POSTABORTION CARE: A COMPELLING MANDATE

Worldwide, 1 in 4 pregnancies ends by induced abortion, and almost half of the 56 million abortions per year are unsafe.¹ For many women, the lack of voluntary postabortion family planning will soon lead to another induced abortion, given that fertility often returns in 2 to 3 weeks after induced abortion and miscarriage.^{2–4} Postabortion family planning counseling and services must be accessible to all women who present for postabortion care (PAC) as their right and as a moral and professional obligation of providers and programs. Anything less is negligence.

Strong support for universal access comes from international health associations of obstetricians/gynecologists, midwives, and nurses who are committed to making voluntary postabortion family planning a standard of practice in PAC and to working across their professions to optimize services²:

If the woman we treat for postabortion complications is there because she could not get contraception, we have failed her. If she leaves without family planning, we have failed her twice.

Collectively these associations represent more than 10 million doctors, midwives, and nurses providing health care for women in more than 110 countries. Joining them are major donors and policy makers who support health professionals in providing universal access to voluntary postabortion family planning as part of comprehensive maternal health services to achieve

the Millennium Development Goals and Family Planning 2020 (FP2020) objectives.⁵

■ POSTABORTION FAMILY PLANNING: WHAT WORKS?

The articles in this supplement demonstrate success with postabortion family planning as a component of PAC in a range of settings supported by multiple donors and governments. These articles describe successes in providing postabortion family planning in humanitarian crisis settings, offering postabortion family planning following misoprostol treatment, and expanding coverage of PAC by reducing barriers.^{6–9} Seeing the diverse range of organizations, countries, and stakeholders sustaining these PAC programs and generating these reports is encouraging.

The authors describe progress in providing a broad range of family planning methods, including long-acting reversible contraceptives (LARCs); highlight new technologies for communication; document the perspectives of patients and providers, including their views on what is still needed to optimize PAC services; and identify cost-effective strategies for governments, programs, and donors.^{10–14}

The authors also document that misunderstanding and misconceptions about contraceptives remain a major stumbling block in providing the family planning component of PAC to clients; that training in counseling and values clarification is much needed; and that engaging men to support family planning for their partners is important and can be challenging.^{6–10,12,14–16}

Long-Acting Reversible Contraceptives

LARCs—contraceptive implants and intrauterine devices—represent a common postabortion family planning choice among women served in the PAC programs

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reported in this supplement.^{6–9,12} This finding is understandable, given that implant use is rising rapidly across many sub-Saharan African countries and sociodemographic sectors. Women in challenging life circumstances (e.g., humanitarian crisis settings) as well as youth are choosing highly effective methods according to their needs to determine the timing and spacing of subsequent pregnancies.^{6–9,12} Contributing to this expansion is increased commodity availability, trained and competent providers committed to broadening method choice, and recognition of the reproductive realities of women.¹⁷ As the provision of LARCs for postabortion family planning expands, it is essential that voluntarism and informed choice is emphasized and that clients have access to removal services so they may have their implant or intrauterine device removed when they choose. Permanent methods should also be available at a later date, depending on women's reproductive intentions and desires.

As part of PAC, written information about the woman's chosen contraceptive method is needed to reinforce counseling messages, to guide correct use, and to address common misconceptions about contraceptives. The woman also needs to have written information about when to seek care should a complication occur after PAC and where to obtain answers for any questions or concerns. Written materials also serve as job aids for busy health providers, helping them provide correct, credible messages to women as well as their partners and communities.

New and Emerging Strategic Alliances

A promising development is the strategic approach to integrate postpartum family planning with postabortion family planning, as included in the FP2020 initiative to advance postpartum/postabortion family planning as a global movement.^{13,18} The health and program rationales are sensible and can be synergistic, given that the same staff and facilities provide both postpartum and postabortion care. Training, supervision, supply systems, and information, education, and communication materials, as well as reporting and monitoring, should be strengthened in parallel for postpartum and postabortion family planning while recognizing differences where they exist. Integrating postpartum and postabortion family planning should be a priority for ministries of health, policy makers, training institutions, donors, and NGOs.

Engaging the faith community can advance PAC—and postabortion family planning as a core

component—drawing on the growing support for voluntary family planning by interfaith networks, faith-based organizations (FBOs), their health care facilities, and religious leaders.^{19–23} As stated by one multifaith network¹⁹:

We recognize the importance of access to information about and services to enable families to plan the timing and spacing of their pregnancies consistent with their faith for family wellbeing . . .

FBOs are major health service providers in many sub-Saharan African countries, where 85% to 90% of people identify religion as very important in their lives.^{19,20,23,24} Voluntary postabortion family planning to reduce unintended pregnancies and repeat abortions resonates well with faith communities. Faith leaders are influential and a number are now family planning champions.^{20,21,23} With accurate information, they help address contraceptive misconceptions and misunderstandings in their communities, an ongoing issue in postpartum and postabortion family planning provision. However, FBOs need technical and financial support for updated PAC training, contraceptive management, and monitoring systems.

Youth

Youth-friendly PAC services reported in this supplement document high levels of voluntary postabortion family planning that meets the needs of youth.^{7,8} Programs include competency-based provider training on contraceptive methods, values clarification to address bias and improve client-provider interactions, and ongoing provider mentoring. But such efforts can also be costly and labor intensive, a challenge for scaling up countrywide. This is another area in which joint postpartum/postabortion family planning programming may offer synergies in providing family planning access for youth after birth or abortion.

For most health providers, especially in sub-Saharan Africa, although their professional associations endorse postabortion family planning as a standard of practice in PAC, religion is important in their lives as well as those of their clients. Where tensions exist between providers' values and the health imperative of postabortion family planning for youth, engaging the faith community can facilitate dialogue and values clarification.

■ PLAN FOR LONG-TERM SUCCESS

The authors in this supplement highlight several components needed for sustainable postabortion family planning success, including links with

postpartum family planning. To be effective, national programs need to monitor voluntary post-abortion family planning counseling and provision in their national health management information systems.^{8,12,13} Performance monitoring includes documenting the numbers of PAC patients, those counseled, and the number and percentage of women receiving voluntary contraception by specific method.

Several elements of success stand out in these articles:

- Training providers in family planning counseling and updating their knowledge of contraceptive methods through competency-based training and ongoing mentoring. This need was noted by providers, patients, and program managers.^{7-9,14,15}
- Establishing a contraceptive logistics system to ensure a full range of contraceptive options at every site providing PAC.
- Recognizing cost as a major barrier for many women and recommending that PAC services, especially a wide range of contraceptive options, be available for free or at minimal cost.^{6,7,9,10,12,15,16}
- Decentralizing PAC services to lower-level facilities and expanding the scope of practice for midlevel providers, especially nurses and midwives, to include PAC.^{6,8,9,11,13-15}
- Discussing with women their reproductive intentions, rapid return of fertility, potential complications after treatment, and if a contraceptive is desired, essential information about the woman's chosen contraceptive method.^{6,8,10-14,16} To supplement counseling on these key points, health professionals call for providing women with user-friendly written information, which also provides a job aid for providers.²⁻⁵ Content is readily available from the World Health Organization's *Family Planning: A Global Handbook for Providers*, the accompanying wall chart, and "Facts for Family Planning," among others.^{25,26}

CONCLUSION

The articles in this supplement demonstrate how to provide quality PAC services and increase voluntary postabortion contraceptive use, including LARCs, in remote and challenging environments, in youth-friendly services, and in decentralized primary health care centers. Voluntary postabortion family planning initiatives should be unified with postpartum family planning as a global movement for post-pregnancy health care.

Postpartum/postabortion family planning expansion promises to be cost efficient and central to women's health—a compelling rationale for national health programs and no longer an isolated service.

Advocacy and support for these programs is expanding among health professional associations, communities, religious leaders, FBOs, donors, and international health organizations. Now is the time to make voluntary postabortion family planning universally accessible as an essential component PAC.

Acknowledgments: A special thanks to the authors in this supplement for their contributions and their exemplary commitment to the health and well-being of women and families in the Global South. The authors and I thank colleagues at EngenderHealth, USAID, and GHSP for their ongoing support and encouragement in bringing this supplement to life. A special thanks to Colin Baynes who was instrumental in developing this supplement.

Funding: Support was provided by EngenderHealth with funding from the United States Agency for International Development (USAID).

Disclaimer: The content of this article is the responsibility of the author and does not necessarily reflect the views of EngenderHealth, USAID, or the U.S. government.

Competing Interests: None declared.

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Cite this article as: Huber D. Postabortion care and the voluntary family planning component: expanding contraceptive choices and service options. *Glob Health Sci Pract.* 2019;7(suppl 2):S207-S210. <https://doi.org/10.9745/GHSP-D-19-00128>

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Healthy Timing and Spacing of Pregnancy: Reducing Mortality Among Women and Their Children

Ellen Starbird,^a Kathryn Crawford^b

Accessible, affordable, and high-quality postabortion care (PAC) can prevent maternal death and disability and provides an important opportunity to prevent future unintended pregnancies. This supplement offers learnings on PAC provision from the community of partners around the world, including service delivery and community engagement models, approaches to support facility-based providers, best practices in pre- and post-procedure counseling, and approaches to institutionalize PAC in public- and private-sector health systems.

Research from around the world shows that the length of the interval between a woman's birth and her next pregnancy directly relates to the risk of infant, child, and maternal mortality.¹⁻³ In summary, the shorter the birth-to-pregnancy interval, the higher the risk to women and their children. In addition, pregnancies that are too closely spaced or that occur among adolescents younger than 18 also carry with them a higher risk of preterm birth and low birth weight for infants, as well as maternal pregnancy- and birth-related complications, such as anemia and obstetric fistula.

Three evidence-based global recommendations for healthy timing and spacing of pregnancy can lead to significantly improved maternal and child health outcomes:

- Women should **delay their first pregnancy until at least age 18**.
- After a live birth, women should wait at least **24 months** before attempting the next pregnancy to reduce health risks for the mother and the baby.
- After a miscarriage or induced abortion, women should wait at least **6 months** before attempting the next pregnancy to reduce health risks for the mother and baby.

■ SYNERGIES BETWEEN SUPPORT FOR POSTABORTION FAMILY PLANNING AND POSTPARTUM FAMILY PLANNING

Over much of the same period that the United States Agency for International Development (USAID) has

supported postabortion care (PAC) programs, USAID has also supported efforts to strengthen voluntary postpartum family planning by better understanding women's needs and current practices in the extended postpartum period; raising awareness about postpartum fertility, particularly in relation to exclusive breastfeeding and the Lactational Amenorrhea Method; expanding the range of contraceptive methods available for postpartum women; and increasing the opportunities to offer these to postpartum women during the continuum of care for mothers, newborns, and children. Given the many parallel investments to strengthen postabortion and postpartum family planning service delivery and demand generation (e.g., provider training, organization of integrated services, supply chain and contraceptive commodities, recordkeeping, client counseling, social and behavior change at community and interpersonal levels, and more), USAID sees both of these as fundamental opportunities for integrated programming to address the lifesaving health care and contraceptive needs of women at key points during their reproductive life course.

■ USAID'S SUPPORT FOR POSTABORTION CARE: SAVING WOMEN'S LIVES

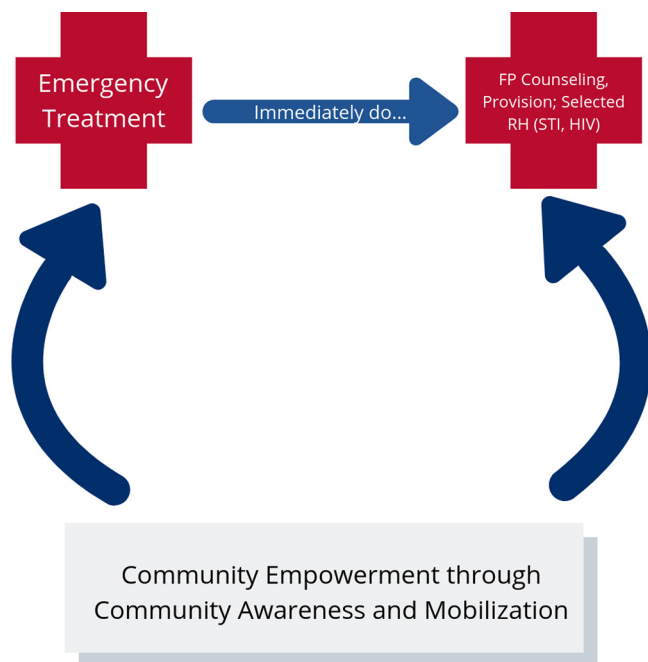
PAC is a lifesaving intervention. When it is accessible, affordable, of high quality, and performed by capable health care providers, PAC can prevent maternal death and disability. PAC is an integrated service delivery model that combines emergency and preventive services. It also combines both maternal health services (emergency treatment) and family planning services (voluntary counseling and service delivery) and is completed **before** the client is discharged from the facility. Emergency treatment is provided immediately, based on country protocols, for complications from miscarriage or induced abortion and considered a key

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FIGURE. USAID’s Postabortion Care Model



Abbreviations: FP, family planning; RH, reproductive health; STI, sexually transmitted infection; USAID, United States Agency for International Development.

component of emergency obstetric care. Even if a woman wants to become pregnant again, most guidance suggests waiting 6 months before attempting another pregnancy to reduce the potential for low birth weight, premature birth, and maternal anemia.⁴ Research demonstrates that when clients are routinely counseled and offered voluntary contraception as part of PAC, most will opt to leave the facility with a family planning method.^{5,6}

Since 1994, USAID has supported implementation of PAC programs in more than 40 countries to address complications related to miscarriage and incomplete abortion.⁷ USAID-supported PAC programs comprise emergency treatment for complications of induced or spontaneous abortion, counseling on and provision of family planning options, and community mobilization (Figure). These programs do not perform or actively promote abortion as a method of family planning. Because PAC clients can become pregnant almost immediately after abortion, offering voluntary family planning counseling and services is an important opportunity to prevent future unintended pregnancies.

USAID’s PAC programs have the following 3 components:

1. **Emergency treatment:** prompt management of potentially life-threatening complications including hemorrhage, infection, injury to internal organs, and shock. Treatment for postabortion complications often occurs in the same location where deliveries are performed by skilled birth attendants. Programs follow country guidelines regarding how to safely treat incomplete abortion. Clients will receive counseling pre- and post-procedure on what to expect during and after treatment, how to recognize danger signs, and when and where to seek additional care. Programs should support providers to provide respectful, dignified care throughout, including pain management.
2. **Family planning counseling and service delivery:** includes pre- and post-procedure client-centered counseling on when clients can experience a return to fertility after PAC, reproductive intentions, and healthy timing of pregnancy. If a client opts for a family planning method, she is offered a choice of a range of voluntary contraceptive methods. Although PAC clients can use any of a wide range of contraceptive methods (Box), some are more appropriate for immediate use than others and the

BOX. Contraceptive Methods for Postabortion Care

Can start immediately:

- Hormonal methods: implants, monthly injectables, injectables, combined oral contraceptive pills, progestin-only pills, progestin-only injectables, combined patch, emergency contraceptive pills.
- Barrier methods: male or female condoms.
- Intrauterine devices (IUDs): copper-bearing or levonorgestrel-releasing IUDs can be provided immediately after emergency treatment of complications if there is no infection or when infection is ruled out and resolved and any injury has healed. However, IUD insertion after medical treatment of emergency complications requires the client to return for a follow-up visit.
- Diaphragms, cervical caps, and combined vaginal ring: can be offered once injury is ruled out or after any injury to the genital tract has healed.
- Permanent methods: tubal ligation or vasectomy (for her partner). Permanent methods can be offered after the client has had time to rest and recover from any sedation and is not stressed or in pain. Counsel carefully, ensure informed consent, and be sure to mention available reversible methods.

Delay use:

- Fertility awareness methods: Standard Days Method or TwoDay Method. It is recommended that women start these methods after their regular menstrual pattern returns.

Source: World Health Organization, 2018.⁴

timing depends on the method, the woman's condition, and the method of her treatment for complications (medical or surgical). Where feasible, sexually transmitted infection evaluation and treatment and HIV counseling and/or referral for HIV testing are also provided as needed. Support to clients who have experienced gender-based violence may also be offered or referred, where feasible.

3. **Community empowerment through community awareness and mobilization:** application of the community action cycle to raise awareness about complications from miscarriage and induced abortion, facilitate connections with local health services, and empower communities to demand quality, effective PAC.

■ POLICY AND LEGISLATIVE REQUIREMENTS GOVERNING USAID'S POSTABORTION CARE PROGRAMMING

USAID-funded PAC programs are guided by several statutory and policy requirements that include restrictions related to abortion. Additionally, the principles of voluntarism and informed choice articulated in legislative and policy requirements guide USAID's family planning program, including PAC. Programming for PAC is permitted under USAID's statutory and policy restrictions related to abortion. More specifically, PAC is explicitly permitted in the standard provision that implements the Protecting Life in Global Health Assistance policy (formerly the Mexico City Policy).^{8,9}

■ DOCUMENTING AND SHARING EXPERIENCES IN POSTABORTION CARE

This special supplement is an opportunity to learn from the community of partners around the world working to respond to women's needs by providing lifesaving PAC. As we strive to make these services accessible to women experiencing complications from miscarriage or induced abortion, it is important that we document and disseminate our experiences so we can learn the following:

- Service delivery models and approaches for how to best provide lifesaving treatment and client-centered care with available health care cadres and facilities, where women are, in all

types of country settings, from urban to rural, from humanitarian to development

- Approaches to support facility-based providers through competency-based training and supportive supervision and adequate equipment and supplies
- Best practices in pre- and post-procedure counseling, including voluntary family planning, to avoid future unintended pregnancies
- Community engagement models to promote care-seeking behavior, reduce stigma, and support women experiencing obstetric emergencies
- Effective approaches to institutionalize PAC in public- and private-sector health systems to support countries in their ability to offer this important, lifesaving health service beyond donor assistance

The open-access information in each of the articles included in this supplement provides the details of how PAC programs are implemented in addition to the results of these programs, with the ultimate goal of helping those who design, implement, manage, evaluate, and otherwise support health programs to more easily adopt and adapt the strategies and approaches.

Competing Interests: None declared.

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Cite this article as: Starbird E, Crawford K. Healthy timing and spacing of pregnancy: reducing mortality among women and their children. *Glob Health Sci Pract*. 2019;7(suppl 2):S211-S214. <https://doi.org/10.9745/GHSP-D-19-00262>

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Strengthening Social and Behavior Change in Postabortion Care: A Call to Action for Health Professionals

Erin Mielke,^a Hope Hempstone,^a Ashlie Williams^a

Social and behavior change approaches have shown promise for addressing the demand- and supply-side challenges in postabortion care. As implementers seek to improve the quality of postabortion care, systematically integrating long-standing models and emerging approaches, including behavioral economics, human-centered design, and attribute-based models of behavior change, can promote positive health outcomes.

■ INTRODUCTION

Unsafe abortion is the fifth leading direct cause of maternal deaths globally and in developing countries.¹ Postabortion care (PAC) programs, encompassing both facility-based and community-based interventions, are essential to address complications of induced and spontaneous abortion, prevent subsequent unintended pregnancies, and ensure healthy timing and spacing of intended pregnancies. The 3 key components of PAC programs are (1) emergency treatment for complications of spontaneous or induced abortion, (2) family planning counseling and service provision, and (3) community engagement.² However, access to and provision of high-quality PAC are compromised in many settings by pervasive social stigma around induced and spontaneous abortion, provider bias, and complex counseling requirements. These barriers impede timely care seeking for complications of abortion and limit access to the full range of voluntary family planning methods during PAC. Social and behavior change, which is widely recognized to be a key component of effective reproductive health programming, offers particular potential to improve the quality and impact of PAC. Social and behavior change approaches include outreach and community mobilization, counseling and interpersonal communication, behavioral “nudges,” and use of digital platforms targeting clients or providers, among many others. Robust application of these approaches can motivate health-seeking behaviors before, during, and after the time a client enters a health facility for PAC and shape the care a client receives in a facility. Achieving positive outcomes among PAC clients depends on the extent to which programs (1) attend to the varied needs of

different client groups and (2) support effective interaction of providers and clients in high-quality counseling and follow-up care. Both factors are key tenets of effective behavior change programming. PAC programs that successfully conduct client-centered demand creation, counseling, and follow-up and address the full range of barriers to delivery of high-quality and nonjudgmental care will be well equipped to overcome the common challenges in PAC programming discussed in this article.

■ ADDRESSING COMMON PAC CHALLENGES THROUGH SOCIAL AND BEHAVIOR CHANGE

Programmatic experience suggests that key behavior-related challenges in the delivery of high-quality PAC services arise before the PAC client reaches a facility, during her visit to a facility, and after she leaves a facility. These challenges include the following³:

Before:

- Ensuring timely care seeking by women and their partners

During:

- Promoting respectful treatment of PAC clients by providers and addressing the stigma that specific client groups may experience in interactions with providers
- Ensuring that during counseling, providers address client needs for clear information about return to fertility and family planning options and acknowledge barriers to postabortion family planning
- Ensuring providers offer a full range of voluntary family planning methods prior to discharging the client, including long-acting reversible contraceptives and permanent methods

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Key challenges in the delivery of high-quality PAC services arise before, during, and after a PAC client's visit to a facility.

After:

- Supporting clients in returning to services to facilitate both voluntary contraceptive continuation and follow-up for clients whose treatment requires return visits

While additional formal evaluation of social and behavior change in the context of PAC is needed, lessons learned from programmatic experience in this and other areas of reproductive health suggest that intentional use of behavior change principles and approaches is necessary to address common challenges in PAC programming.

Before PAC Clients Reach a Facility

Seeking care at the first sign of complication is essential to effective treatment of spontaneous and induced abortions. Facilitating timely care seeking requires attention to barriers to accessing services, which may be specific to a given context or client group. Lack of information about the warning signs of spontaneous abortion, dangerous complications of spontaneous and induced abortion, and where to seek PAC prevents women from seeking help.^{4,5} In many settings, fear of abuse, ill treatment, or legal reprisal arising from the stigma associated with abortion also deters women from seeking medical care.⁵ Youth face particular barriers to timely care seeking, including lack of trust in providers, concerns about confidentiality, and fear of being stigmatized for engaging in risky behaviors.^{6,7}

PAC programs have successfully intervened at the community level to address barriers to care seeking and reinforce supportive norms. In Kenya and Somalia, community education, training of community health workers and community preparedness have effectively increased awareness, acceptance, and utilization of PAC, including voluntary use of postabortion family planning.⁸⁻¹⁰ Organizations in Bolivia and Kenya successfully applied the community action cycle to learn about the concerns of distinct segments of the local population (e.g., women, men, and adolescents). In turn, community members learned about PAC services, participated in ensuring service delivery, and demonstrated ownership of programs to improve access to and use of PAC.¹¹⁻¹³ In Kenya, this approach reduced stigma among family and community members and improved their care-seeking responses to bleeding during pregnancy.¹¹

PAC programs must consistently apply proven practices in behavioral design, including systematic

diagnosis of barriers to service utilization among key client groups. In addition to addressing the common barriers cited above, implementers should employ formative research approaches used in behavioral programming as a means to generate insights about client perceptions and motivations. In particular, immersive and participatory approaches grounded in human-centered design show promise as a means to better understand and address barriers to care seeking. Human-centered design is an iterative process that includes developing a deep understanding of the people affected by a problem, identifying opportunities for design to address that problem, prototyping potential solutions, and repeatedly testing and refining those prototypes.¹⁴ The end-user is directly engaged throughout each stage of this process. In Côte d'Ivoire, for example, a human-centered design project employed group interviews, field observations, and participatory brainstorming and prototyping workshops with stakeholders to understand barriers to family planning use among young men working in the informal sector and their partners.¹⁵ A deep understanding of barriers can inform both the development of social and behavior change messages and the selection of communication channels or approaches.¹⁶ Postabortion care seeking may also be improved by promoting utilization of reproductive health services as an entire category through proven approaches such as branding of services, mass media campaigns, community activation events, or targeted interpersonal communication. With regard to facilitating youth access to reproductive health services, multiple studies show that promotion of reproductive health care via school and community outreach and mass media improves care seeking among young people and positively influences parental and other gatekeepers' approval of reproductive health services for youth.¹⁷⁻¹⁹ This improvement is attained by increasing awareness of services and trust in providers and the health system as an entity *before* emergency care is required.

During a PAC Client's Visit to a Health Facility

The client-provider interaction during health care provision represents a critical opportunity to build trust and establish healthy behaviors pertaining to family planning and reproductive health care seeking. Four distinct but interrelated challenges may influence the quality of care offered during a PAC client's visit to a health facility. Failing to prevent these challenges can ultimately hinder

PAC programs have successfully intervened to address community-level barriers to care seeking and reinforce supportive norms.

adoption of voluntary family planning methods that enable women and their partners to achieve their desired fertility. First, **providers may treat clients with disrespect** or restrict care due to norms or attitudes associated with abortion, sexuality, and sexual health among specific client groups; circumstances such as a subsequent abortion or failure to use family planning; and/or use of family planning after pregnancy loss.^{7,20–22} Second, **providers may not adequately explain healthy spacing of pregnancy.** The World Health Organization recommends women delay pregnancy for at least 6 months after an abortion²³ (although a recent meta-analysis in mainly developed countries showed a shorter interval following miscarriage is not associated with adverse outcomes²⁴). Similarly, **providers may not adequately explain return to fertility**, which can occur within 2 weeks after a first trimester spontaneous or induced abortion.²³ One cross-sectional study in Egypt showed that two-thirds of 412 women who received PAC did not know when fertility returns after abortion and were not intending to use contraception, despite three-quarters wanting to postpone childbearing.²⁵ Women in Russia who left the health facility without a clear understanding of their return to fertility following abortion were 4 times more likely to have a repeat abortion than those with accurate knowledge.²⁶ Finally, **providers may fail to counsel PAC clients on the full range of family planning methods available to them** and fail to offer these methods prior to discharging the client.^{26,27} Incomplete counseling and failure to offer voluntary family planning may be influenced in part by assumptions about client preferences, provider bias toward certain family planning methods (which providers perceive to be safer following an abortion or more appropriate for certain client groups), or low motivation among providers and lack of performance feedback.^{28–29}

To prevent these challenges, PAC programming has successfully employed a range of approaches to influence provider behaviors pertaining to counseling PAC clients, particularly about postabortion family planning. Many PAC programs have integrated discussions of provider attitudes and values into trainings that seek to reduce stigma toward women and adolescents who need reproductive health services, dispel misconceptions about contraceptive methods, and build effective counseling skills. These discussions offer opportunities for providers to reflect on how their own values and beliefs influence their interactions

with clients.^{30,31} Adaptable training materials to build empathy with different types of clients and distinguish between personal beliefs and professional responsibilities are available.³² Similarly, attention to expanding the contraceptive method mix offered to PAC clients has increased voluntary uptake of highly effective methods. Programs in Ethiopia and Guinea enhanced access to long-acting reversible contraceptives for PAC clients and noted that a broader method mix can satisfy clients with a variety of needs.^{33,34} To support sustained improved practice, some Latin American PAC programs incorporated complementary provider behavior change approaches, such as the use of peer opinion leaders to promote best practices and strategic placement of visual reminders of clinical guidelines.³⁵ Across 10 countries in Asia and sub-Saharan Africa, provider behavior change was reinforced by post-learning follow-up by mentors to reinforce new skills, provide performance feedback, and resolve obstacles to care.³² Provider job aids that improve motivation and enable facilities to track performance improvements have proved effective in Ethiopia.^{36,37} Finally, recent years have seen growing use of behavioral economics (i.e., applying psychological insights such as non-conscious biases and mental models that influence decision making) to promote provider behavior change. In Nepal, for example, one intervention made effective use of peer comparison approaches to allow providers to compare their health center's performance to other similar centers, increasing providers' motivation to improve quality of counseling and increasing voluntary family planning uptake during PAC.²⁹

PAC programs can build on the rapidly growing evidence base for provider behavior change as a means to improve not only the knowledge and skills that underpin effective counseling, but the full range of motivational and normative influences affecting providers. To do so, implementers must use formative research to analyze specific drivers of provider behavior. As with programs targeting PAC clients themselves, the insights derived from this research can inform segmentation³⁸ and profiling of providers and identify important behavioral determinants, thus better targeting interventions to change provider behavior. Provider behavior change approaches must also clearly define specific, measurable behaviors and practices that constitute quality PAC counseling and respectful care, such as engagement with clients as active participants in a 2-way counseling dialogue. Adherence to these and other proven practices in behavioral design offer potential to

PAC programming has successfully employed several approaches to influence provider behaviors in counseling PAC clients.

Behavioral design may deepen the impact of traditional knowledge- and skills-based interventions to improve client-provider interaction.

deepen the impacts of more traditional knowledge- and skills-based interventions for improving client-provider interaction.

PAC programs can further improve the quality of client-provider interaction through continued attention to the drivers of client behavior, specificity in behavior change messaging, and promotion of client engagement during care and counseling. Counseling and other communication approaches should acknowledge and address barriers to postabortion family planning, including social norms regarding fertility and couples' communication.³⁹ Activities that improve the quality of counseling can affect not only uptake of family planning but also its continuation.⁴⁰ In Northeast Brazil, for example, female PAC clients who received counseling personalized to their plans for future contraceptive use and their beliefs and previous experiences were 41% more likely to be using a contraceptive method 6 months after an abortion than those who received only standardized information.⁴¹ In addition, activities that directly empower clients to pose questions and express their reproductive intentions can prompt providers to offer further information and address clients' concerns, as demonstrated by a community education and mass media program in Indonesia.⁴² Such approaches may be particularly relevant for young PAC clients who wish to delay or space childbearing but are not using contraception.

After a PAC Client Leaves a Facility

PAC programming must address challenges relating to support for voluntary contraceptive initiation or continuation and care for clients who require follow-up treatment. Clients who receive counseling and choose a voluntary family planning method may require assistance with accessing ongoing supplies of short-acting methods⁴³ or follow-up to obtain long-acting or permanent methods when it is not possible to obtain these during the initial visit or referral to a different facility is required.⁵ Women who choose an intrauterine device or tubal ligation following treatment with misoprostol, for example, require a follow-up visit to ensure that evacuation of the uterus is complete and no complications are present, such as prolonged heavy bleeding or fever.⁵

Social and behavior change interventions within PAC programs enhance a client's follow-up care, including family planning, and reinforce linkages between the client's home and health care workers. Client communication materials facilitate follow-up care. Several international professional associations and development partners

recommend that PAC clients should receive simple written instructions for the use of their method, along with concise information about common side effects and benefits.⁴⁴ In Sri Lanka, women who received an informational leaflet during antenatal care were significantly more likely to accept an intrauterine device following delivery.⁴⁵ Providing take-home information during PAC may similarly support self-care and adoption or continuation of family planning after treatment for complications of a spontaneous or induced abortion. Examples of such client communication materials and provider training materials can be found online and may be adapted to the needs of specific audiences or cultural contexts as needed.^{46,47}

Mobile phone-based communication has shown promise to facilitate access to health information and services in low-resource settings. A randomized control trial in Cambodia found that follow-up communication through mobile phones supports postabortion contraceptive use. It helped women retain family planning information provided during PAC and prompted women who wanted a long-acting method but did not receive one during the initial PAC visit to return for an implant or intrauterine device.⁴⁸ This channel of communication was as effective as home visits in sustaining use of long-acting methods at 12-month follow-up post insertion in rural Punjab, Pakistan.⁴⁹ Mobile phones are an effective tool for facilitating access to care and information and promoting behavior change among youth.⁵⁰ PAC programs considering mobile phone-based communication must give careful attention to risks to confidentiality, such as shared use of a mobile phone among family members.

Evidence suggests that engaging the male partners of PAC clients in counseling, when acceptable to clients themselves, can improve health outcomes. PAC programs in Bolivia and Tanzania found that engaging partners by informing them of the client's condition and providing both with family planning counseling helped to ensure safe recovery and increased voluntary family planning continuation.^{51,52} In China and Egypt, counseling partners on follow-up care, postabortion warning signs, sources of referral care, return to fertility, and family planning also increased family planning usage and physical, material, and emotional support for the clients during recovery.^{53,54}

In general, promotion of voluntary contraceptive continuation or return to services remains less understood than either creation of initial demand for services or improvement of client-provider interaction.

Social and behavior change interventions within PAC programs enhance a client's follow-up care.

Improved design and measurement of activities addressing behavioral initiation or maintenance after a client leaves a facility is an area of increasing collaboration between social and behavior change and service delivery professionals. The concerns of PAC program implementers constitute an important component of this discourse. The rapidly evolving thinking in this area affords PAC program implementers an opportunity to build upon emerging practices and develop innovative solutions to the challenges they face. For example, a growing body of gray literature pertaining to understanding and grouping similar behaviors and the attributes of those behaviors^{55,56} may allow for application of lessons learned from the promotion of other private, stigmatized, or provider-dependent behaviors. Interventions informed by behavioral economics to facilitate health seeking after PAC merit exploration given the amount of information associated with postabortion recovery, return to fertility, and adoption or continuation of family planning and with the normative and emotional context in which clients consider this information. Finally, reproductive “self-care” and direct-to-consumer family planning methods (i.e., not requiring a health worker to administer, such as condoms, oral contraceptives, or mobile phone applications to track fertile days once a woman’s regular menstrual cycle resumes), which are increasingly facilitated by mobile technology, may be particularly relevant in the context of PAC programming.

CONCLUSION

PAC programs have successfully used community-based social and behavior change approaches and provider behavior change interventions to support clients in accessing postabortion services and adopting voluntary family planning. To ensure that all women have access to high-quality PAC, implementers must build upon this important foundation through continued application of proven practices in behavior change, including formative research, audience segmentation, and the use of iterative, multichannel communication approaches that target clients, providers, and community members. Concomitantly, implementers should seize the opportunity to play a leading role in the application of social and behavior change approaches for PAC by leveraging new trends in behavioral economics, human-centered design, and attribute-based models of behavior change and increasing alignment between demand-side and supply-side programming.

Acknowledgments: We thank all the reviewers whose insights and feedback helped to strengthen this call to action.

Funding: This work received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Disclaimer: The contents are the responsibility of the authors and do not necessarily reflect the views of the United States Agency for International Development or the U.S. Government.

Competing Interests: None declared.

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We should build our understanding of how to address behavioral initiation or maintenance after a client leaves a facility.

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Peer Reviewed

Received: August 14, 2018; **Accepted:** March 15, 2019

Cite this article as: Mielke E, Hempstone H, Williams A. Strengthening social and behavior change in postabortion care: a call to action for health professionals. *Glob Health Sci Pract*. 2019;7(suppl 2):S215-S221. <https://doi.org/10.9745/GHSP-D-18-00307>

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COMMENTARY

Postabortion Family Planning Progress: The Role of Donors and Health Professional Associations

Carolyn Curtis,^a Anibal Faundes,^{b,c} Ann Yates,^d Ingela Wiklund,^d Martha Bokosi,^d Maryjane Lacoste^e

Global leadership from donors and international professional associations has enabled postabortion family planning services to be scaled up worldwide through preservice education, clinical service delivery, and global health programming.

■ BACKGROUND

Globaly, an estimated 1 in 4 pregnancies ends in induced abortion,¹ and nearly 20% of postabortion clients have had a previous abortion.² In a large study conducted in 14 countries, more than half of postabortion clients expressed interest in using contraception, but only 1 in 4 left the facility with a contraceptive.²

Unsafe abortion caused 13% of maternal deaths in 1990, with a case fatality rate of 340 per 100,000 women receiving unsafe abortion.³ In response, post-abortion care (PAC) was introduced at the United Nations International Conference on Population and Development, held in September 1994 in Cairo. World leaders, high-ranking officials, representatives of NGOs, and United Nations agencies agreed upon an action plan,⁴ which included the following goals:

- All governments and relevant intergovernmental and nongovernmental organizations should strengthen their commitment to women’s health, to deal with the health aspect of unsafe abortion as a major public health concern, and to reduce the recourse to abortion through expanded and improved family planning services.
- Women who have unintended pregnancies should have ready access to reliable information and compassionate counseling.
- In all cases, women should have access to quality services for management of complications arising from abortion.
- Postabortion counseling, education, and voluntary family planning services should be offered promptly

to protect women’s health and to help to avoid repeat abortions.

Since 1990, donors, international professional associations, and development partners have worked collaboratively to reduce maternal mortality due to complications of miscarriage and unsafe abortion, by delivering PAC services. Major partners include government donors (e.g., UK Department for International Development, Swedish International Development Cooperation Agency, German Technical Cooperation), multilateral organizations (United Nations Population Fund, United Nations Children’s Fund), and private foundations (The David and Lucile Packard Foundation, The Rockefeller Foundation, Erik E. and Edith H. Bergstrom Foundation), among others.⁵

This commentary focuses on the actions taken by the U.S. Agency for International Development (USAID) from 1994 to the present and those of the International Confederation of Midwives (ICM), the International Federation of Gynecology and Obstetrics (FIGO), and the Bill & Melinda Gates Foundation (the Gates Foundation) to address the reduction of unsafe abortion by deliberative attention to postabortion family planning.

■ USAID ACTIONS

In 1994, USAID began funding PAC programs as a key intervention in preventing maternal deaths and reducing unplanned pregnancies that may result in repeat abortion. These programs support treatment of complications from miscarriage and incomplete abortion, provide voluntary family planning counseling and services, and engage the community to reduce future unintended pregnancies and repeat abortions (Table).

Leadership

USAID’s global leadership has supported PAC programs in more than 40 countries worldwide by galvanizing

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TABLE. Postabortion Care Models, 1990 to Present

Initial PAC Model (1990)	Revised USAID PAC Model (2004)	Revised PAC Consortium ^a Model (2004)
Element 1: Emergency treatment	Component 1: Emergency treatment	Element 1: Community and service partnerships
Element 2: Family planning counseling and services	Component 2: Immediate family planning counseling and services; where human and financial resources exist, referral and/or treatment of STI and HIV testing	Element 2: Counseling
Element 3: Linkage to other reproductive health services	Component 3: Community empowerment through community awareness and mobilization	Element 3: Treatment
		Element 4: Contraception and family planning methods
		Element 5: Reproductive and other health services

Abbreviations: PAC, postabortion care; STI, sexually transmitted infection; USAID, U.S. Agency for International Development.
^aThe PAC Consortium was established in 1993 by Ipas, Association for Voluntary Surgical Contraception (now EngenderHealth), Jhpiego, Pathfinder International, and International Planned Parenthood Federation to raise awareness within the reproductive health community about the need to address complications of unsafe abortion and miscarriage. Its founding vision was to promote PAC as an effective strategy for improving maternal health and also to encourage USAID, the United Nations Population Fund, and other international donors and agencies in the reproductive health and population field to address the issue of unsafe abortion in their policies and programs.

support from the World Health Organization (WHO), FIGO, ICM, the International Council of Nurses (ICN), and donor organizations. USAID shared evidence with Senior Program Officers of the Gates Foundation and Family Planning 2020 (FP2020) that by providing voluntary post-abortion family planning counseling and services at the same time and location as treatment, the average postabortion contraceptive uptake across 15 countries increased from 32% to 69%.⁶ USAID’s advocacy led the Gates Foundation to adopt post-abortion family planning as one of its initiatives for reaching FP2020 goals—specifically, enabling 120 million more women and girls to voluntarily use contraceptives. The recognition of the importance and role of postabortion family planning by the Gates Foundation and its inclusion in the foundation’s programming will assist in institutionalizing PAC programming, leading to its sustainability in countries worldwide.

Terminology

Over the years, as new actors began implementing PAC programs, various terms have been used to describe these programs. Several countries use the term “comprehensive post-abortion care” to define PAC programs that include voluntary family planning counseling and services. The Gates Foundation uses the terminology “post-pregnancy family planning” as the platform for implementing postabortion

and postpartum family planning programs. ICM uses the terminology “abortion-related care” in its *Essential Core Competencies for Basic Midwifery Education*, which includes skills for postabortion family planning counseling and services.⁷

Statutes and Policy

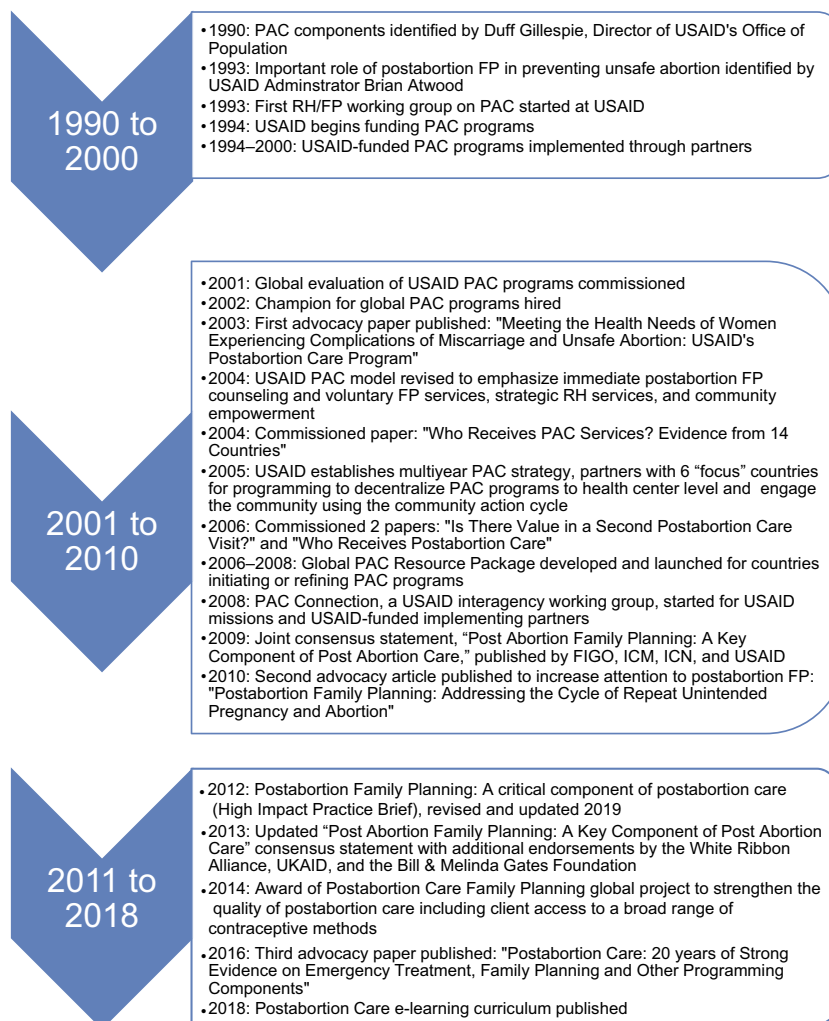
USAID-supported PAC programs include emergency treatment for complications of induced or spontaneous abortion, counseling on and provision of family planning options, and community mobilization. These programs do not promote abortion as a method of family planning. USAID-funded PAC programs are guided by multiple statutory and policy requirements that include restrictions related to abortion. Additionally, the principles of voluntarism and informed choice articulated in legislative and policy requirements guide USAID’s family planning program, including PAC. PAC is explicitly permitted in the standard provision that implements the Protecting Life in Global Health Assistance policy (formerly the Mexico City Policy).⁸⁻¹⁰

PAC Working Group

In 1993, at a meeting of USAID cooperating agencies, USAID Administrator Brian Atwood highlighted the important role of family planning in preventing unsafe abortion and spoke of the need to work for “compassionate treatment of all women who are in such desperate

Since 1990, many entities have worked collaboratively to reduce maternal mortality by delivering PAC.

FIGURE 1. Key USAID Postabortion Care Activities, 1990 to 2018



Abbreviations: FIGO, International Federation of Gynecology and Obstetrics; FP, family planning; ICM, International Federation of Midwives; ICN, International Council of Nurses; PAC, postabortion care; RH, reproductive health; USAID, U.S. Agency for International Development.

In 1993, USAID Administrator Brian Atwood highlighted the important role of family planning in preventing unsafe abortion.

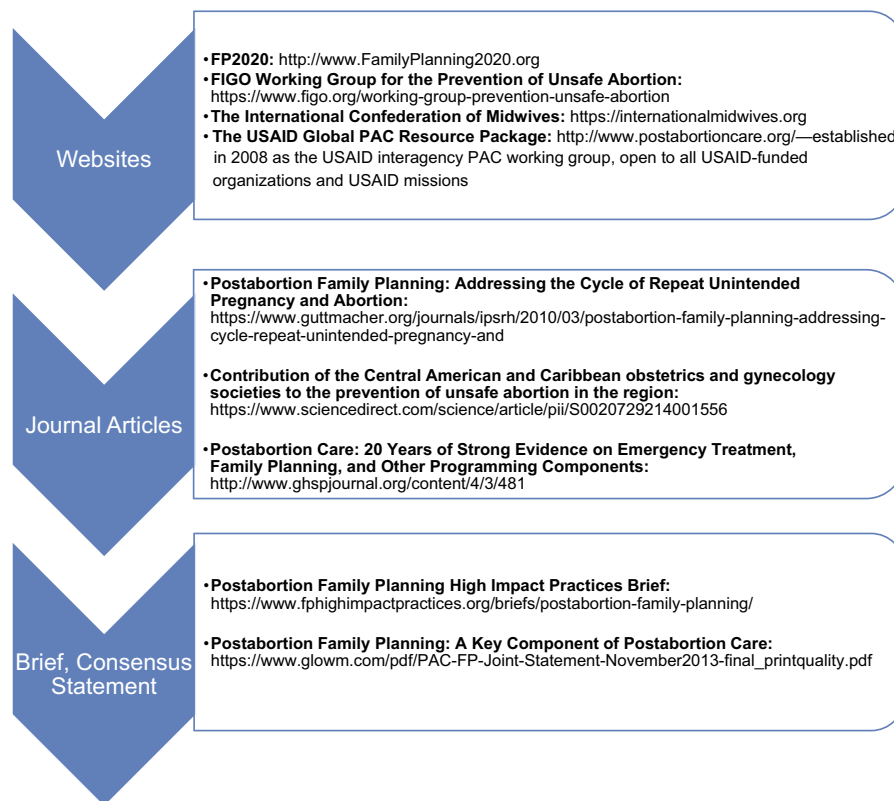
circumstances that they are driven to seek an unsafe abortion” (written communication, Brian Atwood, 1993; Figure 1). In March 1993, the first reproductive health/family planning working group on PAC was convened by USAID. In 1994, USAID authorized the use of population funds for PAC and treatment for the first time, with family planning as the top priority.¹¹

PAC Program Evaluation

In 2001, USAID/Washington commissioned a global evaluation of its PAC program with the

purpose of conducting “a comprehensive and thorough review and analysis of the outstanding programmatic and technical issues in the current PAC portfolio.”⁵ At the time of the evaluation, PAC was being provided by USAID and others in 40 countries. Findings revealed that the greatest success was in the first component, treatment of abortion complications. The second component, voluntary family planning counseling and services, was not implemented as well as emergency treatment, and needed to be strengthened. The case studies and literature highlighted several continuing challenges, including the need to change

FIGURE 2. Key Resources for Postabortion Family Planning



Abbreviations: FIGO, International Federation of Gynecology and Obstetrics; FP2020, Family Planning 2020; PAC, postabortion care.

attitudes among both providers and clients, and management and organizational issues, such as the availability of family planning commodities. A recommendation for “comprehensive postabortion care” was made in an effort to ensure the delivery of voluntary family planning services for women. Another recommendation was that PAC programs should devote more attention to training, monitoring, and supervision of health care providers with regard to family planning knowledge, supportive attitudes, and technical skills to ensure high-quality family planning provision; organization of family planning services (physical location and space); counseling; information, education, and communication materials; contraceptive supply and method choice; privacy; and integration with providers of emergency care.⁵

Global PAC Strategy

In response to the 2001 global evaluation, the USAID PAC working group developed a multiyear strategy during 2003 and 2004 to advance and

support the increased use of PAC with a particular focus on family planning counseling and services. Deliberative action was taken to address the challenges found in the global evaluation. Activities under the new strategy included (Figure 1 and Figure 2):

- Revision of the PAC model and results framework and indicators
- Selection of 6 focus countries for intensive support for PAC programming
- Establishment of the PAC Advisory Panel for the USAID PAC Working Group
- Development of a global PAC package, the “Global Resource Package”
- Establishment of the PAC Connection, a technical working group for USAID-funded implementing partners and USAID headquarters and field staff
- Publication of “Post Abortion Family Planning: A Key Component of Post Abortion Care”

The USAID PAC working group developed a multiyear strategy to advance and support the increased use of PAC.

consensus statement¹²; a Family Planning High Impact Practice (HIP) Brief on Postabortion Family Planning⁶; and peer-reviewed articles in global journals

These activities addressed key themes within the PAC strategy, including the following:

- Standardization of training materials, guidelines, and indicators
- Expansion and institutionalization of PAC at the country level
- Identification of successful models by working intensely in focus countries
- Leadership to identify further research needs
- Compilation of research findings regarding the impact of PAC programs
- Dissemination of this information to donors
- Monitoring and evaluation

Key relationships were developed to standardize global PAC policies, expand their reach, and promote best practices.

Key relationships were developed during the strategy period with international professional associations, such as FIGO, ICM, and ICN, to standardize global PAC policies, expand the reach of the PAC model, and promote the best practices in implementing PAC programs. Three models that evolved from work in the focus countries included (1) the decentralization of PAC from hospitals to health centers, (2) increased community empowerment through use of the community action cycle, and (3) validation that the provision of family planning services immediately after treatment and before discharge from the facility increased uptake of voluntary postabortion family planning. These models were piloted and replicated in a number of countries. Other key activities accomplished during the strategy period are outlined in Figure 1.

■ FIGO ACTIONS

Since January 2007, FIGO promoted family planning by establishing (1) the Committee on Contraception; (2) the Post-Partum IUD Program; and (3) the FIGO Working Group on the Prevention of Unsafe Abortion to promote family planning. Under the working group, FIGO started the Initiative on the Prevention of Unsafe Abortion (Box 1), which was aimed at reducing maternal mortality and morbidity associated with unsafe abortion and its burden for women.

In September 2009, FIGO together with the ICM, ICN, and USAID signed the first joint consensus statement entitled “Family Planning: A Key Component of Post Abortion Care.”¹³ FIGO used

this statement to advocate for the inclusion of voluntary postabortion family planning services when treating abortion complications.

Using the joint consensus statement, a global project was started at the country level under the Initiative to Prevent Unsafe Abortion with FIGO’s member societies to address maternal mortality due to unsafe abortion. FIGO’s central headquarters provided financial and technical assistance. The project consisted of 2 phases, which had country and regional activities.

Phase I, Step 1: Country Activities

1. FIGO member societies in countries with an induced abortion rate of 30 per 1,000 among women ages 15–44 or an unsafe abortion rate of 10 per 1,000 were invited to participate in the initiative.
2. Participating countries in the project identified a focal point and conducted a situational analysis of unsafe abortion in their country.
3. After completion of the analysis, each country held a national workshop with the participation of the government and interested parties. The results were discussed and a country action plan was developed to respond to the deficiencies. The action plan was adopted as a country commitment by the government and civil society.

Phase I, Step 2: Regional Activities

FIGO’s headquarters organized regional workshops for countries in their respective regions. Each participating country presented the various problems encountered in their country related to unsafe abortion and the actions taken to solve them. Country action plans were refined at the regional workshop, and government representatives attending the regional workshops were asked to commit themselves to implementing the action plans during the ensuing 2 years.

Phase II

Country action plans developed at the regional workshops were implemented. Phase II began with the launching of the action plan and at a minimum will end when the goal of reducing unsafe abortion is reached.

Implementation

When the global project began in 2008, 40 countries accepted the invitation to participate. Initially, only 26 of 40 member societies included

voluntary postabortion contraception in their action plans. From 2008 to 2016, regional workshops were held annually in which the progress against the country action plans was reviewed with representatives of the member societies and the respective Ministries of Health.

The regional workshops showed 2 ways in which postabortion contraception activities could be more effective: (1) offering a choice of contraceptive methods before the patient’s discharge, and (2) including the option of voluntary long-acting reversible contraceptives (LARCs). One presentation entitled “The role of post abortion contraception to reduce unsafe abortion” was prepared to emphasize the importance of voluntary postabortion contraception to reduce unsafe abortion.¹⁴ By 2013, all 40 countries included voluntary postabortion contraception in their action plans.

Although advocacy for postabortion contraception was important, the member societies also learned that more could be achieved by introducing postabortion contraception as a new clinical service in hospitals and by introducing postabortion contraceptive services into teaching hospitals and in the training curriculum of residents. The ability of the national member societies to initiate or improve the provision of postabortion contraceptive services was reflected in the radical changes seen in their new action plans. The action plans included what each society or its prominent members could do through teaching hospitals to act directly on the provision of family planning services. In addition, several societies were active in providing family planning training for public health providers.

As of 2017, immediate postabortion contraceptive services are provided in teaching hospitals in 46 participating countries. In 8 Caribbean and Central American countries, updated guidelines are now in use, and emphasis is being placed on postabortion contraception counseling and the provision of voluntary contraceptive methods. Honduras and Nicaragua have included training on the provision of intrauterine devices and implants to increase their voluntary use by post-abortion patients.¹⁵

■ ICM ACTIONS

The global deficit of skilled health care professionals is estimated to reach 12.9 million by 2035.¹⁶ Such shortages are especially critical in regions of the world that also have a high burden of unsafe abortion and related maternal mortality.

BOX 1. Goals of the International Federation of Gynecology and Obstetrics Working Group on the Prevention of Unsafe Abortion

- Build national and international consensus to overcome constraints to providing modern contraception, to reduce the burden of unsafe abortion
- Increase awareness of obstetrics/gynecology professionals about their ethical obligations to increase women’s access to contraceptive methods
- Promote and advance women’s access to postabortion services
- Develop and issue statements, position papers, guidelines, and policy documents on various topics with other global organizations

Globally, an acknowledged inequity exists in access to trained, skilled professional midwives. The vision of ICM focuses on ensuring that all women, irrespective of their economic status, have access to a midwife’s care for herself and her newborn. This factor is key to reducing maternal, newborn, and infant mortality. ICM plays a major role in preparing midwives via preservice education to care for women who have experienced miscarriage or induced abortion. One of ICM’s position statements, “Midwives’ provision of abortion-related services,”¹⁷ notes that midwives should “provide the woman (and where appropriate her family) with education concerning her future health, including contraception and planning for future pregnancy.”

ICM’s *Essential Competencies for Basic Midwifery Practice: 2018 Update*⁷ outlines 4 areas of competency and provides the basic postabortion family planning skills and/or abilities for midwives completing preservice education programs. Competency 2i, “Provide Care to Women with Unintended or Mistimed Pregnancy,” centers on the knowledge of family planning methods appropriate for the postabortion period and skills for postabortion family planning, including reviewing with women options for contraception and helping them to initiate immediate use of an appropriate method.

Currently, ICM is working with a USAID-supported partner to develop modules for PAC and family planning for competency-based global midwifery curricula. The modules will be used by midwifery faculty in preservice education. This activity includes the training of midwifery educators in competency-based methodologies using LARC and PAC modules. Newly qualified graduates in the near future are expected to have the knowledge, skills, and attitudes to provide a wide choice of contraceptive methods, including LARCs, as well as high-quality, safe PAC. ICM has also

By 2013, all 40 FIGO member countries included voluntary postabortion contraception in their action plans.

developed standards related to family planning and PAC for countries to use in developing their midwifery curricula. The competency-based modules for PAC and family planning are expected to be available to countries in 2020.

services can be universally offered within both safe abortion and PAC settings.

The family planning goals of the Gates Foundation align with the global commitments of the 2012 London Summit on Family Planning.

THE GATES FOUNDATION ACTIONS

The family planning goals of the Gates Foundation align with the global commitments of the 2012 London Summit on Family Planning, which are to ensure access to high-quality contraceptive information, services, and supplies so that an additional 120 million women and girls in the poorest countries are voluntarily using modern contraception by 2020, a milestone on the pathway toward universal access. These goals were reaffirmed in 2017.

In November 2013, the Gates Foundation, along with USAID, UKAID, the White Ribbon Alliance, FIGO, ICM, and ICN, signed the revised joint consensus statement on the critical role of postabortion family planning as part of PAC, recognizing this area of work as a key contributor to FP2020, the Millennium Development Goals, and the Sustainable Development Goals.¹² To support the commitments of the joint consensus statement, all endorsing organizations agreed to work with FP2020 governments through their grantees and partners to reconfigure postabortion family planning services for maximum results, provide an expanded contraceptive method mix, emphasize and improve counseling to ensure voluntarism and informed choice, and support follow-up to optimize contraceptive continuation post procedure (Box 2). Postabortion family planning

Uniting Postabortion and Postpartum Family Planning Initiatives

In most low-resource settings, treatment for post-abortion complications often occurs in the same location where deliveries are performed by skilled birth attendants. As countries strengthen their national programs to offer family planning to postpartum women, they should ensure that postabortion clients are counseled and offered voluntary family planning services. Including postabortion family planning when introducing postpartum family planning in health facilities makes sense both programmatically and technically. Thus, the Gates Foundation has committed to addressing postabortion and postpartum family planning through a common framework of post-pregnancy family planning.

As part of its priority programming for 2018–2020, the Gates Foundation continues to invest in postabortion family planning programs in its 9 priority countries. The Gates Foundation supports service delivery efforts at national and subnational levels, as well as innovative operations research on best practices for ensuring that women who seek medical abortion, both within and outside health facilities, have immediate access to a broad range of postabortion contraceptive counseling and voluntary services. Special interest exists for developing innovative solutions for women who access pharmacies or drug shops where immediate access to postabortion family planning could be expanded. Examples of current investments are noted in Box 3.

BOX 2. Commitments Made in the Joint Consensus Statement on Postabortion Family Planning

We commit ourselves and call upon all programs serving postabortion women of all ages to:

- *Ensure that voluntary family planning counseling and services are included as an essential component of postabortion care in all settings*
- *Empower and serve postabortion women of all ages to prevent unintended pregnancies and further abortions*
- *Provide information on optimal pregnancy spacing for those women who want a pregnancy in order to realize critical health benefits, such as reduced maternal, neonatal, and childhood deaths, and prevention of HIV transmission from mother to child*

We recognize that postabortion family planning is a cost-effective strategy for helping countries meet their commitments under Millennium Development Goal 5; FP2020; A Promise Renewed and the United Nations General Assembly Special Session on HIV/AIDS (UNGASS).

The International Federation of Gynecology and Obstetrics (FIGO), the International Confederation of Midwives (ICM), and the International Council of Nurses (ICN) have committed to fully collaborate across their professions to optimize the provision of postabortion family planning, and through this statement, they are joined by collaborating partners to achieve universal access to voluntary postabortion family planning.

Published in 2013 by the International Confederation of Midwives, the International Council of Nurses, the United States Agency for International Development, the White Ribbon Alliance, the Department for International Development, and the Bill & Melinda Gates Foundation.¹²

BOX 3. Posabortion Activities of the Bill & Melinda Gates Foundation

- **Democratic Republic of the Congo:** In partnership with other donors, the ExpandFP II project is providing technical assistance to the national Ministry of Health to integrate postpartum and postabortion family planning countrywide into maternal, newborn, and child health services through development of costed planning and implementation documents; establishment of structures and processes for collaborative planning, implementation, and coordination; documentation and dissemination of best practices; and promotion of limited pilots in other provinces.
- **Pakistan:** The Naya Qadam project is working to increase access to high-quality post-pregnancy family planning, and more specifically postabortion family planning, in both public and private sectors, with a focus on young women (ages 15–24) in Sindh and Punjab provinces. This program will operate at scale in 6 districts across Sindh and Punjab, reaching women with quality counseling and contraceptive method provision, and increasing method choice, including long-acting contraception.
- **India:** The Foundation is working with 7 states—Uttar Pradesh, Bihar, Assam, West Bengal, Maharashtra, Karnataka, and Haryana—to introduce and scale up comprehensive post-pregnancy services, leveraging the introduction of new methods (such as injectables) to ensure the availability of a contraceptive method mix that is as broad as possible. Foundation-funded partners are supporting these states to incorporate budgetary support into local program implementation plans to continue to take programs to scale at the subnational level.
- **Nigeria:** The Foundation is supporting a program in the states of Lagos, Nasarawa, and Rivers to enable access to family planning information and services to provide comprehensive postabortion care, including family planning, following spontaneous or induced abortions.
- **Operations research in Kenya and Indonesia:** In collaboration with Merck for Mothers, the Foundation is supporting an implementation research study to better understand post-pregnancy barriers and facilitators and to generate actionable evidence for realistic policy and programmatic efforts to address them in both the public and private sectors.

The global postpartum family planning steering committee, which was established in 2014 to support the organization of the 2015 Chiang Mai global postpartum family planning meeting, continues to be supported through the Gates Foundation. As part of the FP2020 secretariat’s mandate, the postpartum family planning component has been expanded to also address postabortion family planning, with FP2020 now including the following functions as part of its work:

- Regular coordination calls for postpartum/postabortion family planning global steering committee (comprising all donors active in this space, as well as other critical stakeholders, such as WHO)
- Webinars and/or other knowledge platforms for countries to share best practices/experiences/issues/requests for assistance including the dissemination of the postabortion family planning HIP brief⁶
- The inclusion of postpartum/postabortion family planning in regional focal point workshops and linking relevant technical partners when family planning needs are identified
- Working with countries to ensure postpartum/postabortion family planning efforts are incorporated into and tracked against national family planning costed implementation plans, Global Financing Facility investment cases, and FP2020 action plans
- Coordination with postabortion family planning around data/program information use for

postabortion family planning and postpartum family planning advocacy purposes

In addition, the Gates Foundation has provided funding to FP2020’s Rapid Response Mechanism for dedicated support of country-level catalytic postpartum/postabortion family planning activities. The Foundation looks forward to its continued work with the global family planning community to ensure that there are no missed opportunities to give women increased access to their preferred contraceptive methods where and when they want them.

CONCLUSION

The bold and compassionate actions of these organizations and professional associations with their governments have saved the lives of countless women and averted harm for countless more. Their efforts have produced the evidence-based practices for increasing the voluntary uptake of postabortion family planning as a lifesaving intervention to be mainstreamed, institutionalized, and sustained throughout the world. Continued collaboration and commitment across governments, health professional associations, and international organizations will be vital for achieving universal access to postabortion family planning as part of PAC. Together with postpartum family planning, postabortion family planning will make vital contributions to maternal health, the goals of FP2020, and the Sustainable Development Goals. Now is the time for renewed effort and strong collaboration.

Continued collaboration and commitment will be vital for achieving universal access to voluntary postabortion family planning.

Acknowledgments: We wish to acknowledge all donors, implementing partners, obstetrician/gynecologists, physicians, medical officers, midwives, and nurses who toil hard each day to save the lives of women by providing funding, programming, and postabortion care services.

Funding: None.

Disclaimer: The views expressed in this article are solely the views of the authors and do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Competing Interests: None declared.

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Peer Reviewed

Received: September 6, 2018; **Accepted:** March 25, 2019

Cite this article as: Curtis C, Faundes A, Yates A, Wiklund I, Bokosi M, Lacoste M. Postabortion family planning progress: the role of donors and health professional associations. *Glob Health Sci Pract*. 2019;7(suppl 2):S222–S230. <https://doi.org/10.9745/GHSP-D-18-00334>

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PROGRAMMATIC REVIEW & ANALYSIS

Postabortion Care in Humanitarian Emergencies: Improving Treatment and Reducing Recurrence

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Despite the challenging environment of humanitarian emergencies, with focused programmatic attention, demand for quality postabortion care can be created and services delivered while voluntary contraceptive uptake for PAC clients can simultaneously increase substantially, even in settings where the use of contraception after abortion is often stigmatized. Greater representation of long-acting methods, as a proportion of the methods PAC clients chose, occurred in all 3 countries' method mix, but at different rates.

ABSTRACT

Background: Unsafe abortion contributes to maternal mortality worldwide and disproportionately affects the most disadvantaged women and girls; thus, improving the treatment of complications of abortion is essential. Shifting PAC treatment from sharp dilation and curettage (D&C) to the use of aspiration techniques, notably manual vacuum aspiration (MVA), and medical treatment with misoprostol improves health outcomes. Equally critical is ensuring that women have access to voluntary contraception after an abortion to prevent future unintended pregnancies. In humanitarian settings, access to voluntary family planning to disrupt the cycle of unsafe abortion is even more critical because access to quality services cannot be guaranteed due to security risks, migration, and devastation of infrastructure. Save the Children applied a multipronged postabortion care (PAC) approach in the Democratic Republic of the Congo (DRC), Somalia, and Yemen that focused on capacity building; assurance of supplies and infrastructure; community collaboration and mobilization; and monitoring and evaluation.

Methods: Program-level data were extracted for each of the 3 countries from the inception of their program through 2017. The sources of information included monthly service delivery reports that tracked key PAC indicators as well as qualitative data from evaluations of community mobilization activities.

Results: The number of PAC clients increased in all countries. In the DRC in 2012, 19% of PAC clients requiring treatment received D&C; in 2017 the percentage was reduced to 3%. In 2013, 25% of all PAC clients in Yemen were treated with D&C; this percentage was reduced to 3% in 2017. The proportion of women choosing contraception after an abortion increased. In 2012, only 42% of all PAC clients in the DRC chose a contraceptive method; by 2017, the proportion had increased to 70%. Somalia had substantial increases in PAC demand, with the percentage of all PAC clients electing contraception increasing from 64% in 2012 to 82% in 2017. In Yemen, where the health system has been constrained due to severe conflict, the percentage of PAC clients choosing voluntary contraception rose from 17% in 2013 to 38% in 2017. Uptake and demand for PAC was mobilized through targeted community outreach in each context.

Conclusion: These data demonstrate that providers can effectively shift away from D&C as treatment for PAC and that contraceptive uptake by PAC clients can increase substantially, even in settings where the use of contraception after abortion is often stigmatized.

BACKGROUND

An estimated 25 million unsafe abortions occur globally each year, with 97% of these procedures occurring in developing countries.¹ Between 4.7% and 13.2% of maternal deaths worldwide are attributable to unsafe abortion, with sub-Saharan Africa and southern

Asia disproportionately accounting for 83.8% of this mortality.² In the developing world, nearly 7 million women and girls present in health facilities to receive treatment for complications due to unsafe abortion annually, while many, who are often the most disadvantaged, forgo care completely.³ Analyses of surveys from 14 countries with recent abortion incidence studies found that going without needed care is more common among poor women living in rural areas than women who are not poor and live in urban areas; approximately 49% of the rural poor who need care due to complications do not obtain it, while 21% of the nonpoor urban bypass care.⁴ Although estimates of unsafe abortion are

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To reduce maternal morbidity and mortality in developing countries, improving the treatment of abortion complications is essential.

not available in the context of humanitarian crises, the need for quality postabortion care (PAC) likely increases given the deterioration of the health system and the consequent decreased access to emergency obstetric services and safe delivery.⁵⁻⁷

To reduce maternal morbidity and mortality in developing countries, improving the treatment of abortion complications is essential. As per World Health Organization (WHO) recommendations, shifting from sharp dilation and curettage (D&C) to the use of aspiration techniques, notably manual vacuum aspiration (MVA) and medical treatment with misoprostol for PAC, improves health outcomes and expands the availability of services through task shifting.⁸ In addition to improving safety, the shift away from D&C reduces the length of in-patient hospital stays, reduces the time required for recovery, and is more cost-effective overall.^{9,10}

It is equally critical to prevent future unintended pregnancies by ensuring that women have access to voluntary contraception after an abortion. Although existing evidence suggests that the majority of PAC clients are interested in adopting a method of contraception, uptake varies from 25% to 77% due to differences in service delivery, human resources, and commodity security.¹¹⁻¹⁴ The high unmet need for contraception among PAC clients combined with a nearly immediate return to fertility after an abortion contributes to the higher likelihood of subsequent unintended pregnancies and abortions among women who have previously had an abortion.^{11,15,16} Although postabortion contraceptive counseling and provision of voluntary contraception is an essential element of all PAC models, PAC has historically focused on treating immediate life-threatening symptoms such as hemorrhage and sepsis rather than addressing women's desire to delay, space, or limit future childbearing. Therefore, they miss an opportunity to disrupt the cycle of repeat unintended pregnancy that leads to further instances of unsafe abortion.^{17,18} Successful postabortion contraceptive programs have shown that offering a broad mix of methods on site improves overall uptake.^{12,19}

In humanitarian settings, disrupting the cycle of unsafe abortion is even more critical because it is sometimes difficult to ensure access to quality PAC due to security risks, forced migration, and devastation of infrastructure.^{20,21} Further, a broad contraceptive method mix, including the availability of long-acting reversible contraceptives (LARCs), for PAC clients allows

women to avert future unintended pregnancies, choose a method that suits their lifestyle, and, in the case of LARCs, have longer periods of more effective contraceptive coverage when desired. The Minimum Initial Service Package (MISP) for reproductive health is a set of priority activities that are implemented at the onset of every humanitarian emergency to prevent mortality, morbidity, and disability among crisis-affected populations. MISP activities should be expanded as soon as possible and should continue throughout protracted crises and recovery.²² Objective 4 of the MISP aims to prevent excess maternal and newborn morbidity and mortality, and one key element of this objective is to ensure the availability of lifesaving PAC in health centers and hospitals. Objective 5 of the MISP is to reduce unintended pregnancies by improving availability of contraceptive services, including contraceptive counseling and a wide range of contraceptive methods, and promoting community awareness of contraceptives.²³ Despite recognition of the MISP as a global standard, it is not always implemented systematically, nor are all components always present after the onset of an emergency.^{6,20} The need for reproductive health services remains in crises; thus, access to PAC and the subsequent immediate delivery of quality voluntary contraceptive services should be ensured for all women, regardless of setting.

Quality PAC including both treatment of complications and immediate, on-site postabortion voluntary contraception, are essential in all settings, including acute emergencies. Investments in capacity building, supplies and infrastructure, community mobilization, and consistent monitoring make it possible for PAC to be provided in even the most challenging of settings.

■ INTERVENTION

To address the issue of high maternal morbidity and mortality due to complications of induced abortion or miscarriage among women living in humanitarian settings, Save the Children began implementing PAC in 2012, including postabortion voluntary contraception, in diverse emergency settings. The current study focuses on 3 specific settings—Democratic Republic of the Congo (DRC), Somalia, and Yemen. In all these settings, the initial supply and demand for PAC was universally low because the services were typically relegated to referral hospitals where cost, transport,

The current study focuses on PAC delivered by Save the Children in the DRC, Somalia, and Yemen.

distance, provider competency, and supply availability were notable barriers. In addition, a great deal of community stigma existed around abortion, including seeking PAC.²⁴ Further, many communities were unfamiliar with PAC in general, were not aware of danger signs, and did not know that such services existed, particularly at lower-level health facilities as opposed to exclusively within referral hospitals.

Each country program applied a service approach based on *The Essential Elements of Postabortion Care* as developed by the PAC Consortium: community mobilization, strengthening provider counseling to identify and respond to women’s emotional and physical health needs, treatment of abortion complications, provision of voluntary contraceptive services to help women prevent an unintended pregnancy or practice birth spacing, and referrals for any further health care required.²⁵ Ideally, contraceptive counseling and services are provided as part of PAC by the same provider in the same location to ensure that opportunities for voluntary postabortion contraception are not lost through complicated referrals or the need for a woman to return to the facility at a later date. Save the Children implemented and upgraded PAC using a prioritized approach to ensure high-quality sexual and reproductive health services in humanitarian settings (Figure 1). This approach includes capacity building, assurance of supplies and infrastructure, community collaboration and mobilization, and consistent data management for ongoing monitoring, evaluation, and data use. Its goal is to improve the quality of PAC across facilities and develop greater understanding of the importance of PAC within communities so that women and girls can access comprehensive PAC without delay.

Capacity Building

Capacity building focuses on improving the clinical competency of providers to provide a package of quality PAC. This package includes the ability to identify and diagnose complications due to abortion; conduct physical examination of the PAC client to determine treatment needed; provide surgical or medical treatment with pain management, infection prevention, and blood transfusion, where available; and provide contraceptive counseling and, if the client desires, a contraceptive method prior to discharge from the facility. To ensure that postabortion contraceptive methods were provided to all PAC clients who wanted them, all PAC clinical trainings included extensive focus on contraceptive counseling as well as

FIGURE 1. Save the Children Approach to Implementing Postabortion Care



the technical skills needed to provide a broad mix of contraceptive methods, including LARCs. Capacity building was organized through trainings, ongoing supportive supervision, and coaching from program and Ministry of Health (MOH) staff.

Assurance of Supplies and Infrastructure

Supplies provided to supported health facilities included MVA kits, misoprostol for PAC, drugs for pain management, antibiotics, and materials for infection prevention and control. Medicines and equipment are monitored and maintained to ensure that there are no stock ruptures. Save the Children developed linkages with existing supply chains, including coordination with the United Nations Population Fund (UNFPA) and Ipas, to ensure that supplies and equipment are available even in constantly changing environments. Further, prepositioned stock is maintained in centralized warehouses to ensure that necessary PAC, contraceptive, and maternal health supplies can be deployed as rapidly as possible on request in even the most complex of situations. A key intervention to prevent the recurrence of unintended pregnancy is to ensure a broad contraceptive method mix.¹⁹ In some instances, new contraceptive methods were added to the existing method mix in partnership with the MOH to ensure that necessary approvals were in place and that these products could be easily added to existing supply chain mechanisms.

Community Collaboration and Mobilization

To provide PAC, quality services must be in place; however, members of the community also need to know that they exist and be supportive of access.

Save the Children implemented and upgraded PAC to ensure high-quality sexual and reproductive health services in humanitarian settings.

To provide PAC, quality services must be in place; however, members of the community also need to know that they exist.

In order to provide information about PAC, community health workers conducted small group sessions to raise awareness of PAC availability, educate women and men on danger signs for when to seek care, and address any myths or misconceptions within surrounding communities. In many communities where abortion is taboo, it was important to present PAC as an essential part of maternal health care and a lifesaving service that is a critical part of a functioning health system. In addition to awareness campaigns within communities, key religious and secular leaders were involved in shaping the discourse and spreading key messages to their constituencies.

Data Management, Monitoring, and Evaluation

As the investments in PAC increased, including clinical training, assurance of supplies and equipment, and community mobilization activities, it was necessary to integrate functioning data management systems to ensure that access to PAC increased, postabortion complications were safely treated using MVA or misoprostol, and PAC clients could easily access voluntary contraception. To that end, each facility was equipped with a confidential register book to note the treatment and care provided to each PAC client and submitted aggregated data monthly to the program team and MOH. A health management information system was established to track PAC aggregated at the individual facility level and health zone, district, and national levels, where applicable. Program staff engaged in regular conversations around incoming data with providers and MOH representatives; thus, troubleshooting could occur collaboratively and in real time. Finally, register reviews were conducted annually to ensure that PAC clients represented diverse demographic groups and were provided with care appropriate to their symptoms and diagnosis.

Country Contexts

Democratic Republic of the Congo

The humanitarian situation in the DRC is characterized by intercommunal violence, political unrest, and disease outbreaks resulting in an estimated 12.8 million people in need of humanitarian assistance and protection in 2019, which represents 10% of the total humanitarian caseload globally. This protracted humanitarian crisis has deteriorated significantly over the past years, and the country has the highest number of internally displaced people in Africa.²⁶ The deepening crisis

is most acute in the eastern part of the country, which includes North Kivu Province where Save the Children and the MOH have been working to strengthen the availability of PAC since 2011. At that time, most doctors had only been trained to use D&C for treatment of incomplete abortion at a referral-level facility, while midwives and nurses were not trained or authorized to provide PAC at all. The project is now working in 29 health facilities including 1 hospital and 4 referral health centers covering 5 health zones. MOH staff and project supervisors were trained as PAC trainers on methods of treatment (MVA and misoprostol) and postabortion contraception, inclusive of short- and long-acting contraception. These skills were then cascaded to midwives and nurses to provide PAC at a primary health level. Following the training, Save the Children and MOH supervisors jointly conducted supportive supervision and coaching for trained providers using a range of standardized tools and checklists to assess progress and provide on-the-job training where needed to improve the quality of PAC.

Somalia

The humanitarian crisis in Somalia is the longest continuous crisis in the world and is characterized by complex factors such as famine, drought, conflict, disease outbreaks, extreme poverty, and terrorism. An estimated 2.2 million Somalis are internally displaced by conflict and drought and constitute 40% of those in need of assistance within the country.²⁷ In partnership with the MOH, Save the Children has been implementing a PAC program in the Karkaar region of Puntland since 2012 in 1 hospital and 9 primary health centers, improving the coverage and scale of service provision for Karkaar's population. Save the Children continues to be the only organization supporting the provision of PAC in Puntland State of Somalia. Facility infrastructures have been modified as required, to ensure that sufficient space and privacy are available for counseling and procedures. Each site has at least 2 trained health workers in place who offer PAC including MVA, misoprostol, and a full range of modern contraceptive methods, including LARCs and short-acting methods. Supportive supervision of health workers is conducted in collaboration with the regional health office using standardized checklists to monitor the quality of service provision. UNFPA and Save the Children work together to ensure the provision of required PAC supplies and commodities and support as necessary to

ensure stock-outs do not occur and services remain available at all times.

In addition to physical and security barriers to accessing care, shame, stigma, and gender norms can further impede a woman from accessing PAC at a facility. The current phase of the program includes a strong community element, which aims to raise awareness about the importance of seeking PAC. A 3-month community PAC campaign was carried out in 2017 to increase the knowledge and acceptance of PAC in the local community. Routine facility data showed an increase in PAC client numbers that correlated with the timing of the campaign. Additionally, the team used the primary telecommunications provider, GOLIS, to disseminate weekly text messages on PAC, specifically on first-trimester complications, the need to seek medical treatment, and postabortion contraception, to 40,000 people in Karkaar region.

Yemen

The conflict and crisis in Yemen have been escalating since 2015, with more than 22 million people, including 11 million women and girls, in need of urgent humanitarian aid.²⁸ Only a third to a half of health facilities are still functioning, exacerbating the long-standing barriers that Yemeni women already faced in accessing reproductive health services.^{28,29} The PAC program in Yemen has been implemented through 16 health facilities managed by the Ministry of Planning and Public Health in the Hodeida and Lahj governorates since 2013. Four hospitals and 12 primary health centers were supported to establish PAC for the first time. Discussions with governorate and district health offices allowed the establishment of PAC at the primary health center level, integrated with other reproductive health services. Following authorization, Save the Children rehabilitated the health centers to create PAC procedure rooms and provided the necessary medical supplies, equipment, and medicines. Clinical providers, particularly the midwife cadre, were trained in providing misoprostol for treatment of incomplete abortion, MVA, and postabortion contraception. Supportive supervision was provided to these health facilities to ensure that infection prevention standards were met and that PAC and voluntary postabortion contraceptive services, including LARCs, were provided according to WHO standards. Specific PAC registers and client forms were introduced and midwives were trained to collect and review data to inform their

service provision at respective health facilities. In spite of the worsening situation in the country since 2015, the program has seen a steady flow of clients requesting PAC.

METHODS

To evaluate the overall impact of a comprehensive PAC program approach on improved quality of treatment and postabortion contraception, we analyzed service delivery data from each of the 3 countries from the inception of their program through 2017. The DRC program began in 2011 and data collection commenced in 2012. The Somalia program was launched in 2012 and the Yemen program in 2013. The indicators evaluated for this article included the overall number of PAC clients, mode of treatment, the proportion of PAC clients who chose a method of contraception prior to leaving the facility, and the contraceptive method mix among those PAC clients since demand varies across methods.^{21,30}

Changes in service delivery trends over time were observed for each of the indicators. Tests of association were performed to assess the significance of changes in treatment with D&C as a proportion of all PAC cases and changes in contraceptive uptake among all PAC clients.

To better understand best practices for raising awareness around PAC at a community level, we analyzed qualitative program data including evaluations of community mobilization activities as well as informal interviews with community members and leaders. PAC community awareness campaigns were conducted in the DRC in mid-2016 with refresher trainings in mid-2017; in Somalia from January to April 2017; and in Yemen in mid-2018.

RESULTS

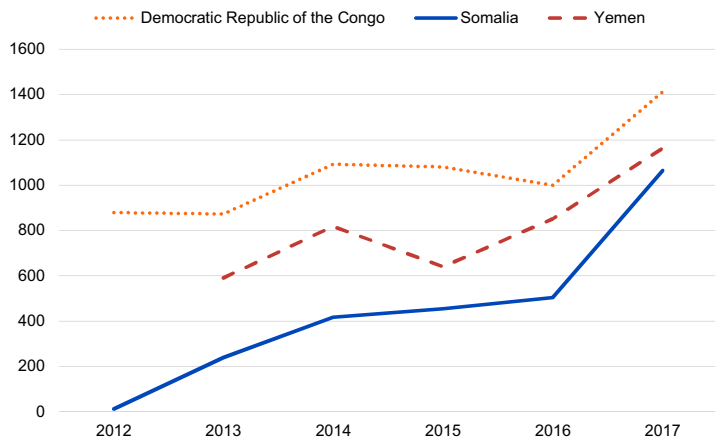
Service Delivery Data

The number of overall PAC clients increased over time in all 3 countries (Figure 2). In the DRC, there were 812 PAC clients in 2012 compared with 1,412 PAC clients in 2017. In Somalia, PAC clients increased from 11 in 2012 to 1,065 in 2017. In Yemen, the number of PAC clients rose from 590 in 2013 to 1,163 in 2017. The number of PAC clients increased due to improved service availability and increased emphasis on improving community messages around the importance and availability of PAC. We observed an increase in PAC clients in the DRC and Somalia that coincided with their PAC-specific community awareness

The program in Somalia includes a strong community element to raise awareness about PAC.

The number of overall PAC clients increased over time in all 3 countries.

FIGURE 2. Total Number of Postabortion Care Clients, Democratic Republic of the Congo, Somalia, and Yemen, 2012–2017



In all 3 countries, the proportion of women who chose a method of contraception after abortion increased.

efforts in late 2016 and early 2017. However, in Yemen, where PAC-specific community awareness campaigns were not conducted during the 2013–2017 period, the total number of PAC clients increased, indicating that improvements in provider capacity and service availability are also instrumental in increasing demand for PAC.

Both the DRC and Yemen had a noteworthy reduction in the use of D&C as a method of treatment among all cases of PAC in 2017 compared with their first year of program implementation ($P < .001$). In the DRC in 2012, 19% of all PAC clients requiring evacuation received D&C as treatment, whereas in 2017 the percentage was reduced to 3% (Figure 3). When the Yemen program commenced in 2013, 25% of all PAC clients were treated with D&C. By 2017, D&C was reduced to 3% of all PAC clients (Figure 3). In Somalia between 2012 and 2017, the percentage of PAC clients treated with D&C actually increased from 0% to 1%; however, the total number of PAC clients increased from 11 in 2012 to 1,065 in 2017. Monthly trends in the overall number of PAC clients and the proportion treated with D&C are displayed in Figure 4. Each circle represents the aggregated monthly total of all supported facilities within the country program area.

In all 3 countries, the proportion of women who chose a method of contraception after treatment for abortion complications increased (Figure 5). This change was significant in the DRC ($P < .001$) and Yemen ($P = .002$), but not in Somalia where postabortion contraception uptake has

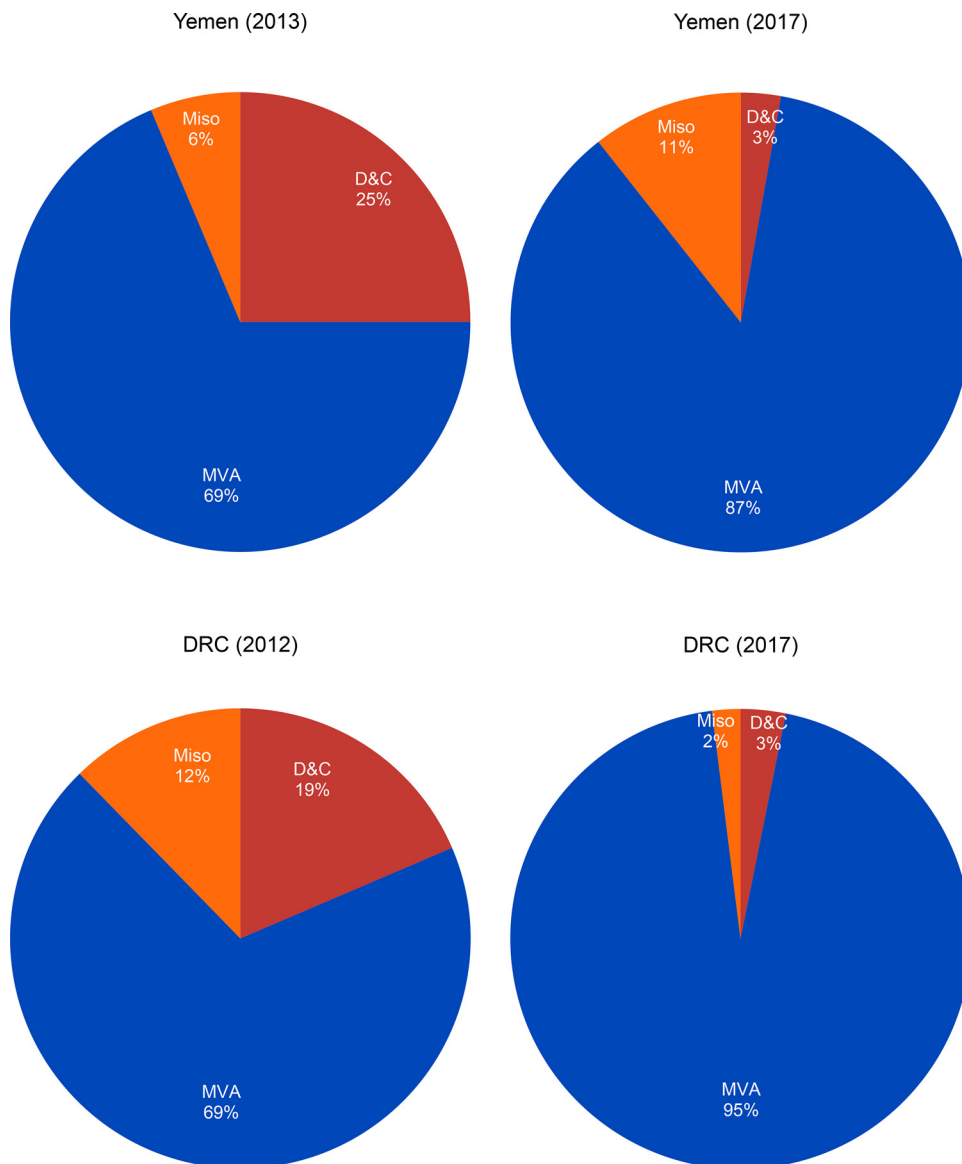
been relatively high since the inception of the program. Further, all settings saw shifts in method mix over time (Figure 6), which included an increase in the proportion of women who chose LARCs after treatment for abortion complications (Figure 7). Again, this increase was significant in the DRC ($P = .02$) and Yemen ($P = .004$), but not in Somalia. Although a shift occurred toward a greater proportion of women and girls choosing a LARC method after treatment for abortion complications, this trend varied over time.

When Save the Children began supporting health facilities to provide PAC in the DRC in 2012, only 42% of all PAC clients adopted a method of contraception before discharge. By 2017, the percentage had increased to 70%. The selection of LARCs as a percentage of postabortion contraception increased from 59% in 2012 to 70% in 2017. Somalia had notable increases in demand for postabortion contraception, with the percentage of all PAC clients choosing a contraceptive method increasing from 64% in 2012 to 82% in 2017 and the percentage of all PAC clients choosing a LARC method increasing from 14% in 2012 to 24% in 2017. Finally, in Yemen, where the health system has been constrained due to severe conflict, the percentage of PAC clients choosing a contraceptive method rose from 17% in 2013 to 38% in 2017. Though LARCs were not a substantial part of the contraceptive method mix in Yemen, the percentage of total PAC clients choosing an intrauterine device or implant also increased, from 1% in 2013 to 15% in 2017. Monthly trends in the number of overall postabortion contraception clients, proportion choosing a method of contraception, and proportion of postabortion contraceptive users choosing LARCs are displayed in Figure 8 for the DRC, Figure 9 for Somalia, and Figure 10 for Yemen; each circle represents the aggregated monthly total of all supported facilities within the country program area.

Qualitative Program Data

In addition to ensuring clinical training, supplies, and ongoing data use, supporting communities to mobilize around the sharing of sexual and reproductive health information and services is essential. The analysis of community mobilization reports found that many program teams were accustomed to generating community awareness and demand around voluntary contraception, but identifying best practices around PAC messaging at a community level was unfamiliar. To this end, each country program developed

FIGURE 3. Method of Treatment Among Postabortion Clients in the DRC and Yemen, First Year of Program Implementation vs. 2017



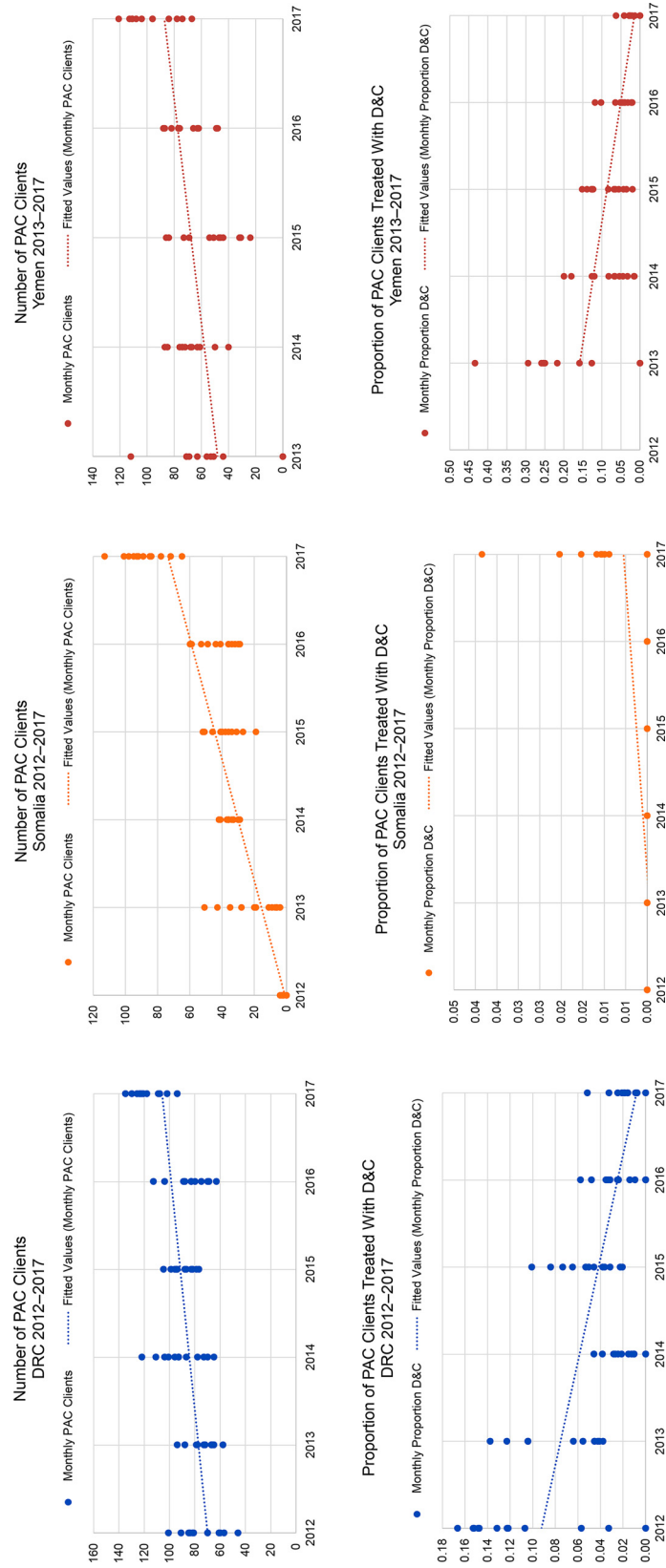
Abbreviations: D&C, dilation and curettage; DRC, Democratic Republic of the Congo; MVA, manual vacuum aspiration; Miso, misoprostol.

contraception and PAC outreach strategies that included specific target populations, key messages, and channels of communication. Using these strategies, teams developed activities and materials to raise awareness of PAC, teach communities to identify and facilitate referral for life-threatening postabortion complications, and to educate communities on the value and

availability of voluntary postabortion contraception. Refresher trainings for community health workers and volunteers were conducted throughout the period to ensure that they had the necessary skills to deliver key PAC messages through a variety of learning modalities.

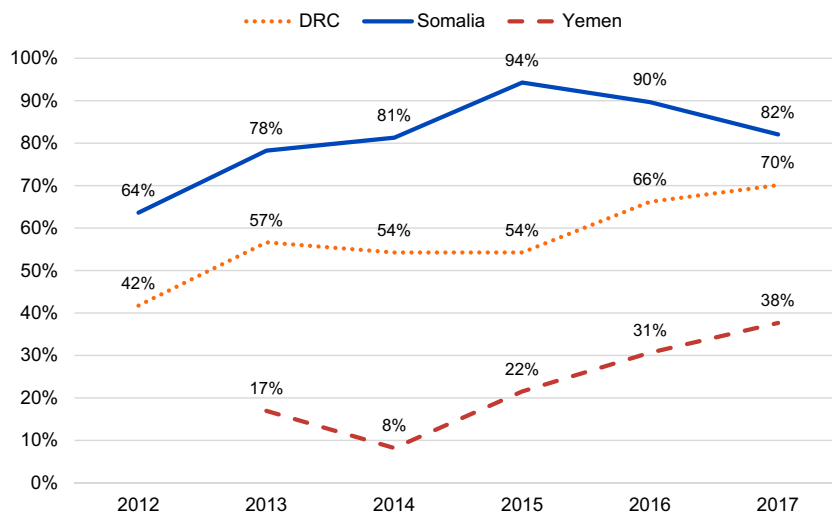
Despite differences in geography, language, and culture, the qualitative program data from the DRC,

FIGURE 4. Overall Number of Postabortion Care Clients and Proportion Treated With Dilatation and Curettage in the DRC, Somalia, and Yemen, 2012/2013–2017



Abbreviations: D&C, dilation and curettage; DRC, Democratic Republic of the Congo.

FIGURE 5. Percentage of Postabortion Care Clients Voluntarily Choosing Contraception Prior to Discharge in the DRC, Somalia, and Yemen, 2012–2017



Abbreviation: DRC, Democratic Republic of the Congo.

Somalia, and Yemen suggested common best practices as well as challenges when raising awareness around PAC in communities that are often unfamiliar with the topic and are simultaneously experiencing instability and population movement due to conflict. Before beginning work directly in the community, all programs first convened secular and religious community leaders in a day-long meeting to ensure that they understood the importance of PAC, had time to ask questions, and were supportive of the campaigns. All programs found that information sharing from health care providers and members of the community were useful in conveying information about the importance of supporting PAC. In Yemen, a woman told her story about having had multiple abortions and receiving information from a community health volunteer about voluntary contraception and the importance of spacing intervals between miscarriages and pregnancy. She went to a health facility, sought counseling, chose a contraceptive method, and after waiting a sufficient time, was able to become pregnant and now has a healthy child. In the DRC, a 28-year-old woman noted the important role of community health workers:

It's the [community health workers] who teach us, even those here, these women, they often pass through the neighborhood teaching us, if there's a miscarriage, you must hurry to the hospital and if the stomach really hurts when pregnant, you must hurry to the hospital to be treated.

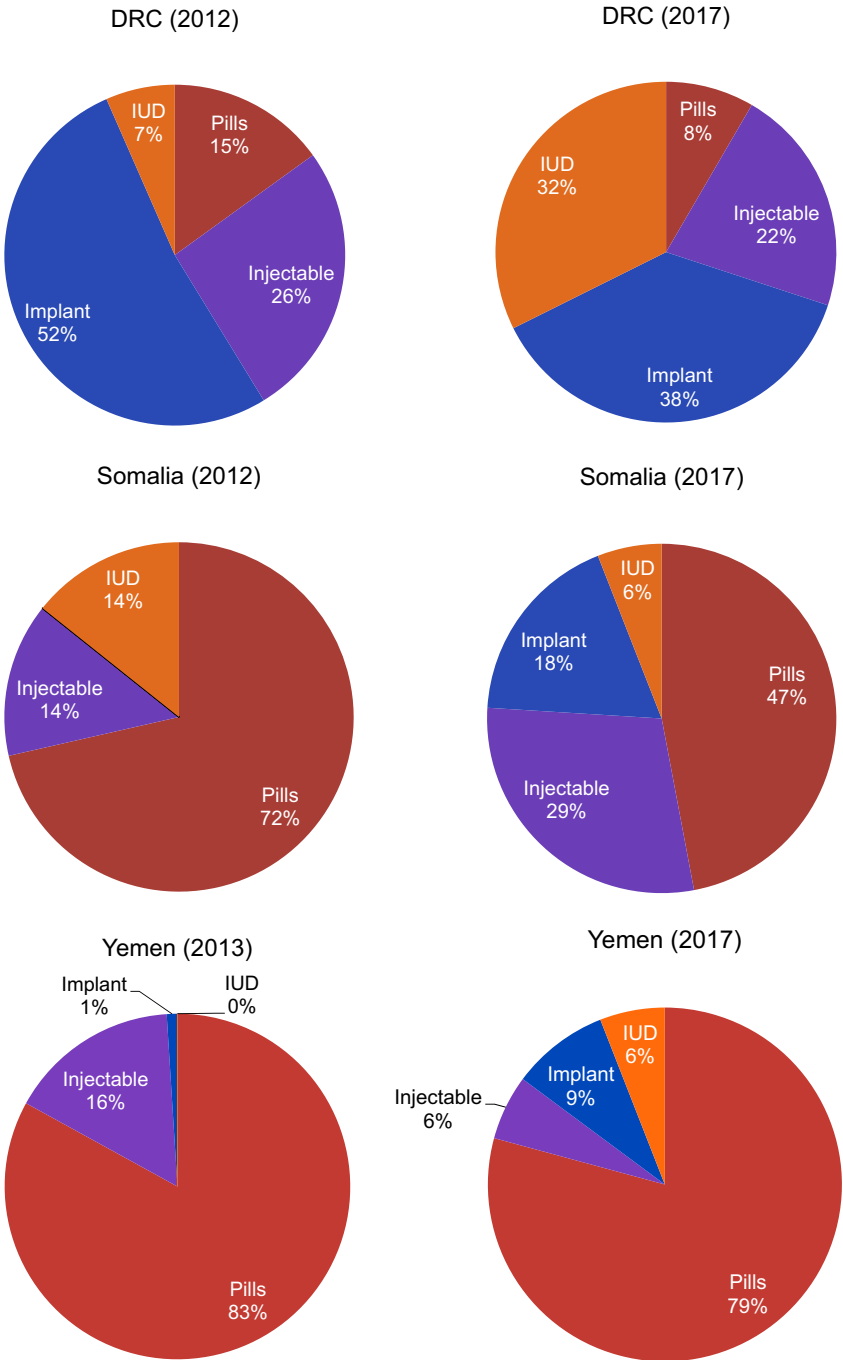
In Somalia, a female doctor delivered lectures on abortion, danger signs that threaten the life of mothers during pregnancy, available services, and when to seek help at each campaign event. The audience was actively engaged and many asked questions, especially regarding the link between PAC and contraception. The creation of dramas and songs that conveyed information about PAC proved popular in all 3 locations and were useful in attracting a broad audience through entertaining vignettes. Information was also conveyed on the radio, via mobile phone in Somalia, and through leaflets and posters explaining what to do when you recognize danger signs in the community. A 25-year-old woman from the DRC highlighted the importance of sharing key PAC messages through a variety of modalities:

No one advised me [on PAC], I just heard it on the radio that if you have this type of problem, you must go to the hospital.

Despite reaching large audiences, all programs aimed to reach more men in the future with PAC messaging. In late 2016, the DRC program piloted an effort to engage men who were satisfied with PAC received by their female partner. These clients were trained and conducted a participatory review of the community mobilization strategy,

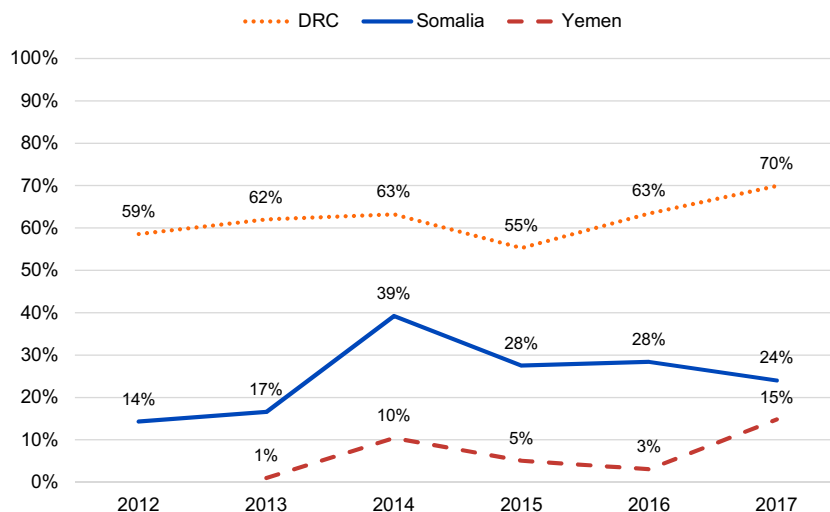
Despite differences in geography, language, and culture, the qualitative program data from the 3 countries suggested common best practices as well as challenges.

FIGURE 6. Postabortion Care Contraceptive Method Mix in the DRC, Somalia, and Yemen, 2012/2013–2017



Abbreviation: DRC, Democratic Republic of the Congo; IUD, intrauterine device.

FIGURE 7. Percentage of PAC Clients Choosing LARCs Among Those Choosing Contraception, DRC, Somalia, and Yemen, 2012–2017



Abbreviations: DRC, Democratic Republic of the Congo; PAC, postabortion care; LARCs, long-acting reversible contraceptives.

offering inputs. Satisfied male advocates were identified as important for initiating conversations regarding PAC. The most referrals for PAC were from health care providers, community health workers, and male advocates in the community. Due to the success of this pilot, the DRC program scaled up this model of identifying and training satisfied male advocates in the community to spread important PAC messages.

In Somalia and Yemen, many men said they felt PAC was a women’s issue and did not think the sessions would be relevant to them, even though men are very important in enabling access to PAC and facilitating referrals. Although these PAC awareness campaigns were effective in reaching a large number of people, they were very time consuming. Program staff indicated that they would like to follow up with participants over time to determine what messages were the most salient and which were most closely linked to changes in individual and community behavior. Despite challenges, however, community awareness campaigns were linked to increases in PAC clients at health facilities and, over time, increased uptake of postabortion contraception.

DISCUSSION

Although complications from abortion are documented causes of excess morbidity and mortality among women living in humanitarian contexts,

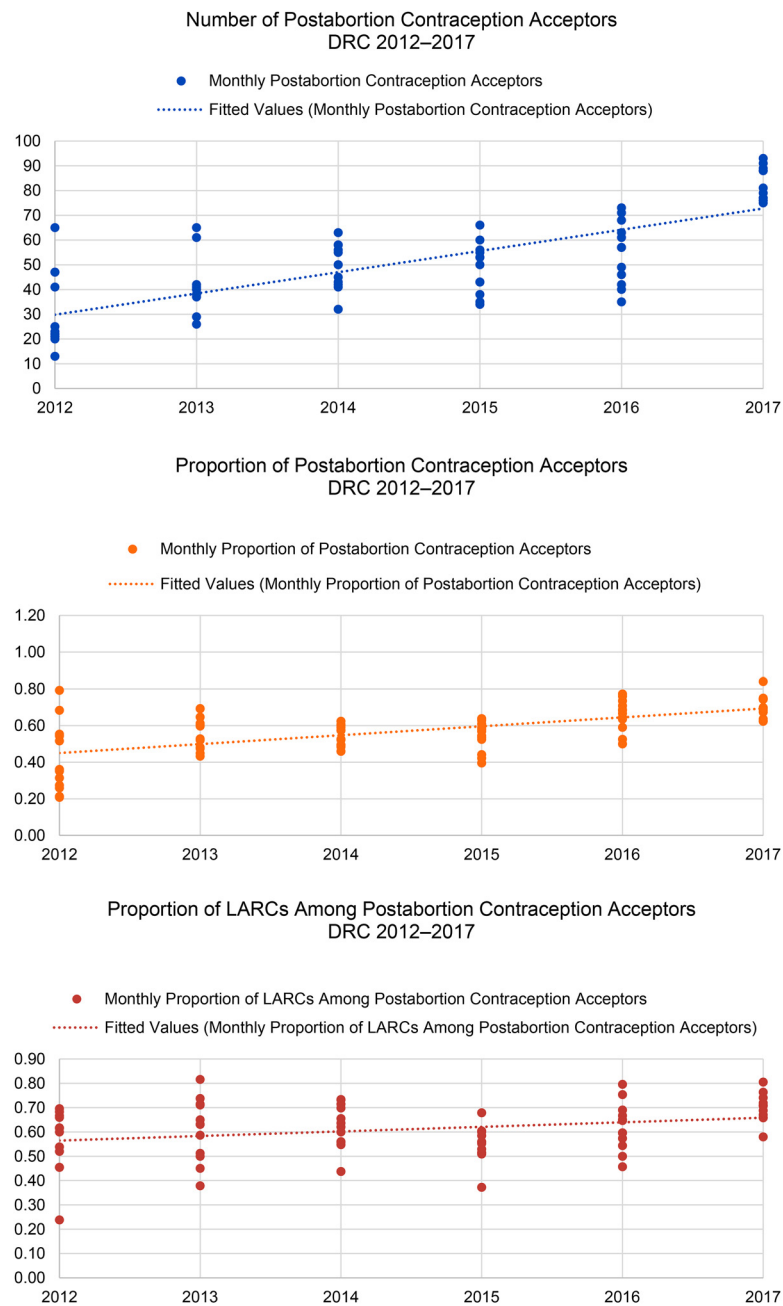
PAC is often only available at hospital-level facilities and only with treatment via D&C, further impeding access in already constrained areas. Increasing availability and improving the clinical approach by supporting primary health facilities and midwives to provide MVA, misoprostol, and voluntary postabortion contraceptive services expands access and reduces morbidity and mortality among women in need of PAC in humanitarian settings.

These data demonstrate that providers can effectively shift away from D&C toward MVA and misoprostol and that voluntary contraceptive uptake for PAC clients can increase substantially, even in settings where the use of postabortion contraception is often stigmatized. A multifaceted approach was taken in each country to ensure that quality PAC was implemented in an effective and respectful manner. The important link between postabortion contraception and the avoidance of future unintended pregnancies was understood by PAC clients, as evidenced by increased postabortion voluntary contraception uptake. This approach focused on health worker capacity building, continuous quality improvement on supplies and service delivery, consistent collaboration with the local health authorities, sustained community engagement, and strengthened health information monitoring systems.

The findings show that MVA eclipses misoprostol in the treatment of abortion complications.

Increasing the availability of PAC and improving the clinical approach reduces morbidity and mortality among women in humanitarian settings.

FIGURE 8. Trends in Postabortion Care Contraception in the DRC, 2012–2017

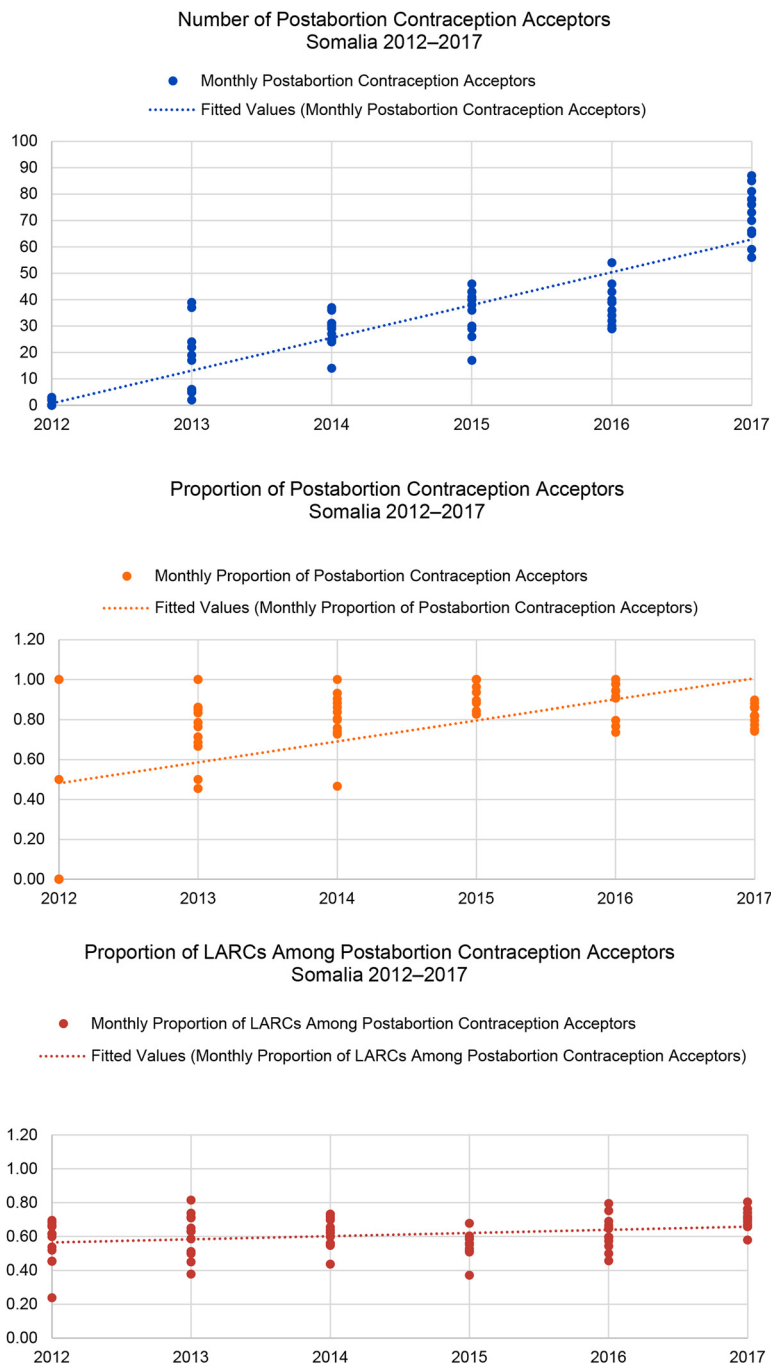


Abbreviations: DRC, Democratic Republic of the Congo; LARCs, long-acting reversible contraceptives.

In many countries where Save the Children works in humanitarian emergencies, misoprostol is not on the national-level list of approved drugs for the treatment of postabortion complications or has only recently become a part of approved treatments, or its administration is limited by required

supervision from medical doctors. It therefore takes time to shift the practice toward misoprostol for PAC, despite providers receiving training on both techniques. Further, the data are from public facilities only and do not consider women who seek misoprostol at a pharmacy or private clinic.

FIGURE 9. Trends in Postabortion Care Contraception in Somalia, 2012–2017

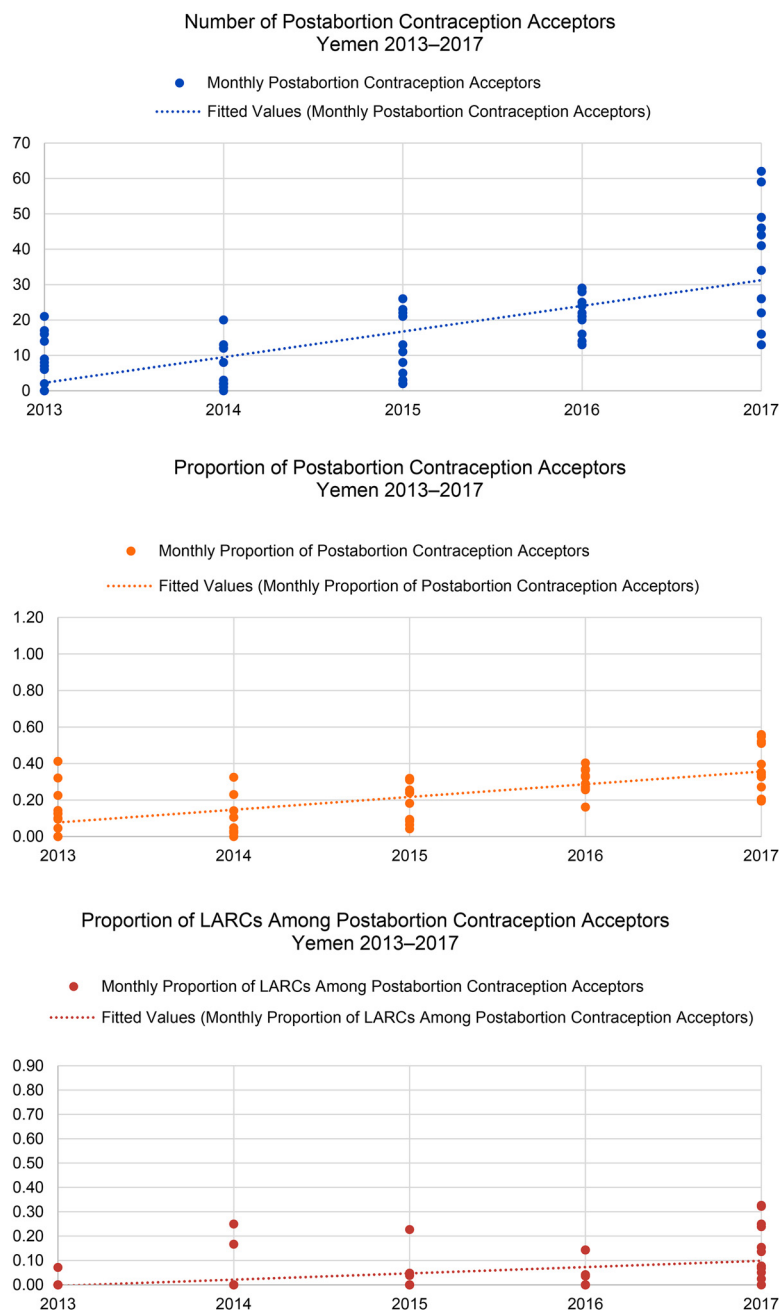


Abbreviation: LARCs, long-acting reversible contraceptives.

The results of this program model suggest the feasibility and acceptability of midlevel health care workers providing PAC at primary health level facilities, and the findings should be used to

advocate for necessary policy shifts, including task sharing, particularly in countries affected by conflict where access to health care is already constrained. Midlevel providers should be supported

FIGURE 10. Trends in Postabortion Care Contraception in Yemen, 2013–2017



Abbreviation: LARCs, long-acting reversible contraceptives.

through preservice and in-service training on the provision of misoprostol, MVA, and voluntary contraception for PAC clients. Procurement and supplies for primary-level health facilities should include misoprostol, MVA kits, contraception methods including LARCs, and necessary infection

prevention materials. Health information systems should incorporate relevant PAC indicators to monitor availability and accessibility of PAC throughout an emergency.

Based on the findings from community mobilization evaluations, we see a need to create

demand for and understanding of PAC, which constitutes a lifesaving and essential element of a quality health system. In humanitarian settings where systems have been disrupted, many people were not aware that PAC existed, especially outside of referral hospitals. Further, messages around PAC need to be conveyed in a variety of ways in order to reach a broad audience that includes community leaders, men, women, and young people. Although raising community awareness is a common element of contraceptive service provision, this sort of messaging around PAC was new to many of the project locales and required new and creative ways of thinking about community-level buy-in and education.

Overall, this particular model of providing PAC is intensive and comprehensive. In many instances, LARCs were introduced into the method mix at the commencement of this program and had varying levels of uptake. Each of the featured countries—the DRC, Somalia, and Yemen—had shifts in overall contraceptive method mix as well as postabortion contraceptive method mix. In the DRC, implants have been very popular since their introduction, with intrauterine devices slowly increasing in popularity. In Somalia and Yemen, short-acting methods of contraception were the largest proportion of the respective method mixes with LARC uptake increasing slowly. Shifting a program to facilitate greater availability of and access to LARCs requires skilled counseling and consistent supplies. Because both were a feature of this program, we have seen shifts over time toward greater LARC representation in the method mix of all 3 countries, but at different rates.

Funding for PAC often comes through funding for broader emergency obstetric and newborn care (EmONC) programs within humanitarian responses. This program model had a clear focus on PAC within clinical trainings, supplies, supervision, and community mobilization. PAC was able to be offered at primary-level facilities, even when the facilities did not provide other EmONC services, allowing increased access. Having dedicated funding geared specifically toward quality PAC and contraception allows for true improvements in provider skill, provision of good services, shifts in perceptions, and, ultimately, a better overall health system for women, families, and communities.

Limitations

The study design was retrospective in nature. While aggregated data on the number of PAC clients each month at each facility were collected

monthly throughout program implementation, data from pre-implementation were not available for comparison. Aggregated facility data only allowed us to examine certain indicators such as the overall number of clients and the proportion who voluntarily adopt postabortion contraception. Demographics of the women accessing voluntary contraceptive services and estimates of remaining unmet need could not be evaluated. Neither qualitative information from trained providers on their experiences nor survey information from PAC clients on satisfaction with the services provided were available for this analysis.

CONCLUSION

This program implementation model has been effective at expanding access in these 3 settings, which are much like many other humanitarian settings. However, there remains a high unmet need for quality PAC throughout humanitarian environments. More resources must be committed to further expand the provision of quality PAC in crisis-affected countries in order to treat postabortion complications, ensure effective voluntary contraceptive counseling and provision, contribute to the overall reduction in maternal mortality, and serve PAC client needs globally.

Acknowledgments: The authors are grateful to the many Save the Children and Ministry of Health colleagues who supported work on postabortion care in eastern DRC, Somalia, and Yemen.

Funding: Anonymous private foundation.

Competing Interests: None declared.

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In humanitarian settings, many people were not aware that PAC existed.

More resources must be committed to further expand the provision of quality PAC in crisis-affected countries.

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Peer Reviewed

Received: October 8, 2018; **Accepted:** March 8, 2019

Cite this article as: Gallagher M, Morris C, Aldogani M, et al. Postabortion care in humanitarian emergencies: improving treatment and reducing recurrence. *Glob Health Sci Pract*. 2019;7(suppl 2):S231–S246. <https://doi.org/10.9745/GHSP-D-18-00400>

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ORIGINAL ARTICLE

Voluntary Contraceptive Uptake Among Postabortion Care Clients Treated With Misoprostol in Rwanda

Catherine Packer,^a Allison P. Pack,^b Donna R. McCarraher^a

Voluntary contraceptive uptake among postabortion care clients treated with misoprostol in Rwanda was high and unhindered by the extended bleeding that sometimes occurs with misoprostol use. However, provider knowledge regarding return to fertility and contraceptive methods appropriate for postabortion care clients should be strengthened.

ABSTRACT

Introduction: Unsafe abortion remains a problem in Rwanda, where abortion is highly restricted by law. To reduce mortality and morbidity from unsafe abortion, Rwanda implemented a national postabortion care (PAC) program in 2012, which included using misoprostol to treat incomplete abortion. Key components of PAC are offering and providing voluntary contraceptive methods and counseling on their use, but little is known about contraceptive uptake among PAC clients treated with misoprostol. The objectives of the current study were (1) to assess the contraceptive uptake of PAC clients treated with misoprostol, including whether extended bleeding hinders uptake; and (2) to assess providers' knowledge of contraception and their willingness to counsel PAC clients on contraception, provide methods, or refer for contraceptive services.

Methods: We surveyed 68 PAC clients treated with misoprostol and 43 providers (84% nurses) in 17 health facilities across 3 districts in Rwanda where misoprostol for PAC had been introduced recently. PAC clients were recruited into the study prior to facility discharge and surveyed between 10 days and 1 month after discharge. We asked PAC clients and providers about demographic characteristics and attitudes toward contraception. We also asked PAC clients about contraceptive counseling received and postabortion contraceptive uptake or reasons for nonuse, and providers about their knowledge about return to fertility, pregnancy and contraceptive counseling, practices related to contraceptive method provision, and their knowledge and potential biases about PAC clients using contraception. We used descriptive statistics for analysis.

Results: PAC clients were 19–46 years old, and most (69%) had at least 1 child. Almost all PAC clients (94%) reported being counseled on contraception, but only 47% reported choosing and receiving a method before being discharged from the facility. Nevertheless, by the time of the survey, 71% reported using a method. PAC clients' main reason for not using contraception was wanting to become pregnant. Only 1 woman reported nonuse because of bleeding. Among providers, more than half (56%) reported there are contraceptive methods PAC clients should never use and about a quarter (26%) reported incorrect information on when PAC clients' fertility could return.

Conclusion: We found no evidence that bleeding associated with misoprostol for PAC influenced women's contraceptive uptake. However, as PAC programs expand to include misoprostol as a treatment option, accurate and high-quality postabortion contraception counseling and method provision at both treatment and follow-up visits must be strengthened.

INTRODUCTION

Unsafe abortion remains a serious threat to women's health, especially in countries where abortion is illegal or highly restricted. In Rwanda, abortion is illegal except to save the life of a pregnant woman, or when the pregnancy is a result of rape, incest, or forced marriage or poses a risk to the health of the woman or the fetus.^{1,2} Although Rwanda's abortion law was amended in 2012 to reduce penalties and increase exceptions for

permissible abortion, safe and legal abortion services remain extremely difficult to obtain due to burdensome processes, both women and health care professionals being unaware of the law, and/or stigma, leading many women to continue to resort to unsafe abortion.^{1,2} In 2009, 16,700 women aged 15–44 in Rwanda received care for complications resulting from unsafe induced abortion; however, about one-third of the women who experienced complications did not receive care.¹ In response to this problem, Rwanda implemented a national comprehensive postabortion care (PAC) program beginning in 2012 to strengthen and expand services to reduce mortality and morbidity caused by unsafe abortion. Part of this comprehensive PAC program

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WHO endorses the use of misoprostol as a first-line treatment for incomplete abortion.

included introducing misoprostol as a treatment option that can be delivered in the communities where PAC clients live.

Incomplete abortion can be treated using surgical methods, such as vacuum aspiration or dilation and curettage (D&C), or nonsurgical medical methods, such as misoprostol. The World Health Organization (WHO) endorses the use of misoprostol as a first-line treatment for incomplete abortion, either induced or spontaneous (miscarriage), and several countries have introduced misoprostol for PAC.^{3–6} A single oral dose of 600 µg or a single sublingual dose of 400 µg effectively treats incomplete abortions and miscarriages.⁷ The advantages of using misoprostol over surgical methods to treat incomplete abortion include the following⁷:

- It can be administered by lower-level providers (e.g., nurses and midwives in primary health facilities), thereby increasing accessibility to those who need PAC.
- It is a “no touch” technique, which eliminates the need for surgical equipment, space, and highly trained personnel, and it takes providers less time than surgical techniques.
- It enables women to be more involved because the woman initiates the treatment.
- It is less invasive and feels more natural than a surgical procedure.
- It is inexpensive.
- It is easy to transport and store.
- It has few medical contraindications.

In addition, several clinical trials have reported misoprostol to be acceptable to women. Women who have used misoprostol report that they would use it again to treat an incomplete abortion or that they would recommend the use of misoprostol to other women in need of treatment for an incomplete abortion.^{8,9}

Emergency treatment of incomplete abortion, miscarriage, and complications is only one component of PAC. It is equally important that PAC clients be counseled and offered contraceptive methods to prevent subsequent unintended pregnancies and repeat unsafe abortions. Several studies have illustrated significant increases in contraceptive uptake with modest intervention.^{10–12} However, these studies examined contraceptive uptake in settings where manual vacuum aspiration (MVA) and D&C were used for emergency treatment. We found only a single study that documented contraceptive uptake

among PAC clients treated with misoprostol. In that 2010 study, operations research was conducted in Mozambique to document the feasibility and acceptability of misoprostol for treating incomplete abortion and miscarriage at all levels of the health system.¹³ Between July 2010 and January 2011, 300 PAC clients were treated with misoprostol. Service delivery data indicated that almost all PAC clients reported being counseled on contraception prior to facility discharge, and 81% chose and received a contraceptive method before leaving the facility. These methods included oral contraceptives (54.7%), injectable contraception (17.3%), and condoms (8.3%). The high rate of contraceptive uptake in Mozambique suggested that PAC clients treated with misoprostol were similar to those treated with MVA or D&C.

However, contraceptive uptake among PAC clients treated with misoprostol might vary by setting and could be influenced by how well women tolerate the bleeding associated with misoprostol. One concern is that the extended bleeding associated with misoprostol might prevent women from initiating contraception. Other studies have documented that some PAC clients do not initiate contraceptive use after treatment because they believe they need to recover or heal.^{14–16} Moreover, bleeding irregularities are often cited as a reason why women discontinue method use in general.^{17–19}

To advance our knowledge about voluntary contraceptive uptake among PAC clients treated with misoprostol in other contexts, we surveyed PAC clients and providers in 3 districts in Rwanda as a part of government-driven efforts to improve PAC that included the introduction of misoprostol as a treatment for postabortion complications.²⁰ Our study objectives were to assess the contraceptive counseling and uptake among PAC clients treated with misoprostol, including whether extended bleeding associated with misoprostol affected contraceptive uptake, and to assess providers' knowledge, attitudes, and practices of counseling PAC clients on contraception and return to fertility.

■ METHODS

Study Design and Setting

FHI 360 worked with the Rwanda Ministry of Health (MOH) and Venture Strategies Innovations (VSI) to conduct this cross-sectional study. In 2012, VSI was working with the Rwanda MOH to implement a comprehensive PAC pilot program that offered both surgical and medical methods

Emergency treatment of incomplete abortion, miscarriage, and complications is only one component of PAC. PAC clients should also be counseled and offered contraceptive methods.

(including the introduction of misoprostol) to treat postabortion complications in primary health care facilities and hospitals in 4 districts.²⁰ In terms of misoprostol provision, providers (i.e., physicians, nurses, and midwives) were trained to administer misoprostol to eligible clients in stable condition with a gestational age of 12 or fewer weeks. Clients were to be given 3 tablets of 200 µg of misoprostol orally, stay at the facility for monitoring for 3 hours, and attend a follow-up visit 1–2 weeks after treatment. Providers were trained to provide counseling to PAC clients about all contraceptive methods, to talk to them about their reproductive goals, and to provide those who wanted to avoid pregnancy with condoms, pills, injectables, or implants or refer them for their method of choice prior to discharge at their treatment visit. Providers were trained that women could be offered an intrauterine device (IUD) at their follow-up visit. This study was built on VSI efforts to introduce misoprostol to treat incomplete abortion; at the time, MVA for PAC was only available at larger facilities. We implemented the study in 27 health facilities (district hospitals and health centers) that provide PAC in 3 of the 4 districts where the pilot program was being implemented: Gisagara, Bugesera, and Kicukiro districts.

Due to time and funding constraints, we had just over 1 month to recruit and survey study participants. We sought to survey as many PAC clients as possible during this time frame. PAC client eligibility criteria included being 15 years or older, receiving treatment for incomplete abortion at a study facility, and being willing to provide informed consent to participate in a survey. We trained study point persons at each facility to approach all PAC clients, during the recruitment time frame, after they received treatment (misoprostol, MVA, or D&C) for an incomplete abortion but prior to discharge, using a recruitment script to invite them to participate in the study. PAC clients who were willing to take part were asked to return to the facility to complete a survey between 10 days to 4 weeks after facility discharge. The 10-day minimum limit to the time frame allowed for some healing to take place, but also represents the minimal amount of time before a woman's fertility may return after experiencing a miscarriage and/or an incomplete abortion.

Eligibility criteria for providers included being involved in treating PAC clients at the study facility and being willing to give informed consent. We sought to survey at least 1 PAC provider at each facility where PAC clients were enrolled. In facilities

with multiple PAC providers, more than 1 provider was invited to take part in a survey if they were available. We administered surveys to PAC providers (defined as a nurse, doctor, or midwife who provides medical treatment, counseling, or both to a PAC client) on the same days PAC clients were surveyed.

Data Collection

We developed surveys to obtain information to answer our study objectives and pretested them prior to data collection. From March to April 2012, trained female Rwandan interviewers administered surveys in Kinyarwanda to PAC clients and providers using personal digital assistants (PDAs) to electronically record participants' responses. We asked clients about demographic and reproductive health characteristics, attitudes toward contraception and previous contraceptive use, contraceptive counseling received during their initial treatment and follow-up visits, and postabortion contraceptive uptake or reasons for non-use. We asked providers about their demographic characteristics, attitudes toward contraception, knowledge about return to fertility, pregnancy and contraceptive counseling, practices related to contraceptive method provision, and their knowledge and potential biases about PAC clients, including young women, using contraception.

Data Analysis

The study coordinator from FHI 360 Rwanda transmitted the survey data to FHI 360 North Carolina using a secure server. We imported the data from PDAs into SAS software version 9.3²¹ and used descriptive statistics for analysis. We restricted the client analysis to PAC clients treated with misoprostol since only 2 were treated with D&C and none were treated with MVA. We restricted the provider analysis to providers who had provided any PAC in the prior 3 months. We translated open-ended responses that had been typed into the PDAs from Kinyarwanda to English and categorized and summarized the responses. Two analysts from FHI 360 North Carolina independently produced all tables and resolved discrepancies.

Ethical Considerations

This study was reviewed and approved by FHI 360's Protection of Human Subjects Committee and the Republic of Rwanda National Ethics Committee. All PAC clients and providers gave

written informed assent (ages 15–20 years) or informed consent (age 21 years and above) prior to completing a survey. After the survey, we reimbursed PAC clients about US\$3.40 for their travel expenses per local norms. We did not compensate providers for participating because we conducted the survey at their workplace; therefore, no travel was involved.

■ RESULTS

PAC Client Characteristics

In total, 70 of 77 PAC clients who agreed to participate returned to the facility and completed the survey. We excluded from this analysis 2 PAC clients treated with D&C, resulting in a total analysis sample of 68 PAC clients who were treated with misoprostol. We surveyed the PAC clients at 17 facilities, including 4 district hospitals (n=33) and 13 primary care health centers (n=35). During the recruitment period, 10 of the study facilities had no PAC clients. The mean age of the PAC clients was 29.5 years (range 19–46), the majority had attended at least some primary school, and most were married (Table 1). About 70% reported having at least 1 living child and having used contraception previously. Study participants reported that they had primarily used short-acting contraceptive methods in the past, including injectables (53%), oral contraceptives (28%), and male condoms (7%). Few women had experience with long-acting methods; only 2 women reported that they had used implants previously. Eleven women (16%) reported that they were using a method at the time they became pregnant, including oral contraceptives, injectables, male condoms, CycleBeads, and withdrawal (data not shown). The need for postabortion contraception was great, with 60% of the women reporting that they wanted to delay childbearing and 16% reporting that they wanted to forgo all future childbearing. Finally, 13% of the women reported that they did not think they could get pregnant in the future.

Study participants reported that they had primarily used short-acting contraceptive methods in the past.

Almost half of the women said they left the facility with a contraceptive method, and at the time of the survey, 71% reported they were using contraception.

PAC Clients' Reports of Contraceptive Counseling and Uptake

Initiating contraceptive use is predicated on women understanding their risk of pregnancy postabortion. Among the PAC clients surveyed, 40% reported that they were not told when they could become pregnant again while 49% reported being told that they should delay pregnancy for at least 6 months (Table 2). However, 94% of the

PAC clients reported that they were counseled on contraceptive methods.

Almost half (47%) of the women said they chose and received a contraceptive method after being treated at their initial visit, prior to facility discharge. At the time of the survey, 71% of the women reported that they were using contraception. Those who were using a method at the time of the survey most likely obtained contraception from another source, such as a secondary health post or pharmacy; however, the survey did not capture this information. Most PAC clients reported using short-acting methods, including injectables, oral contraceptives, and condoms, at the time of the survey. Only 3 were using the implant, and none reported using an IUD. The PAC clients gave a variety of reasons for not using a contraceptive method, including the desire to become pregnant again, the belief that they were unable to get pregnant, disapproval of contraception, and concern that their bodies needed time to recover. Only 1 woman reported that she was not using a method because she was concerned about the bleeding she was experiencing.

PAC Provider Characteristics

We surveyed a total of 47 PAC providers; however, 4 providers had not provided any PAC in the past 3 months. Those providers were excluded from this analysis, resulting in a total analysis sample of 43 providers. PAC for treatment of incomplete abortion could include misoprostol, MVA, or D&C. We surveyed providers from 16 different facilities, including 4 district hospitals and 12 health centers. We surveyed at least 1 provider from all but 1 health facility where we surveyed PAC clients. Most providers were nurses (84%) while a few were midwives (9%) and physicians (7%) with varying levels of experience treating PAC clients (Table 3). In total, 72% of providers reported that they attended the Rwanda MOH/VSI training on using misoprostol to treat PAC clients.

PAC Providers' Reports of Contraceptive Counseling and Method Provision

All providers surveyed reported that in the past 3 months they had talked with PAC clients about the clients' desire to have children in the future (Table 4). However, some providers were misinformed about when PAC clients could become pregnant again, with 26% indicating that they could not get pregnant for a month or more after treatment. Most providers (93%) reported that

TABLE 1. PAC Client Sociodemographic and Reproductive Health Characteristics (N=68)

	Value
District, No. (%)	
Gisagara	29 (43)
Bugesera	28 (41)
Kicukiro	11 (16)
Number of PAC clients by facility type, No. (%)	
District hospital (4)	33 (49)
Health center (13)	35 (51)
Age, years, mean (range)	29.5 (19, 46)
Highest educational level attended, No. (%)	
Did not attend school	7 (10)
Primary	53 (78)
Secondary	8 (12)
Has a paid job, No. (%)	4 (6)
Marital status, No. (%)	
Currently married	50 (74)
Not married but living with partner	14 (21)
Not married but has boyfriend	2 (3)
Single, not in union	2 (3)
Has living child(ren), No. (%)	47 (69)
Has ever used a contraceptive method, No. (%)	48 (71)
Prior contraceptive method used, No. (%)	
Oral contraceptives	19 (28)
Injectables	36 (53)
Male condoms	5 (7)
Implants	2 (3)
CycleBeads	1 (1)
Was using method when became pregnant, No. (%)	11 (16)
Future pregnancy plans, No. (%)	
Immediately	6 (9)
Wait to become pregnant	41 (60)
Never want to become pregnant again	11 (16)
Do not think can get pregnant	9 (13)
Do not know	1 (1)

Abbreviation: PAC, postabortion care.

they advised PAC clients to wait 6 months before becoming pregnant again. All providers reported that in the past 3 months they had counseled PAC clients on contraception or referred them to a

secondary health post (a lower-level facility that provides contraceptive methods). Providers reported that they typically discussed a variety of methods with PAC clients; however, more

TABLE 2. PAC Client Contraceptive Counseling and Uptake (N=68)

	No. (%)
Client counseling	
Not told when they could become pregnant again	27 (40)
Counseled to wait at least 6 months before becoming pregnant	33 (49)
Counseled on voluntary family planning	64 (94)
Contraceptive uptake	
Chose and received method before facility discharge	32 (47)
Using method at time of survey	48 (71)
Method using at the time of the survey^a	
Injectable	22 (46)
Oral contraceptives	10 (21)
Male condom	9 (19)
Implant	3 (6)
CycleBeads	2 (4)
Missing	2 (4)
Reasons for nonuse^b	
Wanted to get pregnant	6 (30)
Thinks unable to get pregnant	3 (15)
Disapproves of family planning	2 (10)
Believes body is weak/needs to recover	3 (15)
Reports family planning not available	2 (10)
Has infrequent sex or is no longer with partner	1 (5)
Worries that bleeding is too much	1 (5)

Abbreviation: PAC, postabortion care.

^a N=48.

^b N=20.

More than half of providers reported that there were some contraceptive methods that PAC clients should not use.

providers reported discussing short-acting methods, such as oral contraceptives and injectables (84% and 91%, respectively), than long-acting methods, such as IUDs and implants (65% and 77%, respectively). Only 56% of providers reported that they discussed male condoms with PAC clients.

About one-third of providers reported feeling that they generally did not have enough time to provide contraceptive counseling or referrals to PAC clients. Approximately three-quarters of providers said that they personally give PAC clients contraceptive methods. Providers’ main reason for not personally giving clients contraceptive methods was that methods were not available where PAC was delivered, or that they were not dispensed in the facility at all (data not shown).

Providers thought that the main reason PAC clients do not use contraception was that they want to become pregnant again (data not shown).

PAC Provider Knowledge and Biases

Providers’ willingness to counsel PAC clients on contraception could be influenced by their knowledge of which methods PAC clients can use and their personal opinions on providing women and young women information on contraception.^{14,15,22} More than half (56%) of providers reported that there were some contraceptive methods that PAC clients should not use, with 37% reporting that PAC clients should not use IUDs (Table 5). When we investigated biases PAC providers might have toward unmarried and

TABLE 3. PAC Provider Sociodemographic Characteristics and PAC Experience (N=43)

	No. (%)
District	
Gisagara	19 (44)
Bugesera	19 (44)
Kicukiro	5 (12)
Number of providers by facility type	
District hospital (4)	17 (40)
Health center (12)	26 (60)
Sex	
Male	15 (35)
Female	28 (65)
Age, years, mean (range)	32 (25–52)
Job title	
Nurse	36 (84)
Physician	3 (7)
Midwife	4 (9)
Length of time providing PAC	
<6 months	12 (28)
6 months to 1 year	3 (7)
1–5 years	15 (35)
>5 years	13 (30)
Participated in VSI/RMOH training on misoprostol for PAC	31 (72)

Abbreviations: PAC, postabortion care; RMOH, Rwanda Ministry of Health; VSI, Venture Strategies Innovations.

young women, we found that almost all PAC providers believed that unmarried women should not have sex and 42% believed that giving contraception to young women would motivate them to have sex.

DISCUSSION

This study is one of the first to explore PAC client and provider perspectives on contraceptive uptake among clients treated with misoprostol for PAC. In this study, almost all surveyed PAC clients in 3 selected districts of Rwanda reported being counseled on contraception, almost half reported that they chose and received a contraceptive method prior to facility discharge, and nearly three-quarters reported that they were using a method at the time of the survey. We found no evidence to suggest that the bleeding associated with misoprostol use inhibited PAC clients'

contraceptive uptake. All PAC providers reported counseling women on contraception; however, they were more likely to counsel and provide PAC clients with short-acting rather than long-acting methods. Providers did not consistently have or deliver accurate information on return to fertility, some had misconceptions about what contraceptive methods PAC clients could use, and several held negative opinions toward unmarried women having sex and young women being given contraception.

The levels of contraceptive uptake we found for PAC clients treated with misoprostol in 3 districts in Rwanda were similar to the results of studies that examined contraceptive uptake after strengthening postabortion contraception services (e.g., providing contraception at the same time and location as PAC) for women treated with surgical methods in other African countries, such as Burkina Faso (83%), Ethiopia (78%), and

We found no evidence to suggest that the bleeding associated with misoprostol use inhibited PAC clients' contraceptive uptake.

TABLE 4. PAC Providers' Experience Providing Contraceptive and Pregnancy Counseling (N=43)

	No. (%)
Talked to PAC clients about future plans to have children^a	43 (100)
Thinks PAC clients can become pregnant again:	
Within 10 days of treatment	28 (65)
After 1 month or more post treatment	11 (26)
Tells PAC clients to wait 6 months before becoming pregnant again	40 (93)
Feels has enough time to counsel/refer PAC clients to voluntary contraception	29 (67)
Counseled PAC clients on voluntary contraception/referred them to secondary health post for method^a	43 (100)
Discusses long-acting and permanent methods	
IUD	28 (65)
Implants	33 (77)
Female sterilization ^b	8 (19)
Vasectomy	7 (16)
Discusses short-acting methods	
Oral contraceptives	36 (84)
Injectables	39 (91)
Male condoms	24 (56)
Female condoms	13 (30)
Emergency contraception pills	4 (9)
Discusses fertility awareness methods	
CycleBeads ^c	9 (21)
Provider personally gives contraceptive methods to PAC clients	32 (74)

Abbreviation: PAC, postabortion care.

^aIn the past 3 months.

^bPAC clients are generally asked to return to the facility to seek this procedure.

^cThis method cannot be initiated by a PAC client until return to normal menses; this is important to avoid a future unintended pregnancy.

Tanzania (70%).²³ Our results are also similar to an evaluation of the pilot program implemented by the Rwanda MOH with support from VSI. That evaluation, done in 2013, reported that more than 80% of PAC clients were treated with misoprostol and 59% chose and were discharged with a contraceptive method.²⁰ Our results indicate that postabortion contraceptive uptake of women treated with misoprostol for incomplete abortion is comparable with the contraceptive uptake of women treated with other methods for incomplete abortion and is not hindered by bleeding associated with misoprostol.

The main strength of our study is that we surveyed women after they were discharged from the health care facility. This gave PAC clients time to start using the method they were discharged with or to seek a method from another location and

start using it. This is especially important in Rwanda because facilities with a religious affiliation, predominantly Catholicism, do not provide methods on site but are trained to refer PAC clients to secondary health posts located nearby for contraception.²⁰ Several of our study facilities were Catholic and did not offer modern contraceptive methods. Therefore, between facility discharge and the survey, PAC clients likely went to a secondary health post or another location (e.g., pharmacy) to obtain a contraceptive method, which may explain the gap between facility discharge with a method and reported contraceptive use at the time of the survey. It should be noted that the amount of time to adopt contraception varied since clients were interviewed between 10 days to 4 weeks after receiving PAC. It is also important to note that some clients may have sought PAC

TABLE 5. PAC Providers’ Postabortion Contraceptive Knowledge and Opinions (N=43)

	No. (%)
Reported there are methods that should never be used by PAC clients	24 (56)
Methods believed should never be used by PAC clients	
IUD	16 (37)
Implants	1 (2)
Injectables	1 (2)
CycleBeads	4 (9)
Female sterilization	2 (5)
Any traditional method	1 (2)
No response	1 (2)
Agreed with statement: “Unmarried women should not have sex until marriage.”	41 (95)
Agreed with statement: “Giving family planning to PAC patients under 20 years old will motivate them to have sex.”	18 (42)

Abbreviation: PAC, postabortion care.

due to miscarriage, which may explain why the main reason for contraceptive nonuse was the desire to become pregnant again.

Like previous studies,²⁴ our study revealed that providers were more likely to counsel and provide PAC clients with short-acting rather than long-acting or permanent methods. Most PAC clients in this study who were using contraception at the time of the survey reported using injectables, oral contraceptives, and male condoms. Very few reported using implants, and none were using IUDs. These findings are similar to the contraceptive use reported among all women in the 2010 Rwanda Demographic and Health Survey (the time period closest to our survey) in which the most commonly used modern contraceptive methods were injectables (14.6%), oral contraceptives (3.9%), implants (3.6%), and male condoms (2.9%).²⁵ Moreover, only 0.2% were using IUDs. Long-acting methods should be offered to PAC clients because they are highly effective in reducing unintended pregnancies and are appropriate for most PAC clients. According to WHO guidelines, IUDs can be safely used by PAC clients, but those treated with misoprostol should not get an IUD inserted until a follow-up appointment to ensure complete abortion.³ Although PAC providers in Rwanda were trained to offer IUDs to women treated with misoprostol for PAC, more than one-third of providers in our study felt that IUDs should never be used by PAC clients. In practice, few providers actually provide postabortion IUDs. In addition, some women, especially young

women, do not attend follow-up appointments due to inconvenience or fear of stigma related to abortion.^{5,26} Therefore, more work should be done to explore strategies to overcome challenges in promoting postabortion IUD uptake. Same-day implant insertion for PAC clients who want to prevent pregnancy should also be encouraged since this is an increasingly popular method in Rwanda.²⁷

Our study found that PAC providers did not deliver information on return to fertility to all PAC clients. Further, not all providers had accurate information on it. Women receiving PAC need accurate information on when they can become pregnant again in order to make informed contraceptive choices. In addition, although almost all providers said they counseled women to wait 6 months to become pregnant again, just under half of PAC clients reported receiving this advice. Providers may have overreported this, or perhaps they counseled some but not all PAC clients. Furthermore, almost all PAC providers in this study felt that unmarried women should not have sex and almost half felt that giving young women contraception would motivate them to have sex, which likely influenced the way they counseled PAC clients. Enhanced training for providers on accurate information about return to fertility and which methods can safely be used by PAC clients, coupled with stronger referrals to contraceptive services from facilities where contraception is not available, will likely further increase contraceptive uptake. A key consensus statement by major international donors and

Long-acting methods should be offered to PAC clients because they are highly effective in reducing unintended pregnancies and are appropriate for most PAC clients.

Voluntary contraceptive services—and postabortion contraception services in particular—must continue to be strengthened to help women avoid future unintended pregnancies.

health provider associations on postabortion voluntary family planning recommends providing PAC clients with skilled counseling to create a plan for obtaining ongoing contraceptive supplies as well as simple written instructions and information about their method of choice.²⁸

Nearly half of pregnancies in Rwanda are unintended,¹ and nearly one-fifth of women are not using modern contraception but wish to delay, space, or limit childbearing.²⁷ Rwanda has made significant progress in improving reproductive health in recent years. Since this study was conducted, integration of comprehensive PAC into other services has continued; however, work remains to be done, specifically adding misoprostol for PAC to the list of essential medicines at the health center level, updating the comprehensive PAC guidelines, and continuing to have more practical trainings for providers to strengthen their PAC skills. Therefore, contraceptive services—and post-abortion contraception services in particular—must continue to be strengthened to help women avoid future unintended pregnancies.

Limitations

This study had some limitations. The main limitation is that our small sample size only allowed presenting our findings descriptively and in aggregate. Consequently, we were unable to make meaningful comparisons between districts, types of health facilities, and younger versus older women. In addition, given that we relied on self-reported data, our results are subject to recall and social desirability biases. It is unknown whether these biases would inflate or underestimate the percentage of women who said they chose and were discharged with contraception and were using it at the time of the survey. These biases may have inflated providers' responses about counseling women on contraception and return to fertility. Finally, this study included only women who obtained PAC and agreed to be interviewed; we do not know if or how the perspectives and contraceptive uptake might differ for women who did not seek PAC or refused to be interviewed.

In general, women aged 24 years or younger are more likely to have unsafe abortions than older women, especially in Africa²⁹; however, few PAC clients in our study reported being 24 years or younger. It is possible that PAC clients in this study may have reported being older and/or married due to the strong stigma against young people using contraception and abortion in general in this context. This may have led to an

undercount of younger women and adolescents. Moreover, adolescents are less likely to seek PAC,²⁶ which may have affected the number of young women available to participate in this study. Future research should focus on documenting the experiences and perspectives of adolescent and young PAC clients since they may differ from experiences of older women.

CONCLUSION

As PAC programs are expanded to include misoprostol, these services have the potential to become available closer to where women live and offered by a lower cadre of providers, which in turn will save lives. However, as these efforts are expanded, training providers to ensure that they give PAC clients accurate information on return to fertility, unbiased youth-friendly comprehensive contraceptive counseling, and contraceptive method provision is still critical and should be reinforced to improve access and care. Increasing the use of long-acting methods among PAC clients who want these methods should also be a part of these efforts going forward.

Acknowledgments: We would like to thank the study participants for sharing their time and experiences with us. In addition, we would like to acknowledge the support from colleagues in the FHI 360 Rwanda office and the Rwanda Ministry of Health and to acknowledge Steve Sortijas of FHI 360 for programming the surveys into the personal digital assistants, Leila Dal Santo of FHI 360 for verifying the data tables, and Natasha Mack of FHI 360 and Callie Simon of Save the Children for reviewing this manuscript.

Funding: This project was funded by the William and Flora Hewlett Foundation.

Disclaimer: The findings and conclusions in this article are those of the authors and do not necessarily reflect the views of the Rwanda Ministry of Health, FHI 360, Venture Strategies Innovations, or the William and Flora Hewlett Foundation.

Competing Interest: None declared.

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Peer Reviewed

Received: October 3, 2018; Accepted: February 12, 2019

Cite this article as: Packer C, Pack AP, McCarragher DR. Voluntary contraceptive uptake among postabortion care clients treated with misoprostol in Rwanda. *Glob Health Sci Pract*. 2019;7(suppl 2):S247–S257. <https://doi.org/10.9745/GHSP-D-18-00399>

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ORIGINAL ARTICLE

Reducing Barriers to Postabortion Contraception: The Role of Expanding Coverage of Postabortion Care in Dar es Salaam, Tanzania

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Expanding postabortion care (PAC) coverage to 64 public facilities over 30 months in Dar es Salaam, Tanzania, contributed to >6,000 women voluntarily adopting a contraceptive method, for an overall acceptance rate of about 81% and 78% adopting a long-acting method. Key interventions included clinical training and follow-up mentorship; PAC service reorganization, equipment provision, and an expanded method mix offering; standardized PAC documentation tools; and community linkages and referrals.

ABSTRACT

Background: In Tanzania, limited access to postabortion care (PAC) contributes to high rates of maternal mortality. To address the issue, Pathfinder International and the Tanzania Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) introduced and expanded coverage of PAC in 64 public health facilities in Dar es Salaam, Tanzania.

Methods: During a 30-month period, we implemented a multifaceted approach to introduce and expand PAC, including clinical training and mentorship for health care providers; service reorganization, equipment provision, and an expanded method mix offering; standardization of PAC reporting tools; and community engagement and referral. We assessed outcomes using PAC service statistics from 64 public health facilities in 4 districts of Dar es Salaam and health care provider mentorship data from 385 observed PAC visits.

Results: From January 2016 to June 2018, voluntary postabortion contraceptive uptake increased steadily. A total of 6,636 PAC clients, including 2,731 young people (ages 10–24), adopted a method post-procedure. Average semesterly client volume per facility increased from 27 to 52.4 manual vacuum aspiration clients and 17.6 to 43.9 postabortion contraceptors between the first and last periods. Overall postabortion contraceptive uptake was 80.6% (6,636/8,230), with a method mix of 58.3% implant, 18.9% intrauterine device, 13.7% pills, 8.6% injectables, and 0.5% permanent methods. Adults and young people had comparable method mix. Mentored providers showed improvements in service quality indicators. During the last period, 92% counseled the client on contraception, 93% considered the client's sexual and reproductive health intentions, 94% provided correct method information and supply, and 96% documented services on the client's family planning card. Different provider types (mid- and senior-level) performed comparably.

Conclusions: Expanding PAC coverage to primary- and secondary-level facilities led to high uptake of voluntary contraception among postabortion clients. Key interventions included PAC clinical training and mentorship; service reorganization, equipment provision, and an expanded method mix offering; use of standardized PAC registers; and community engagement for awareness building and linkage to PAC.

BACKGROUND

Treatment of complications resulting from unsafe abortions and prevention of unintended pregnancies are essential strategies for reducing maternal mortality, which globally claims approximately 830 lives each day.¹ Yet many countries face challenges implementing such strategies, despite national and global efforts to

support them. Sub-Saharan Africa disproportionately experiences high maternal death rates resulting from unsafe or untreated abortions, which accounted for 9.6% of all maternal deaths in the region between 2003 and 2009.² In Tanzania, the maternal mortality ratio is estimated to be 556 deaths per 100,000 live births,³ and despite concerted efforts in recent years, the country still struggles to reduce the number of deaths. While Tanzania has improved child survival rates due to sustained investments over time and a focus on high-impact practices at lower levels of the health system,

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maternal health has had more variable commitments, which have occurred at higher levels of the health system and been implemented at a smaller scale.⁴ Abortion is restricted in Tanzania and unsafe abortion plays a substantial role in Tanzania's poor maternal health performance, with an annual incidence of induced abortions estimated at 405,000.⁵ The problems are compounded by limited access to contraceptive services, which leads to approximately 1 million unintended pregnancies annually⁶: the national modern contraceptive prevalence rate is only 27%, while 22% of the women who wish to delay or limit childbearing are not using modern contraception.³

High-quality postabortion care (PAC) can greatly help reduce the morbidity and mortality associated with unsafe or incomplete abortions, and it includes both curative and preventive care components.⁷ Experts have identified 5 essential, interrelated components of PAC: treatment of complications, counseling, contraceptive services, other sexual and reproductive health (SRH) services such as sexually transmitted infection (STI) testing and treatment, and community partnerships and service linkages.⁸ Research has demonstrated the importance of information provision and linkages to ancillary services—including comprehensive counseling and contraception—as part of the PAC service package, and it has shown them to be recognized indicators of quality care.^{9,10} An expanded method mix is another indicator of quality care. A recent multicountry analysis identified the provision of at least 1 modern, short-acting contraceptive method as a signal function of a health system's capacity to provide basic PAC and provision of at least 1 short-acting and 1 long-acting reversible contraceptive (LARC) method or permanent method as signal functions for comprehensive PAC capacity.¹¹

Decades of program implementation have generated evidence and contributed to globally recognized best practices for postabortion contraception. Contraceptive counseling and full method availability at the same time and location where women receive treatment for abortion complications is a proven high-impact practice because it makes contraception available immediately after the procedure.¹² Removal of cost barriers by offering free contraceptive methods and services, including LARCs, further contributes to contraceptive uptake.¹³ Practitioners have made other essential recommendations for increasing

uptake of postabortion contraception among vulnerable groups such as youth and adolescents, including the removal of facility policies and practices that require women to be married or have parental or spousal consent for contraception and the presence of skilled providers trained in nonjudgmental and respectful youth-friendly service delivery.¹⁴

A correlation exists between improving the quality of postabortion care services and increasing the uptake of postabortion contraception. Experience in Togo shows that even within a relatively short period, contraceptive counseling and method uptake among postabortion clients increased substantially when PAC service quality improved. Mugore and colleagues claimed that¹⁵:

high-quality PAC services avert repeat unplanned pregnancies and the cycle of repeat abortions; they do this by providing counseling and a broad range of contraceptive services at the time and location of emergency treatment of abortion complications, and before the patient is discharged from the facility.

While global health consensus supports the provision of PAC, its implementation in Tanzania has not been easy, despite strong efforts. Service oversight in the country is segmented between units within the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC), with the Safe Motherhood Initiatives unit managing treatment of pregnancy complications and the Reproductive and Child Health unit overseeing contraception. The national PAC training curriculum includes contraceptive counseling, but it does not include method provision. Barriers to streamlined service oversight and limitations of national training tools have contributed to previous PAC programming focusing almost exclusively on emergency treatment (e.g., uterine evacuation) rather than a comprehensive package of curative and preventive services. Moreover, emergency obstetric care training and service provision tend to focus more on signal functions such as managing postpartum hemorrhaging rather than treating complications from an abortion—in part due to stigma—regardless of the gravity of both. Service segmentation within the facility also adds a logistical and privacy burden: PAC is based in the maternity ward, where postabortion clients interact with delivering mothers, while contraceptive counseling and provision are offered in facility family planning rooms. The absence of national health management information system (HMIS) tools for PAC has prevented the standardized documentation of services and limited the

Between 2015 and 2018, Pathfinder and MOHCDGEC strengthened and expanded contraception services and PAC in public facilities of Dar es Salaam.

ability of facility and district health team management to use performance data for decision making.

With funding from an anonymous donor, Pathfinder International and MOHCDGEC implemented the *Chaguo La Maisha* (CLM) or “Choice of Life” project in January 2015 to strengthen and expand contraception services and PAC in public facilities of Dar es Salaam. CLM began in 36 facilities in 1 district in 2015 and eventually scaled to 96 facilities in 4 districts by 2018 for contraceptive services; PAC was introduced in 64 of these facilities. The CLM-supported PAC service package includes the use of manual vacuum aspiration (MVA) for uterine evacuation if indicated; provision of high-impact,¹⁶ nonjudgmental, and respectful youth-friendly services (YFS) (Box); comprehensive contraceptive counseling and expanded method mix provision at point of treatment; STI (including HIV) screening and treatment; follow-up appointment for continued care; and community linkages. This article describes the approach we used to introduce and expand PAC service coverage and demonstrates its effectiveness in removing barriers to accessing voluntary contraceptive services among postabortion clients.

METHODS

Baseline

In February 2015, Pathfinder International and the Regional Health Management Teams (RHMTs) conducted a baseline assessment of existing PAC and contraceptive services in 36 public facilities (4 hospitals, 2 health centers, and 30 dispensaries) in Temeke district of Dar es Salaam. The teams assessed the facilities with regard to client volume; service availability, organization, and integration;

provider training; elements of YFS; and data collection/use practices. Key baseline results found that 12 facilities (33.3%) offered MVA for treatment of incomplete abortion (with most facilities using sharp curettage as the standard for treatment), 1 facility (2.8%) offered contraception post-procedure (pills only), and no facilities (0%) provided all components of PAC together (Table). Pathfinder, the RHMTs, and facility management used deficiencies found during baseline to create facility-based action plans and supported their implementation.

Program Interventions

We supported a mutually reinforcing package of quality improvement interventions that encompassed provider clinical training and follow-up mentorship, including provision of YFS; service reorganization, supportive supervision, and equipment provision, including collocation of a range of contraceptive methods where PAC is offered; usage of a standardized PAC register that captures treatment of incomplete abortion type (e.g., MVA and sharp curettage), contraceptive method selection, and age disaggregation; and community engagement to increase awareness and acceptance of PAC and contraceptive services. (While PAC tools captured both MVA and sharp curettage, our training focused exclusively on MVA for the treatment of incomplete abortion and encouraged providers to shift away from the use of sharp curettage. Misoprostol is not used for treatment of incomplete abortion in Tanzania.) This article only includes MVA client data in the presented PAC results.

Provider Training and Follow-Up Mentorship

We applied a 2-phased approach of training and onsite follow-up mentorship to strengthen the

BOX. Key Attributes of Pathfinder-Supported Youth-Friendly Postabortion Care Services

- Providers receive training, values clarification, and mentorship to offer **nonjudgmental, respectful care** and the **full contraceptive method mix** regardless of age, marital, and matriculation status.
- Nonmedical staff receive training and values clarification to encourage an **enabling, welcoming environment** within the health facility.
- Service reorganization and infrastructure improvements ensure **confidentiality**, with audio and visual **privacy**.
- Service reorganization and contraception commodity collocation in PAC rooms ensure **24-hour per day/7-days per week availability** to meet schedules of young people.
- Community mobilizers sensitize on the availability of quality PAC and contraceptive services to build **community support**.
- Improved data collection instruments capture **age group disaggregation** among young people (preferably ages 10–14, 15–19, and 20–24).

TABLE. Summary of Selected Results From the Baseline Assessment of PAC Among 36 Facilities in Temeke District, Dar es Salaam, Tanzania (February 2015)

Element	Results
PAC services	<ul style="list-style-type: none"> • 12 (33.3%) facilities offered MVA treatment for incomplete abortion. • No facilities offered all components of PAC. • 1 (2.8%) facility offered contraception (pills only) post-procedure. • No facilities had a dedicated private room for PAC. • 4 providers in 3 facilities had training in PAC. • 1 (2.8%) facility had PAC guidelines.
Commodities and equipment	<ul style="list-style-type: none"> • 8 (22%) facilities had ergometrine available. • 10 (27%) and 3 (8%) facilities did not have sodium hypochlorite or analgesics, respectively. • 32 (89%) facilities had either no or poor-quality MVA equipment. • 18 (50%) facilities had either no or poor-quality sterilization equipment. • 16 (44%) facilities had either no or poor-quality examination tables.
Registers	<ul style="list-style-type: none"> • No facilities had standardized registers, reporting tools, or procedures for documenting PAC.

Abbreviations: MVA, manual vacuum aspiration; PAC, postabortion care.

clinical skills and confidence of PAC providers to comfortably deliver and document services. As of June 2018, we trained 236 providers in PAC, 120 of whom were midlevel providers (e.g., enrolled and registered nurses) in support of task-sharing efforts to increase the number of providers trained and authorized through delegation to provide MVA and contraceptive methods. We used the national training curriculum and added modules on values clarification and YFS orientation to reduce stigma and bias pertaining to women and adolescents who need reproductive health services and included content on counseling and the provision/removal of LARCs. All PAC providers received clinical training in MVA and contraceptive method (including LARCs) insertion and removal. LARCs provided under this program are Jadelle and Implanon implants and the Copper T 380A intra-uterine device (IUD).

Providers learned balanced counseling techniques to assess the client’s reproductive health intentions and medical eligibility prior to counseling on methods. Counseling reviews method options, starting with the most effective ones and progressing to less effective ones, as well as opportunities for method removal if desired.¹⁷ Research shows that a rights-based approach to contraceptive counseling should focus on method effectiveness as the leading factor, and Stanback and colleagues argue the following¹⁸:

the effectiveness of any contraceptive method is its paramount characteristic, and counseling that does not use [World Health Organization] tiers (with the most effective methods discussed proactively) fails to meet the true needs and desires of the majority of women.

YFS orientation included offering the full contraceptive method mix to adolescents and youth regardless of age, marital, and matriculation status. Finally, providers received no incentives for clients adopting contraception or specific methods, and service provision was not contingent upon clients accepting contraception.

We engaged 12 experienced providers from MOHCDGEC (to strengthen ministry personnel and support buy-in) and trained them to serve as mentors, using the ministry’s *Reproductive, Maternal, Newborn, Child, and Adolescent Health Clinical and Facility Mentorship* curriculum as part of the onsite follow-up post training. While all providers received some mentorship follow-up, the program specifically targeted individuals considered to have the most need of follow-up support. Mentors conducted mentorship in a range of clinical areas, including PAC. A tablet-based mobile application guided mentors through service steps using international and national guidelines and quality standards to track provider skill during service provision and over time. These checklists also guided mentors through verification of YFS components

As of June 2018, we trained 236 providers in PAC, 120 of whom were midlevel providers.

We engaged 12 experienced providers and trained them to serve as mentors to provide follow-up support to newly trained providers.

such as provider assurance of privacy, confidentiality, and judgment-free care. Under the PAC application, mentors monitored quality service indicators such as the providers' ability to appropriately assess the client's SRH intentions (including desire for future pregnancy), offer comprehensive contraceptive counseling (including opportunities for method removal if desired) and recommendation for the timely initiation of a method after abortion to protect from future unintended pregnancy or support appropriate spacing of pregnancies, and document services on client's family planning card.

Service Reorganization and Equipment Provision

Prior to project intervention, only a few facilities offered multiple components of PAC (e.g., MVA and postabortion contraception), but did so in disparate parts of the facility and by different types of providers. Much of the onus for receiving comprehensive service fell on the client. She would often have to navigate various service rooms (e.g., maternity, family planning room, and pharmacy) and would encounter many providers and clients along the way, which compromised privacy and confidentiality and presented further barriers to service access.

We worked with the RHMTs, council health management teams, and facility managers to assess PAC service layout and organization and make appropriate upgrades. Our advisors stressed the importance of PAC being offered in a separate space if possible (as opposed to within the maternity), for optimal client privacy and confidentiality, and for the collocation of an expanded method mix of contraceptive commodities to encourage informed choice and voluntary uptake immediately post-procedure. The advisors advocated for PAC service availability 24 hours a day, 7 days a week and worked with facility managers to identify capacity support needed to ensure this schedule. We worked within existing facility layouts to provide targeted infrastructure improvements to increase the auditory and visual privacy and confidentiality of PAC. Finally, we worked with facility managers and supply chain staff to ensure the collocation of contraceptive commodities, other essential PAC commodities, and appropriate equipment within PAC rooms. By June 2018, among the 64 facilities, 40 provided PAC in separate rooms, 15 provided PAC in partitioned space within the family planning room, and 9 continued to provide PAC in the maternity ward (due to space limitations that prevented facilities from

separating PAC from maternities, as advised). We equipped these facilities with a total of 380 MVA kits, 309 sterilization drums, 271 instrument trays, 130 IUD and implant kits for insertions and removals, 13 autoclave units, and other essential equipment for PAC.

Standardized PAC Registers

The baseline assessment identified no standardized register for PAC as a major barrier to the documentation of services. The few facilities offering postabortion treatment used improvised counter books as registers. These registers were typically kept in the operating room (where contraceptive methods were not offered) and were frequently misplaced, leading to inconsistent use. Contraceptive counseling and method provision for postabortion clients were not documented alongside treatment services. While facility family planning registers identified postabortion contraceptive users, few postabortion clients were counseled and referred for contraception, and there was no process by which family planning service documentation was linked with postabortion treatment services provided elsewhere in the facility. Between July and December 2016, we developed a standardized PAC register with age group disaggregation for youth and adolescents (ages 10–14, 15–19, and 20–24) that tracked contraceptive counseling, method provision, and referral for STI treatment, among other quality indicators. With our support, facilities back-entered service data for the period of January to June 2016 and used the registers moving forward. Provider mentorship and supportive supervision visits reviewed registers and cross-checked them with HMIS data for accuracy and consistency. Finally, our advisors worked with district health teams and facility managers to strengthen routine performance monitoring of PAC and voluntary contraception services for decision making.

Community Engagement and Mobilization

To strengthen community awareness and access to health services, we recruited 215 community mobilizers to provide counseling and referrals for contraceptives and PAC. Community mobilizers received a 2-week training and orientation to a systematic door-to-door approach to identify, counsel, and provide respectful care to clients. During home visits, community mobilizers sensitized women to the availability and safety of PAC using mobile-based job aids. Between July 2015 and June 2018, community mobilizers

We worked with the RHMTs, council health management teams, and facility managers to assess and improve PAC service layout and organization.

counseled 283,127 women on contraception and PAC; generated 208,691 referrals (mostly for contraception), of which 96,702 were completed by the client; and provided 30-day follow-up visits to 112,686 women.¹⁹

Data Collection and Analysis

We used national HMIS data generated from project-introduced facility PAC registers and descriptive statistics to measure and analyze MVA and contraception results with age and method disaggregation. Technical assistance visits afforded us the opportunity to review data quality between registers and HMIS data with facility staff, and data quality audits provided standardized scrutiny and capacity support for improving data quality. For mentorship data, we used an open-sourced mobile application (i.e., CommCare) to collect data and guide mentorship visits. Mentors followed the mobile application, which uses a quality checklist for service provision, to record provider performance during mentorship visits and calculate competency scores. We downloaded mentorship data from the CommCare server and used descriptive statistics to measure and analyze provider mentorship performance in key postabortion contraception indicators.

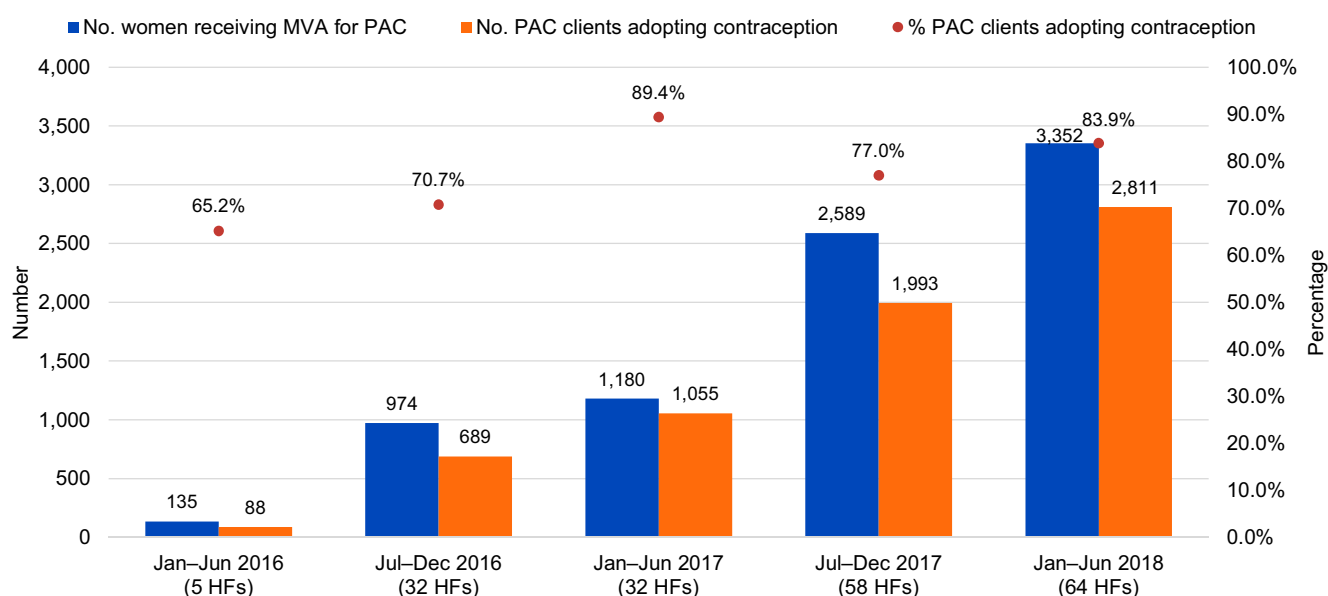
RESULTS

Increased Uptake of Voluntary Postabortion Contraception

From January 2016—when facilities started reporting PAC using a standardized register—to June 2018, uptake of voluntary postabortion contraception increased steadily as PAC coverage expanded from 5 to 64 facilities. The number of postabortion clients voluntarily choosing contraception before discharge from the facility increased each semester from 88 (5 facilities) in January–June 2016 to 2,811 (64 facilities) in January–June 2018, for a total of 6,636 clients during the 30-month period. The proportion of postabortion contraceptors among all MVA clients was 65.2% in January–June 2016 and 83.9% in January–June 2018 (Figure 1), for an average of 80.6% (6,636/8,230) during the 30-month period (not shown). Adolescents and youth (ages 10–24) accounted for 40.9% (3,364/8,230) of MVA clients and 41.2% (2,731/6,636) of postabortion contraceptors (not shown). Contraceptive method mix for all postabortion contraceptors (n=6,636) from January 2016 to June 2018 was 58.3% implant, 18.9% IUD, 13.7% pills, 8.6% injectables, and 0.5% permanent methods. Method mix for postabortion contraceptors was comparable between young people (ages 10–24) and adults (ages ≥25) (Figure 2).

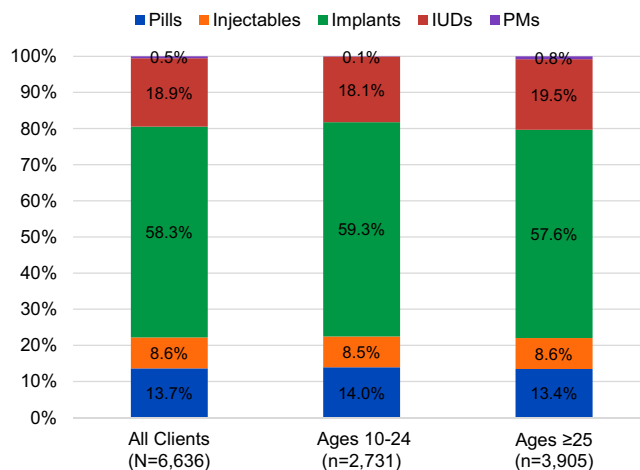
Uptake of voluntary postabortion contraception increased steadily as PAC coverage expanded from 5 to 64 facilities.

FIGURE 1. Total MVA and Postabortion Contraceptive Uptake



Abbreviations: HF, health facility; MVA, manual vacuum aspiration; PAC, postabortion care.

FIGURE 2. Method Mix Among Postabortion Contraceptors



Abbreviations: IUDs, intrauterine devices; PMs, permanent methods.

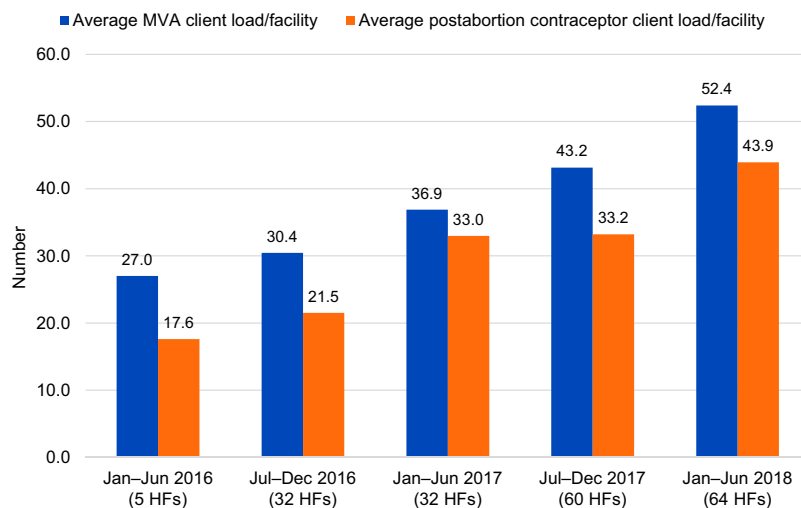
Coverage for PAC expanded, with both the number of facilities offering the service package and the average facility’s PAC service output increasing over time. To offset the effect of service expansion to new facilities on voluntary postabortion contraception performance, we calculated an average semesterly PAC client load per facility. Results show average MVA service use increased from 27.0 to 52.4 clients per facility per semester

and average postabortion contraceptors increased from 17.6 to 43.9 clients per facility per semester between the first (January–June 2016) and last (January–June 2018) periods (Figure 3).

Improved PAC Provider Capacity to Offer Contraceptive Services

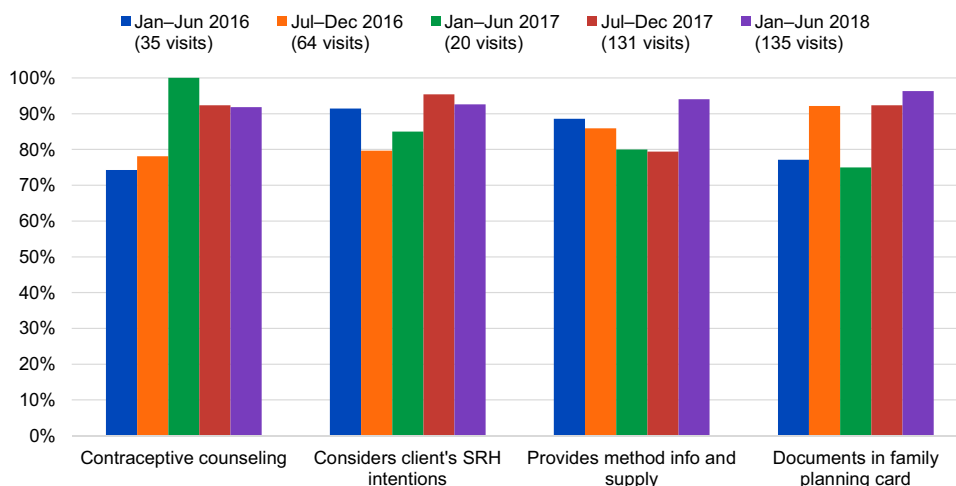
Through mentorship, providers received post-training follow-up support in PAC. Between

FIGURE 3. Average Semesterly PAC Client Load per Facility



Abbreviations: HF, health facility; MVA, manual vacuum aspiration; PAC, postabortion care.

FIGURE 4. Average PAC Provider Performance on Key Contraceptive Indicators



Abbreviations: PAC, postabortion care; SRH, sexual and reproductive health.

January 2016 and June 2018, 12 mentors supported 161 providers during 385 observed PAC visits, for an average of 2.4 mentored PAC client visits per provider. Over time, mentored PAC client visits yielded improvements in provider capacity to offer voluntary contraceptive services to postabortion clients. The average percentage of mentored providers counseling clients on contraception and encouraging its timely initiation after abortion increased from 74.3% (January–June 2016) to 91.9% (January–June 2018), while those offering contraceptive method information and supply prior to client discharge increased nominally from 88.6% (January–June 2016) to 94.1% (January–June 2018). The average percentage of mentored providers who considered the client’s SRH intentions, including desire for future pregnancy, did not change significantly, at 91.4% (January–June 2016) and 92.6% (January–June 2018). Service documentation, however, improved among mentored providers: the average percentage of providers documenting service details in the client’s chart and family planning card increased from 77.1% (January–June 2016) to 96.3% (January–June 2018) (Figure 4).

While overall PAC provider capacity to offer contraceptive services improved over time, performance across provider cadre was comparable. Mentorship supported enrolled nurses, registered nurses/midwives, assistant medical officers, and medical/clinical officers to strengthen the quality of PAC as we expanded support to more

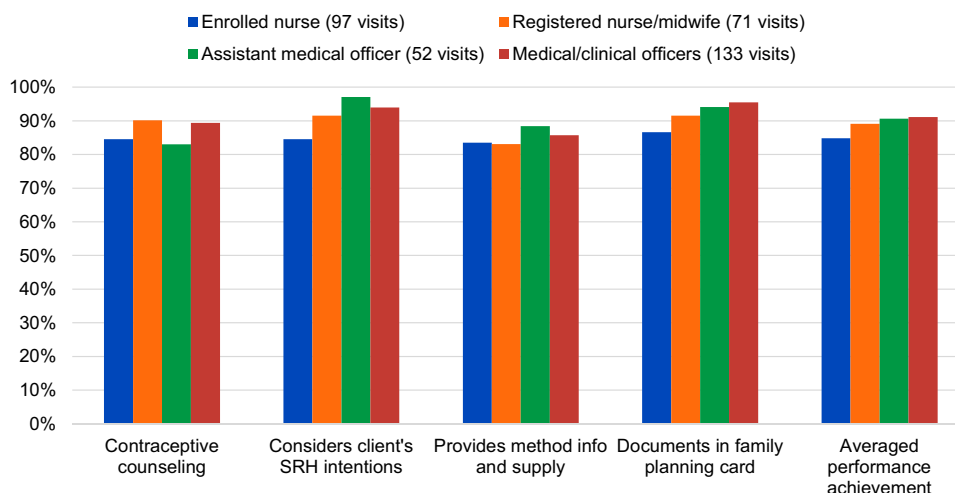
hospitals, health centers, and dispensaries. Different provider types performed within 7 percentage points (from 83.1% to 90.1%) for offering contraceptive counseling and 5.3 percentage points (from 83.1% to 88.4%) for providing method information and supply. Provider cadres performed with slightly more variation for considering the client’s SRH intentions and documenting services on the client’s family planning card, within 12.6 percentage points (from 84.5% to 97.1%) and 8.9 percentage points (from 86.6% to 95.5%), respectively. Overall, provider cadres performed within 6.3 percentage points (from 84.8% to 91.1%) when achievement was averaged across all 4 service quality indicators (Figure 5).

DISCUSSION

Abortion rates in Tanzania’s eastern zone (which includes Dar es Salaam) are high, estimated at 23.9 per 1,000 live births in 2013.²⁰ During this time, an estimated 54,655 induced abortions occurred per year for the region, many of which went without proper care: for every woman treated for an induced abortion, more than 8 women did not receive treatment. In an environment where abortion is legally restricted and highly stigmatized and access to PAC is significantly limited—with fewer than 8 facilities providing the service per 100,000 women nationally²⁰—many women seek unsafe abortions and do not

Mentored PAC client visits yielded improvements in provider capacity to offer voluntary contraceptive services to postabortion clients.

FIGURE 5. Average PAC Provider Mentorship Performance on Key Contraceptive Indicators, by Provider Cadre



Abbreviations: PAC, postabortion care; SRH, sexual and reproductive health.

Service results demonstrate that our efforts had a significant effect on women accessing comprehensive contraceptive counseling and provision.

receive quality treatment for resulting complications. Compounding these problems, access to contraception is also limited, with only 48% of the demand for modern method contraception being met in Dar es Salaam.³ Contraception is well accepted and in high demand among women in Dar es Salaam admitted with complications from an unsafe abortion,²¹ yet postabortion clients have traditionally faced obstacles in accessing contraception. These obstacles may place them at heightened risk of having future unintended pregnancies and seeking additional unsafe abortions.

In this context, we strengthened and expanded PAC coverage to primary- and secondary-level public facilities across 4 districts in Dar es Salaam. We increased the number of facilities offering PAC and using a standardized PAC register from 0 at baseline to 64 through June 2018, 48 (75%) of which were at the primary (dispensary) service level. Of the 64 facilities offering PAC, 64 (100%) offer contraception at point of treatment, 24 hours per day/7 days per week, and 55 (86%) offer PAC in a private space exclusively used for that service. Comprehensive counseling and method mix availability at point of treatment improved, from 1 facility offering 1 short-acting method at baseline to 64 facilities offering at least 5 modern methods, including LARCs and voluntary sterilization. Evidence has shown that improving the quality of counseling and expanding the range of method options available to women promote

informed and voluntary choice.¹³ We increased the number and breadth of provider cadres eligible to offer PAC, training 236 providers, including 120 midlevel staff such as enrolled and registered nurses. Finally, communities improved their awareness of and linkage to PAC through a network of community mobilizers.

Service results demonstrate that these efforts had a significant effect on women accessing comprehensive contraceptive counseling and provision. In a 30-month period, 6,636 women, who previously might not have had the opportunity, increased their protection from future unintended pregnancies and possible additional abortions through uptake of voluntary postabortion contraception. Facilities increased their average semesterly client load as more people learned about and accessed PAC, with use of MVA for PAC nearly doubling and postabortion contraception increasing 2.5-fold between the first and last periods. The postabortion contraceptive uptake rate was high, at 80.6% between January 2016 to June 2018, which surpasses the recommended quality benchmark of at least 60% of all women receiving abortion services accepting contraception²² and is in line with other regional experiences.^{14,23,24}

Mentorship results show PAC provider capacity for quality contraceptive indicators improved over time and was comparable across provider cadres. Research has identified important sub-themes in quality abortion care indicators, including those that measure informed decision making

by the client.¹⁰ We found that PAC providers performed well for related indicators, with improvements in their ability to effectively counsel women in contraception, provide method information and supply, and document services, while maintaining high capacity to consider clients' SRH intentions—including desires to become pregnant. Through task-sharing efforts, we expanded the cadre of medical personnel qualified to offer PAC to include staff who traditionally did not offer surgical services such as MVA. Evidence shows that expanding PAC—including MVA—to mid-level providers who traditionally offer contraception at primary health facilities helps to expand access to quality PAC and supports uptake of post-abortion contraception.²⁵ However, while some research has found that provider type can influence access to and uptake of postabortion contraception,²⁶ we found contraceptive service offering was relatively comparable across different PAC provider cadres, with the average performance for 4 quality service indicators falling within 6.3 percentage points across 4 groups of providers. We found an expanded cadre of PAC provider types successfully increased coverage of postabortion contraception, with minimal variance in contraceptive service quality.

Method selection results are notable, with 77.3% (5,127/6,636) postabortion contraceptors adopting LARCs before discharge from the facility. Adults and young people (ages 10–24) had comparable preference for LARCs: 77.2% adults (3,013/3,905) and 77.4% young people (2,117/2,731) voluntarily selected LARCs. Immediate contraceptive service offering is crucial for helping women avoid risk of future unintended pregnancy because fertility can return as soon as 8–10 days postabortion. Studies have demonstrated that the adoption of a LARC immediately post-procedure protects a woman more from subsequent unintended pregnancies and repeat abortions than if it is adopted 3–6 weeks post-procedure.¹³ Demand for LARCs among postabortion clients has been shown to increase substantially when providers and facilities are skilled and equipped to offer them,¹⁵ and our experience supports this claim. Nonetheless, the LARC adoption rate was higher than seen in similar programs. We worked to increase access to and availability of LARCs in postabortion and standard contraceptive services and informed clients of options for method removal through several mutually supporting interventions, such as clinical training and mentorship in LARC insertion and removal and YFS to a broader range of health providers,

equipment provision (e.g., IUD kits), service integration, and community referrals. A focus on balanced counseling and no provider incentivization reinforced voluntarism and informed choice among clients.

Challenges

MOHCDGEC was an essential partner and much of CLM's success hinged upon its leadership, technical capacity, and support. Despite these advantages, the organization of technical units within the ministry did not always lend itself to strengthening PAC. Different ministry technical units manage different service components of PAC (e.g., treatment and contraception), which presents a segmented package of services. It was challenging at times to reinforce a service package that spanned different technical units, health care providers, and service registers, and required Pathfinder, district health teams, and facility management to work across structural divides to build PAC.

Limitations to facility space and our mandate to make improvements presented obstacles to reorganizing PAC in separate designated rooms in each facility. Where creating a PAC room was not feasible, we worked with facilities to partition a private space for PAC within the family planning room (15 of 64 facilities). Yet sometimes even this arrangement was not possible, particularly in smaller dispensaries. In these cases (9 of 64 facilities), we worked with facilities to offer PAC within the labor and delivery room.

While we strengthened PAC service documentation through introducing standardized reporting tools and providing capacity support to manage and use quality data, evidence shows that more support is needed to ensure all services are adequately documented. Historically, some providers offered postabortion treatment under the table to make supplemental income, taking advantage of confusion and poor transparency regarding services. Our work to mainstream PAC, including increased oversight by facility managers and improved provider confidence to document services, helped curb this shadow practice. Yet, we still found in selected cases, facilities required MVA kit replacements at rates faster than expected in comparison to documented service delivery, suggesting more kits were being used than what the registers showed. In these instances, we engaged facility managers and providers to address the issue and provided

More than three-quarters of postabortion contraceptors adopted LARCs before discharge from the facility.

While Pathfinder strengthened PAC service documentation, more support is needed to ensure all services are adequately documented.

refreshers on service documentation and data review practices.

Limitations

Limitations of this study include the absence of an established control group for comparison with the results. Every facility involved was an intervention site because resource limitations did not permit data collection in comparison facilities that had not received our support. Similarly, while baseline data afford a basic understanding of what the service quality and level were prior to the intervention, treatment data were sporadic and postabortion contraception data were largely unavailable before we began the program because facilities did not use standard and comprehensive logbooks for services. This circumstance prevents a true comparison of postabortion contraception data before and after the intervention.

Mentorship data documenting provider–client interactions during service delivery are useful for adding depth of quality to general service statistics, yet they pose limitations nonetheless. The information covers only a portion of PAC provided and varies in provider representation because the intervention’s focus was to improve the quality of providers thought to most need it. Furthermore, mentors covered a range of SRH services during their visits, including postpartum and general contraception provision. The sporadic nature of uptake of PAC, with 27–52 clients accessing care on average per facility each semester, made it difficult to always align service provision with planned mentorship visits. Therefore, mentorship data represent only a fraction of PAC provided (approximately 5%), and it is difficult to fully compare this data set with general PAC service statistics.

Finally, another limitation was the lack of a systematic process for effectively monitoring method discontinuation among postabortion clients. We trained and mentored providers to remove LARCs, and community mobilizers followed up with postabortion clients who were referred for PAC service, but no system or tool existed to comprehensively track postabortion contraceptors after discharge. Ascertaining how many clients discontinued their method over time was not possible, despite method interruption being a common reality faced by programs. Makensius and colleagues found that 25% of postabortion contraceptors in Kisumu, Kenya, discontinued their method within 3 months, with LARCs accounting for the most commonly discontinued method

type.²⁷ Our results do not show method discontinuation, which represents a gap in the data.

CONCLUSIONS AND RECOMMENDATIONS

Introducing and expanding coverage of PAC—particularly at lower levels of the health system—form a clear strategy for removing barriers to accessing postabortion contraception and suggest a path toward reducing rates of unintended pregnancies and unsafe abortions. Our experience reinforces evidence regarding global recommendations for PAC, including recommendations intended to ensure adolescents and youth access quality services. The program approach described here touches upon several essential and interrelated health systems strengthening and service delivery components and includes the following:

- Clinical PAC training and follow-up mentorship—including MVA, contraceptive counseling and provision, values clarification, and YFS—for mid- and senior-level provider cadres to ensure they apply learned clinical skills consistently and with confidence and respect
- PAC service organization and equipment supply to encourage privacy, confidentiality, and streamlined services (e.g., separate space for PAC; service availability 24 hours per day/7 days per week; and collocation of an expanded method mix and other PAC commodities)
- Standardized PAC tools with disaggregation for client age group (ideally 10–14, 15–19, 20–24, and ≥25 years), treatment type, and method selection
- Community engagement to increase awareness and acceptance of, and linkage to, facility-based gratis PAC

While implementing this package of support helped to strengthen the quality and expand coverage of PAC across a network of low- and mid-level health facilities, the process was time and resource intensive. We adapted its approach over time to improve feasibility of bringing interventions to scale and lay foundations for sustainability. Accordingly, we recommend a few strategies:

- Utilize and build upon technical leadership within ministries of health, particularly at regional and/or district levels, for leading

provider capacity building efforts, including clinical training and mentorship

- Integrate "treatment of postabortion complications with contraceptive service programming to ensure an appropriate investment and stable supply chain of contraceptive methods
- Implement on-the-job training with low dosage, high frequency rather than large one-time off-site trainings for improved skills and knowledge retention and reduced cost
- Invest in building capacities of facility managers through mentorship and supportive supervision, including service organization and data usage, to foster ownership and investment in quality PAC
- Support and strengthen a culture of performance review and accountability within the health facility, including regular data reviews and action planning/follow-up

Although PAC has been on the global agenda for years and consensus surrounds the high-impact practice of postabortion contraception, momentum in expanding the service package has only recently been made in Tanzania. Nonetheless, clear indicators of progress exist. In early 2019, MOHCDGEC approved official PAC data collection tools and is currently rolling them out across the health system. These tools will feed critical data into the national HMIS and will enable ministry officials, facility managers, and providers to monitor services appropriately. The "focus on implementation and use of data to drive coverage, especially when interventions are delivered at lower levels of the health system," is a critical step toward reducing maternal mortality.⁴ Yet Tanzania has more work to accomplish to address key bottlenecks to expanding PAC coverage, such as service segmentation within the ministry and facility physical spaces, human resource constraints, and the prevailing confusion about the legality and stigmatization of PAC. Sustained investment (both nationally and internationally) and commitment to support expansion of PAC to lower facility levels will be critical steps for Tanzania to take in its effort to increase access to contraception and reduce maternal mortality.

Acknowledgments: Mohamed I. Brooks, Pathfinder International (Watertown, MA), and Anna Maria Speciale, Pathfinder International (Barcelona, Spain) provided technical review and editing.

Funding: Anonymous.

Competing Interests: None declared.

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Peer Reviewed

Received: May 1, 2019; **Accepted:** July 24, 2019

Cite this article as: Stephens B, Mwandilima IJ, Samma A, Lyatuu J, Mimno K, Komwihangiro J. Reducing barriers to postabortion contraception: the role of expanding coverage of postabortion care in Dar es Salaam, Tanzania. *Glob Health Sci Pract.* 2019;7(suppl 2):S258–S270. <https://doi.org/10.9745/GHSP-D-19-00146>

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ORIGINAL ARTICLE

Findings and Lessons Learned From Strengthening the Provision of Voluntary Long-Acting Reversible Contraceptives With Postabortion Care in Guinea

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Integrating voluntary long-acting reversible contraceptive (LARC) methods within postabortion care (PAC) in Guinea has increased LARC uptake among PAC clients, compared with non-PAC clients. With aid from government champions and leveraging of resources, Guinea has incorporated PAC into national policies and guidelines and trained providers on PAC and LARCs to expand service provision.

ABSTRACT

Integrating voluntary family planning into postabortion care (PAC) presents a critical opportunity to reduce future unintended pregnancies. Although Guinea has low contraceptive prevalence overall, acceptance of long-acting reversible contraceptives (LARCs) among PAC clients is higher than among interval LARC users and higher than the national average. In 2014, we assessed the extent of LARC provision within PAC services and the factors influencing integration. Primary and secondary data collected from 143 interviews, 75 provider assessments, and facility inventories and service statistics from all 38 public facilities providing PAC in Guinea allowed exploration of voluntary family planning uptake in the context of PAC. Study findings showed that 38 of 456 (8.3%) public health facilities or 38 of 122 (31.1%) facilities with a mandate to manage obstetric complications provided PAC services. Service statistics from 4,544 PAC clients in 2013 indicate that 95.2% received counseling and 73.0% voluntarily left the facility with contraception, with 29.6% of acceptors choosing a LARC. Family planning within PAC was emphasized in advocacy, policy and guidelines, quality improvement, and supervision, and the range of contraceptive options for postabortion clients was expanded to enable them to avoid a second unintended pregnancy. Factors that influenced provision of family planning within PAC included (1) the ability of champions both within and outside the Ministry of Public Health to advocate for PAC and leverage donor resources, (2) the incorporation of PAC with postabortion family planning into national policies, standards, and guidelines, (3) training of large numbers of providers in PAC and LARCs, and (4) integration of LARCs within PAC into quality improvement and supervision tools and performance standards. Guinea has gradually scaled up provision of PAC services nationwide and its experience may offer learning opportunities for other countries; however, continued advocacy for further expansion to more rural areas of the country and among private health facilities is necessary.

INTRODUCTION

Unintended pregnancy and induced abortion indicate an unmet need for contraception and suggest missed opportunities of family planning programs to serve clients. If a health facility manages a case with abortion complications without offering a full range of voluntary, highly effective contraceptive methods to

prevent future unintended pregnancies, the health system has failed to provide comprehensive, client-centered care. Effective delivery of postabortion care (PAC) leads to decreased abortion-related maternal mortality and prevents repeat abortions.¹ In 1994, at the International Conference on Population and Development, PAC emerged as a new public health intervention to improve management of abortion complications and prevent unintended pregnancies after an abortion.^{2–5} Since then, experts have introduced and expanded PAC service delivery to ensure that women receive judgment-free, compassionate care that includes (1) treatment of incomplete abortion using manual vacuum aspiration (MVA) when clinically indicated; (2) family planning counseling and provision of voluntary contraceptives before discharge, as well as referral to other reproductive health services; and (3) engagement with communities

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Contraceptive methods typically used in Guinea. © Suzanne Austin/Jhpiego

Guinea implementers recognized early the importance of ensuring that a full range of contraceptive methods, including LARCs, is integrated into and available at the PAC point of treatment.

to reduce care-seeking stigma.⁶ Despite these efforts, however, few countries currently implement PAC at scale.⁷ Even where PAC is provided, some elements of the model, particularly family planning counseling and service provision, are poorly implemented.^{4,8,9} The exploration of effective models of PAC operating at scale in a country, especially in severely resource-constrained settings, can inform other countries.

In studies exploring ways to improve PAC, large percentages of women accept voluntary family planning methods.¹⁰ Family planning experts have recently advocated for more tier-based counseling

based on the contraceptive effectiveness of various methods with typical use of the method.^{11,12} A post-abortion service interaction offers an opportunity for initiating a highly effective contraceptive method. This opportunity is often lost if a full range of methods is not available in the same location as the management of abortion complications. Recent papers have shared data on voluntary acceptance of long-acting reversible contraceptives (LARCs)¹³ or proportion of facilities that offer LARCs within PAC services.¹⁴

In many countries, implementation of comprehensive PAC services is complicated by the fact that services are provided by maternity staff. Historically, this staff may not have been trained or expected to provide LARCs or other contraceptive methods and thus tends to refer PAC clients to the family planning unit or recommend short-acting methods, if providing any family planning counseling or services at all. Sizeable loss to follow-up typically occurs when such referrals are made.¹⁵ Acceptance and continuation rates are higher when services are integrated and provided at the treatment point¹⁶ and the rates are even higher when the provider receives supportive supervision after training.¹⁷

The Guinean Context

Following the 1994 International Conference on Population and Development, the West African nation of Guinea sought to improve the availability and quality of its PAC services. Abortion is legally restricted except when the life of the mother is in danger or in cases of incest, rape, or fetal impairment.¹⁸ The Guinean context for PAC implementation is challenged by the country's low overall contraceptive prevalence. In 2017, only 11% of all women of reproductive age were using a modern contraceptive method. Among those using contraception, 2.8% relied on the intrauterine device (IUD), 1.4% on implants, 2.8% on female sterilization, 15.5% on the Lactational Amenorrhea Method, 22.5% on pills and injectables, and 33.5% on condoms.¹⁹

The Ministry of Health's 2008–2012 *Family Planning Repositioning Strategic Plan* sought both to expand voluntary method choice, including LARCs, and to strengthen PAC.²⁰ Guinea implementers recognized early the importance of ensuring that a full range of contraceptive methods, including LARCs, is integrated into and available at the PAC point of treatment.¹⁵ An update of the *Repositioning Plan* for 2013–2018 reiterated the same commitment to PAC.²¹ Table 1 describes the evolution of Guinea's

TABLE 1. Evolution of the Postabortion Care Program in Guinea, 1998–2014

Phase and Years of Implementation	Cumulative No. of Health Facilities	Program Description	Donor	Types and Specific Names of Health Facilities
Introduction 1998–2001	12	<p>Pilot in 2 national hospitals (1998 and 1999), followed by 10 additional sites in 2001, in Conakry and Upper Guinea. Activities included advocacy to stakeholders; development of PAC policies, standards, and protocols; site needs assessments; training in infection prevention, counseling skills, and family planning, and in abortion complication management using MVA; provision of initial stocks of equipment and supplies; transfer of learning visits to support organization of services, placement of contraceptives in PAC procedure room, and linkage to other reproductive health services and supportive supervision; site-level all-staff orientations about PAC, which often included engaging local officials and radios to inform them of the services.</p> <p>Policy: The MOPH first recognized the need for PAC, then led the development and finalization of the PAC policy, standards, and protocols. Subsequently, MOPH adopted the PAC implementation approach used in the first 12 health facilities as the standard for PAC introduction to be used in scale-up. All subsequent implementing partners were asked to follow the same approach.</p>	USAID	<ul style="list-style-type: none"> • National hospitals: Donka and Ignace Deen • Regional hospitals: Faranah, Kankan • Prefectural hospitals/municipal medical centers: Dabola, Dinguiraye, Mandiana, Siguiri, Kissidougou, Kouroussa, Kerouane • Urban health center: Banan Koro
Early expansion 2002–2005	22	<p>Activities included training of trainers, who then supported implementation of the same activities as above in order to integrate PAC in 10 new sites; community engagement meetings linked with initiation of PAC services at new sites.</p>	USAID, UNFPA, unknown for selected health facility	<ul style="list-style-type: none"> • Prefectural hospitals/municipal medical centers: Matam, Ratoma, Flamboyant, Minière, Forecariah, Pita, Boke, Boffa, Fria, Dubreka
Expansion 2006–2009	38	<p>Policy: When the MOPH revised national reproductive health policies, standards, and protocols, PAC standards and protocols were incorporated into that document, which was finalized in 2006.</p> <p>Activities included those listed above in 16 new sites as well as supervision and refresher training for the 22 sites previously integrated. A 2008 regional PAC meeting in Saly, Senegal, and hosted by CEFOREP was the catalyst for additional PAC program consolidation, including:</p> <ul style="list-style-type: none"> • Fostering Change Virtual Leadership Program targeting 4 West African countries, including Guinea (2009–2010) • Advocacy, tool development, and initial implementation in 5 Conakry health facilities of a quality improvement methodology of SBM-R²² • Commercial vendor established and approved by MOPH to resupply MVA equipment 	UNFPA and USAID	<ul style="list-style-type: none"> • Regional hospitals: N'zérékoré, Kindia, Mamou, Labe • Prefectural hospitals/municipal medical centers: Télimélé, Lelouma, Coleah, Beyla, Sinko, Gueckedou, Macenta, Lola, Yomou, Coyah • Urban health center: Télimélé, Lelouma/Leysare

Continued

TABLE 1. Continued

Phase and Years of Implementation	Cumulative No. of Health Facilities	Program Description	Donor	Types and Specific Names of Health Facilities
Support to existing sites 2010–2014	38	Activities included follow-up and supportive supervision of PAC activities in health facilities in Conakry and Upper and Forest Guinea, training of PAC service providers in LARCs, and rollout of SBM-R at 28 sites. Revision of community health worker educational materials regarding bleeding during pregnancy and postabortion family planning. 2013 regional meeting in Saly, Senegal, hosted by E2A, and evaluation visits of Fostering Change Program Countries. ²³	USAID and UNFPA	
Post-assessment 2014–present	48	Ebola virus epidemic-related disruptions to the health system. In recovery and reconstruction phase, training of providers and support to additional 10 sites, including 6 in prefectures not previously covered and in 4 urban health centers.	USAID	<ul style="list-style-type: none"> • Prefectural hospitals/municipal medical centers: Dalaba, Tougué, Mali, Koubia, Gaoual, Koundara • Urban health center: Dabola, Dubreka, Manquepas, Boffa

Abbreviations: CEFOPREP, Centre Régional de Formation, de Recherche et de Plaidoyer en Santé de la Reproduction; E2A, Evidence to Action; LARCs, long-acting reversible contraceptives; MOPH, Ministry of Public Health; MVA, manual vacuum aspiration; PAC, postabortion care; SBM-R, Standards-Based Management and Recognition; UNFPA, United Nations Population Fund; USAID, United States Agency for International Development.

Notes: Guinea is geographically divided into 8 regions, 38 prefectures or municipalities (equivalent to a district), and 410 sub-prefectures. Each sub-prefecture has a health center (urban or rural). Prefectural hospitals have an average catchment population of 304,804, and regional hospitals cover 1,447,819 population. Users pay fixed amounts defined by the Ministry of Health for each type of service and facility, thus PAC service costs are fixed at 6000 francs (US\$0.82) in health centers, 10,000 francs (\$1.37) in prefectural or regional hospitals, and 15,000 francs (\$2.05) in teaching hospitals. This price does not include contraceptive services, which incur a small additional fee. Donors supply the great majority of contraceptives offered through government health facilities in Guinea.

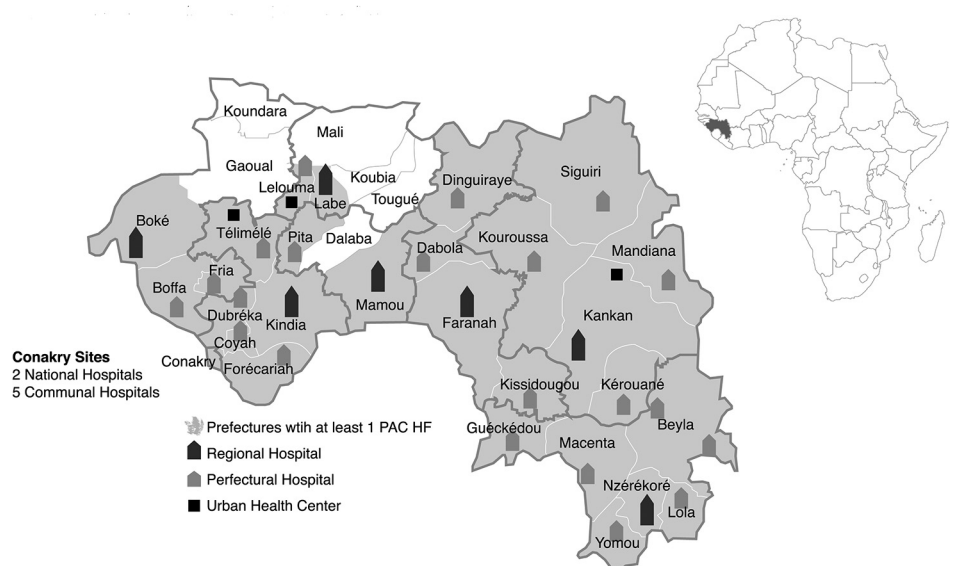
PAC program, from the pilot phase in 1998, through expansion, to consolidation.

A program report from 2013 indicated that family planning counseling was more common and uptake of contraceptives among PAC clients was higher in Guinea than in other West African countries.²³ Further, contraceptive usage included considerable voluntary uptake of LARCs. Specifically, the report found that 100% of PAC clients in 3 Burkina facilities were counseled on family planning and 47% left with a method; 79% of PAC clients at 3 sites in Togo were counseled and all those counseled left with a method, mostly combined oral contraceptive pills; 17% of Senegal PAC clients at 2 sites were counseled and 4% left with a method; whereas, all PAC clients at 3 Guinea sites were counseled and left with a method, with a predominance of IUDs and injectables. Healy et al.¹⁰ found a range in acceptance among PAC clients within studies of 37% to 87% discharged with a contraceptive method. In Ethiopia, postabortion contraception uptake exceeded 58% of PAC clients.²⁴ Due to higher effectiveness and continuation, LARCs are generally more successful in preventing repeat unintended pregnancies and repeat abortions.²⁵

Our study aimed to (1) determine the extent of success in implementing the 2006 PAC policy and 2008 Repositioning Plan, with emphasis on voluntary uptake of LARCs, within PAC services in Guinea, and (2) understand health systems factors influencing PAC policy implementation. Specifically, we conducted a census in early 2014 of public health facilities providing PAC services to determine the proportion that offered a full range of contraceptive methods, including LARCs, within PAC, and how elements of health systems functioning affect PAC and LARC integration within PAC.

■ MATERIALS AND METHODS

We employed a cross-sectional observational design using both primary and secondary data sources. Data collectors visited all 38 public facilities that provide PAC in Guinea (Figure 1). Ten Guinean physicians and midwives with experience providing maternity and PAC services collected data during a 1-month period in early 2014. They did not collect data in facilities where they worked. Ethical approval was obtained from the Johns Hopkins Bloomberg School of Public

FIGURE 1. Location and Type of PAC Facilities in Guinea

Abbreviations: HF, health facility; PAC, postabortion care.

Health Institutional Review Board and the Guinea National Ethical Committee for Health Research.

The study team developed interview and assessment tools from a list of domains around provision of voluntary family planning and LARCs within PAC and health systems factors to support expansion and sustainability of services (e.g., coverage of services, quality, characteristics of PAC facilities, support for provision of LARCs within PAC). We developed questionnaires for national stakeholders, prefecture focal points, maternity in-charges, and PAC providers. Interview tools included close-ended questions with precoded response options, with a few open-ended questions to gauge opinions on integration for all respondents. The national stakeholder questionnaire included more open-ended questions to facilitate a better understanding of the current policy environment and health systems factors contributing to the quality of PAC services and integration of LARCs. [Table 2](#) lists the number of respondents sampled as well as a summary of the questions presented to each respondent. The [supplemental material](#) to this article details infection prevention and PAC equipment and supplies included in the inventory. Data collection tools used in PAC facilities were pretested in a recently renovated medical center attached to the Ministry of Social Affairs that was not included in the 38 facilities during data collector training.

National stakeholders and key informants at the prefectural level were selected based on their ability to provide information on PAC implementation in Guinea. Thus, prefectural level reproductive health focal points were interviewed instead of the heads of the prefectural health office. Within facilities, we employed a convenience sampling strategy to interview maternity in-charges and PAC providers present at the time of data collection. All facility-based respondents consented to be interviewed.

Data were collected on tablets and synchronized daily to a cloud-based server using the mobile data collection platform CommCare.²⁶ Automatic constraints were programmed into study instruments to minimize human error during data entry and to reduce the data cleaning required following data collection. Data collectors reviewed the data and performed initial data cleaning; the study team conducted additional cleaning before analysis.

Descriptive statistics were tabulated for interviewee responses and facility assessment results. To address health systems-related factors affecting PAC, we analyzed responses from multiple respondents related to training, supervision, equipment and supplies, and the health management information system (HMIS). Because these data were collected a few years ago, we also present more recent updates in [Table 1](#) and 2017 service

TABLE 2. Characteristics of Respondents by Facility Type, Provider Qualification, and Study Tools Administered

	Prefectures/ Municipal Focal Points ^a	Maternity In-Charges ^b	PAC Providers	Total Facilities
Respondents^c by facility type				
National hospitals	—	2	7	2
Regional hospitals	—	7	22	7
Prefectural hospitals	—	26	42	26
Urban or improved health centers	—	3	4	3
Total	—	38	75	38
Respondents by qualification				
Obstetrician/ gynecologist	—	10	5	15
General practitioner	16	23	23	62
Nurse/laboratory technician ^d	7	2	5	14
Midwife	3	—	23	26
Auxiliary nurse	4	3	18	25
Medical student	—	—	1	1
Total	30	38	75	143
Study tool administered^e	Questions on lists of facilities in their respective jurisdictions, whether facilities offered PAC, commodity availability, financing for activities, supervision reporting, and plans for expansion	Questions on staffing by cadre overall and for PAC services, staff training, hours and organization, recordkeeping, and supervision	Questions on types of services available, availability of supplies, attitudes and opinions about PAC and contraception; assessment of provider knowledge and skills in postabortion family planning counseling	

Abbreviation: PAC, postabortion care.

^a Includes the head of the health office, the reproductive health focal point, and others who are responsible for more than one facility.

^b Includes medical officer in charge of maternity, head of PAC unit, and deputy/assistant maternity in-charge.

^c In addition to these subnational respondents, the study team interviewed 3 national stakeholders from the family health division.

^d Among PAC providers, 1 of the 5 nurses was a laboratory technician.

^e A separate facility assessment tool was also administered, which included an inventory of equipment and supplies and abstraction of service statistics from PAC registers.

statistics from the national health information system later in the discussion section.

■ RESULTS

Implementation of National Policy to Expand PAC Inclusive of Postabortion Contraception

Data collectors completed 143 interviews in all 30 prefectures/communes and 38 facilities (Table 2). At the time of the assessment, 38 (8.3%) of 456 health facilities provided PAC services in Guinea (Table 3). According to national policy, 122 of the 456 facilities were mandated to provide PAC, thus 31% of those mandated to provide PAC did so. All national hospitals provided PAC services except one, which was established in 2013 and

generally did not offer any maternity services. All regional and three-quarters of prefectural hospitals and municipal medical centers provided PAC services. PAC provision remained minimal (3.8%) in urban health centers.

National stakeholders (3) reported the existence of national PAC strategies and the intention to expand services to the 6 prefectures where PAC services had not yet been introduced, despite challenges accessing these areas. They also reported dependence on donors and technical assistance both for expanding PAC and for supplying contraceptive commodities, especially for costlier implants.

Within facilities providing PAC, services were available 24/7 at nearly all facilities (94.7%,

Of the facilities mandated to provide PAC, 31% did so.

TABLE 3. Number and Proportion of Health Facilities Offering Postabortion Care, by Level, Along With Parameters of Service Availability and Family Planning Integration, as Reported by Maternity In-Charge Respondents

Facility Type	Facilities in Country ^a	Facilities With PAC Services ^b	Facilities With PAC Services Available 24/7	Facilities With Any FP Services Provided in PAC Unit	Facilities With Both LARC Methods in PAC Unit ^c	Facilities With Both LARC Methods in FP Unit
	No.	No. (% of total health facilities)	No. (% of PAC health facilities)	No. (%)	No. (%)	No. (%)
National hospitals	3	2 (66.7)	2 (100.0)	2 (100.0)	2 (100.0)	2 (100.0)
Regional hospitals	7	7 (100.0)	7 (100.0)	7 (100.0)	6 (85.7)	7 (100.0)
Prefectural hospitals/ municipal medical centers	34	26 (76.5)	26 (100.0)	26 (100.0)	25 (96.2)	26 (100.0)
Urban health centers	78	3 (3.8)	1 (33.0)	3 (100.0)	3 (100.0)	3 (100.0)
Rural health centers	334	0 (0.0)	—	—	—	—
Total	456	38 (8.3)	36 (94.7)	38 (100.0)	36 (94.7)	38 (100.0)

Abbreviations: FP, family planning; LARC, long-acting reversible contraceptive; PAC, postabortion care.

^a Based on Guinea National Health Management Information System.

^b One of the urban health centers (in the same town as a prefectural hospital) had PAC services in place in prior years but not during the whole of calendar year 2013, because of the lack of manual vacuum aspiration equipment.

^c The LARCs available in Guinea are Copper T380A intrauterine devices and Jadelle subdermal implants.

n=36). Use of MVA as a method of PAC management was reported among nearly all providers (99%). Six (8%) also reported using dilation and curettage, 8 (11%) reported using medical management, and 2 (3%) reported using all 3 methods. Availability of family planning is universal in the PAC unit, where abortion complications are managed. According to maternity in-charge reports, provision of voluntary LARCs within the unit was nearly universal (94.7%); however, 2 clarified that PAC clients seeking LARCs are referred to the family planning unit. While all maternity in-charges reported availability of LARC in PAC or family planning units, service statistics showed that 6 (17%) health facilities offered no LARCs to PAC clients in 2013—2 in Boke, 2 in Kindia, and 1 in both N'zérékoré and Labe.

Data from 2013 facility registers showed that among PAC cases (n=4,544), nearly all clients (95.2%) received counseling and nearly three-quarters (73.0%) voluntarily chose and left with a family planning method before discharge (Table 4). Among family planning acceptors, 29.6% chose a LARC method (Figure 2). In comparison, nationally only 7.0% of all women 15–49 years old were using a modern method, based on data from the 2012 Demographic and Health Survey (DHS). Among these modern method users, only

4.2% were using LARCs. Family planning counseling rates and method uptake among PAC clients varied by region (Table 4). FP counseling rates exceeded 95% in most regions, but were lower in Labe and Kindia. Method uptake varied from 31% to 94%.

Health System Factors Linked With PAC Implementation

At time of data collection, a total of 276 health care workers provided PAC in Guinea (Table 5). Conakry had the highest number of PAC providers (1–39 staff per site). N'zérékoré had the fewest PAC providers (median of 3 providers per site). To date, 416 providers have been trained in PAC in Guinea; half received group-based PAC training and half learned on the job. After Conakry, Boke had the most trained providers, whereas Labe and Faranah had the fewest. Among providers trained in LARCs, more were trained in IUDs than in implants, but some regions had relative parity in the numbers of providers trained in both methods. Family planning training data are presented for all providers in the facility without disaggregating by those also trained in PAC, so we were unable to determine the proportion of PAC providers who also received family planning training.

Among PAC cases in 2013, nearly all clients (95%) received family planning counseling and nearly three-quarters left the facility with a method.

TABLE 4. PAC Caseload, Family Planning Counseling, and Family Planning Use, Health Facility Register Data, 2013

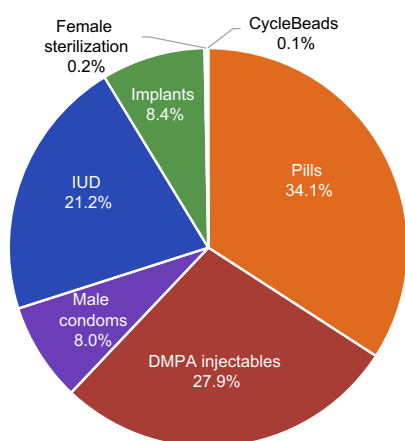
Region	PAC Cases	PAC Cases Counseled on Family Planning	PAC Clients Leaving the Facility With a Method	PAC/Family Planning Clients Who Chose a LARC Method
	No.	No. (% of PAC cases)	No. (% of counseled PAC clients)	No. (% of family planning acceptors)
Conakry	2,215	2,209 (99.7)	1,775 (80.1)	623 (35.1)
Kindia ^a	471	360 (76.4)	231 (49.0)	44 (19.0)
Boke	148	141 (95.3)	84 (56.8)	5 (6.0)
Mamou	300	286 (95.3)	228 (76.0)	97 (42.5)
Labe	295	223 (75.6)	92 (31.2)	10 (10.9)
Faranah	205	199 (97.1)	133 (64.9)	19 (14.1)
Kankan	692	691 (99.9)	567 (81.9)	118 (20.8)
Nzérékoré	218	217 (99.5)	205 (94.0)	66 (32.2)
Total	4,544	4,326 (95.2)	3,315 (73.0)	982 (29.6)

Abbreviations: IUD, intrauterine device; LARC, long-acting reversible contraceptive; PAC, postabortion care.

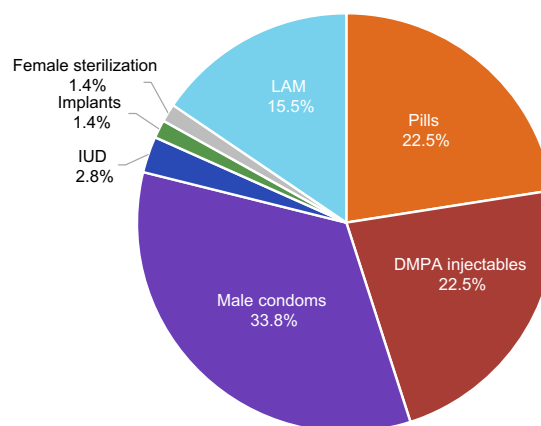
^a Two health facilities in Kindia region, a health center and a prefectural hospital, did not have any service statistics data for 2013. The health center staff indicated that they referred all PAC cases to a nearby hospital (in same city).

FIGURE 2. Contraceptive Method Mix Among Postabortion Clients Choosing a Method Prior to Discharge and Among All Women Ages 15–49 in Guinea Currently Using a Modern Method

Method Mix Among PAC Clients Adopting a Modern Method Prior to Discharge (N=3,315), 2013



Method Mix Among All Women Ages 15–49 Currently Using a Modern Method in Guinea*



* mCPR=7.0% (DHS 2012).

Abbreviations: DHS, Demographic and Health Survey; DMPA, depot medroxyprogesterone acetate; IUD, intrauterine device; LAM, Lactational Amenorrhea Method; mCPR, modern contraceptive prevalence rate; PAC, postabortion care.

Maternity in-charges and prefecture-level focal points were asked about health system factors that favor comprehensive PAC including contraceptive counseling and services, particularly

LARCs. Nearly half (n=18) of the 38 facilities reported that their internal and external supervisory tools or standards included PAC and family planning (Table 5). National respondents confirm

TABLE 5. Health Systems Factors Influencing Effective FP/LARC Integration Within PAC

	Region								Total
	Conakry	Kindia	Boke	Mamou	Labe	Faranah	Kankan	Nzérékoré	
Health systems factors									
PAC health facilities (N)	7	6	3	2	3	4	6	7	38
No. of staff providing PAC services ^a	119	30	23	15	14	19	34	22	276
Median	8	5.5	9	7.5	6	5	5.5	3	5
Range	1–39	1–8	5–9	3–12	1–7	4–5	2–10	0–5	1–39
Availability of trained personnel^b									
PAC (Total)	128	43	54	38	31	33	49	40	416
Group-based PAC course	70	22	28	19	11	16	27	18	211
On the job	58	21	26	19	20	17	22	22	205
FP/LARCs									
IUD	54	18	13	15	9	17	24	26	176
Implants (Jadelle)	23	16	12	15	9	12	16	17	120
Supervision tools incorporate PAC inclusive of FP									
Internal or external supervision or both	7	5	3	2	3	4	6	7	37
Equipment and supplies available									
IEC materials	6	5	1	2	3	4	5	6	32
Contraceptives in MVA room									
Condoms	5	5	2	0	2	3	2	3	22
Pills (POP/COC)	5	5	3	1	2	4	5	6	31
DMPA	5	4	2	0	1	2	4	6	24
IUD	6	4	3	2	3	4	4	5	32
Implants	6	6	3	2	3	3	5	5	32
MVA equipment and supplies	3	0	1	0	0	0	0	3	7
Infection prevention supplies ^c	4	1	1	0	3	0	3	7	19
No. (%) of health facilities with any stock-outs of contraceptives	1 (14)	2 (33)	2 (67)	0 (0)	2 (67)	2 (50)	4 (67)	4 (57)	17 (45)
No. (%) of health facilities with a complete set of minimum equipment and supplies	3 (43)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (29)	5 (13)
HMIS functioning									
No. (%) of health facilities that report PAC data ^d	6 (86)	5 (83)	3 (100)	2 (100)	3 (100)	3 (75)	6 (100)	7 (100)	35 (92)

Abbreviations: COC, combined oral contraceptive; DMPA, depo-medroxyprogesterone acetate; FP, family planning; HMIS, health management information system; IEC, information, education, and communication; IUD, intrauterine device; LARC, long-acting reversible contraceptive; MVA, manual vacuum aspiration; PAC, postabortion care; POP, progestin-only pill.

Data sources include maternity in-charge responses and the facility assessments.

^a The investigators could not confirm the number of PAC providers in one health facility in N'zérékoré; thus providers are included from only 6 health facilities in that region.

^b We assume that maternity in-charges did not list the same providers as both trained through group-based and on-the-job PAC training.

^c Exhaustive list of 28 items that included access to water source, cleaning supplies, personal protective equipment, means to sterilize or high-level disinfect MVA equipment and instruments, containers, antiseptics, and disinfectants.

^d Two health facility maternity in-charges, one in Conakry and one in Kindia, did not report the PAC data they collected. One health facility in Faranah did not collect PAC data at all.

PAC clients are more likely to use a contraceptive method after an abortion when counseled effectively and given a choice among a diverse array of methods.

that PAC and family planning within PAC are captured in national supervisory tools.

Material availability was variable. Only 5 facilities (13%) had a complete set of basic information, education, and communication materials, as well as equipment and supplies. At the time of the assessment, most facilities (n=32) had LARCs available in MVA procedure rooms, although complete MVA supplies were found in only 7 facilities. Nineteen facilities had appropriate infection prevention supplies, with N'zérékoré reporting 100% availability across its facilities. Prefectural focal points in 5 of the 8 regions reported stock-outs of contraceptives in the last 6 months in 50% or more of PAC procedure rooms.

■ DISCUSSION

Our study sought to assess the extent of PAC policy implementation in Guinea, with a focus on family planning and specifically LARC integration. At the time of the study in 2014, 31 of 38 prefectures had facilities offering PAC according to the international definition.² PAC was predominantly available in hospitals in urban areas. This unequal distribution of services is not unique to PAC. The Guinea Costed Implementation Plan notes that although 62% of the population lives in rural areas, only 16% of service providers practice in those settings.²¹ However, within the Guinea health system pyramid of care, rural health centers are expected to manage only normal pregnancy and birth and systematically refer complications, including postabortion clients, to urban facilities. With the referral system taken into consideration, PAC facilities are intended to cover urban and rural zones in their catchment area. Thus, if the referral system is adequate to cover the needs of the population, the denominator for urban health centers and higher-level facilities totals 122 facilities. The coverage for PAC services at the time of the study was then 31.1% of facilities expected to deliver PAC services.

We found that 36 of 38 facilities offering PAC reported also offering a full range of contraceptives to their clients, and 32 actually did so in 2013. As a result, 73% of women left a facility with a contraceptive method after a spontaneous or induced abortion and 26% opted for LARCs, an encouraging trend given their particular efficacy and suitability in preventing repeat pregnancy.

The level of postabortion contraceptive uptake in Guinea compares favorably with levels reported elsewhere.^{27,28} Postabortion voluntary contraceptive adoption rates (73%) found in the 2013

service statistics stand in sharp contrast to the overall 7% rate of modern contraceptive method use among all women in Guinea in 2012 (or even the 11% estimate for today),¹⁹ perhaps indicating that the contraceptive demands of this high-need population are being met. Similarly, the uptake of IUDs after abortion at 21.2% among those adopting a method prior to discharge is in marked contrast to the 2.8% uptake of IUDs among modern method users of reproductive age nationally in 2012.²⁹ Our results demonstrate that PAC clients are more likely to use a contraceptive method after an abortion when counseled effectively and given a choice among a diverse array of methods. The results also suggest that Guinea was able to implement PAC policies that mandate comprehensive counseling and broad method choice. Even higher uptake might have occurred if these facilities had not had contraceptive stock-outs. The practice in Guinea of offering contraceptive methods in the same room as the management of postabortion complications may contribute to our findings, as also seen in Ghana.³⁰ Low contraceptive prevalence overall does not appear to constrain postabortion contraceptive acceptance.

Another study objective was to understand how the Guinean health system has integrated and institutionalized PAC, inclusive of voluntary LARCs, including human resources, training, performance management through supervision, availability of essential equipment and supplies, and availability and use of PAC data. We found the highest numbers of PAC providers in the capital, consistent with the previously observed trend in both Guinea and elsewhere that health care workers and resources are often concentrated in urban areas or the nation's capital, creating health care shortages in rural and more remote locations.^{31–33} While this can be partially explained by the inclusion of tertiary hospitals in Conakry, other facilities were also well staffed. In contrast, the Forest region had a low median number of PAC providers, likely due to its remoteness. Yet, despite lower staffing levels, the proportion of PAC clients counseled and the rate of family planning uptake were among the highest in the Forest region. Factors other than staffing levels, such as quality of counseling training, local leadership, champions, or donor-funded program support, may contribute to these results. However, the 2014–2015 Ebola outbreak undoubtedly worsened the situation, as other research has documented.³⁴

Maternity in-charges were asked to give numbers of providers trained. Their reported number

(416) far exceeds the number they reported as currently providing services (276). Transfers of staff to rural facilities that do not offer PAC could partially explain this. Conversely, the high proportion of providers they reported as trained on the job may explain how public facilities continue to offer PAC services integrated with family planning after external assistance ends. The ability of facilities to engage new providers in PAC service delivery is encouraging for continuing sustainability. Other interventions beyond training, such as the use of performance standards for PAC, may also contribute to higher quality service delivery. Furthermore, the offer of LARC training that likely included PAC providers is clearly important, although our inability to accurately determine how many providers received both types of training is a limitation.

Reports by maternity directors suggest that PAC is well integrated into existing supervision tools and standards, reinforcing the practice of comprehensive PAC. Standards in Guinea have multiple purposes. Beyond supervision, quality teams or individual providers use them as a job aid to improve the quality of their services. This suggests either that leadership is greater at the facility level or that the emphasis on PAC is a function of its integration into ongoing quality improvement tools.

The national health system was weakest in terms of the availability of equipment and supplies, HMIS analysis, and use of PAC data. Alarming, half of the facilities were missing essential infection prevention supplies and few had a full complement of MVA equipment.[†] A challenge in Guinea is that each facility must procure its own MVA syringes and cannulas from a private commercial vendor. Our facility inventory assessment revealed the limitations of this system. These system challenges affecting consistency of key commodities, PAC supplies, and infection prevention supplies impede health care providers' ability to deliver quality services and are not unique to Guinea. Shortages in health commodities in other sub-Saharan African countries have been well documented, and they contribute to ineffective provision of reproductive and maternal health care.³⁵

Only 8.3% of all Guinea health facilities, or 31.1% of those mandated, offered PAC services in 2014. The Guinea health system should further extend PAC service delivery closer to women. Guinea has already adopted task shifting of MVA

for PAC to nurses and midwives, but more effort is needed to equip and support their performance of those competencies in rural health centers without easy access to referral facilities. Guinea stakeholders could consider expanding the options for managing incomplete abortion complications through use of misoprostol in rural health centers, as other countries have done,³⁶ and emphasize all elements of PAC, including community mobilization. The Box reflects recent updates since the assessment, with expansion into 6 remaining prefectures that were not covered at the time of the study. One commune in Conakry continues to lack a PAC facility, and continued expansion will likely require donor support.

Our study provides a comprehensive picture of PAC service provision in Guinea. By interviewing multiple respondents at a facility, using tablets programmed for that purpose, and triangulating answers with service statistics and inventory data, we were able to cross-check responses by health facility (e.g., provision of voluntary LARCs to PAC clients in the past year in service statistics versus report from maternity in-charge). There are few published reports of national-level assessments of PAC services. One study in Afghanistan focused on assessing provider competence to manage abortion complications,¹⁴ while one in Ethiopia included both PAC and safe abortion services using signal functions for assessing facility readiness to manage even the most severe complications.³⁷ Another study in Ethiopia described a baseline assessment that uncovered inadequate

System challenges affecting consistency of key commodities, PAC supplies, and infection prevention supplies impede health care providers' ability to deliver quality services.



A client in Guinea chooses to use implants for contraceptive protection. © 2012 Suzanne Austin/Jhpiego

[†]USAID funds were not used to procure or distribute MVA equipment. USAID funds can be used to conduct trainings, monitoring, and assessments to understand facility level availability or other issues related to PAC.

BOX. 2018 Guinea Postabortion Care Situation Update

Several years have passed since our data were collected. In addition, the assessment occurred prior to the Ebola virus crisis in Guinea. Therefore, we reviewed postabortion care (PAC) expansion and training that have occurred in the intervening years. As shown in [Table 1](#), providers were trained in PAC, including long-acting reversible contraceptive (LARC) skills, at an additional 10 sites post-assessment, as well as at existing sites that needed training of replacement staff. Six of the 10 new sites are in the 6 prefectures that had no coverage in 2014. The remaining 4 were additional urban health centers in prefectures where PAC was available at the hospital level. Government policy remains to expand PAC to health centers equipped to offer basic emergency obstetric care. In 2018, these totaled 137, for a coverage of 35%.

The health management information system (HMIS) was revised in 2015 and now includes additional indicators, for example, disaggregation of PAC services by method and age group. New HMIS tools and reporting forms are gradually being rolled out, along with the use of District Health Information System (DHIS) 2.

A review of 2017 data collected by USAID partners reveal PAC cases to be below the 2013 level (3,260 in 2017 versus 4,544 in 2013). This decrease may be partially explained by facility usage having drastically declined during the 2014 and 2015 Ebola epidemic, and the slow recovery has meant that previous thresholds for maternal health have not yet been realized. Further, the temporary closure of both large high-volume national hospitals in Conakry for several months in 2017 led many clients to seek services in other health facilities, potentially including private structures that do not report their data to the national HMIS. The vast majority of cases in the HMIS were documented as receiving counseling for family planning (3,234 or 99.2%). In 2017, the acceptance of a family planning method after PAC services remained high at 76.7%, with even higher uptake of LARCs at 47.2%.

A relatively high proportion of women opted for LARCs in this setting, confirming the importance of providing voluntary, client-centered family planning services within the PAC treatment unit.

space within safe abortion and PAC procedure areas and shortages of commodities and supplies for LARC services as constraining the ability of facilities to offer integrated postabortion contraception.³⁸ Recent studies have reported on subnational assessments in Ethiopia, Ghana, and India^{17,30,38} and shown increases in contraceptive uptake including voluntary LARCs and permanent methods.

Study Limitations

Because PAC and emergency obstetric care are linked and it is unknown whether Guinea's health system offers adequate emergency obstetric care coverage, this study does not claim to understand met need for PAC or population-based coverage. Also, this study does not include private health facilities, which should be considered in future PAC program activities.

CONCLUSION

We studied components of PAC services in a country that legally restricts abortion and where the rate of family planning uptake among married women is low. We found that all but one of the

facilities expected to provide PAC were doing so, with a high proportion of clients receiving contraceptive counseling and voluntary family planning services within the PAC treatment unit. A relatively high proportion of women opted for LARCs in this setting, confirming the importance of providing voluntary, client-centered family planning services within the PAC treatment unit, including counseling and provision of voluntary LARCs as part of a comprehensive range of methods. More needs to be done to extend PAC to remote and private health facilities.

Factors that influence provision of family planning within PAC and expand the range of contraceptive options for postabortion clients include (1) the ability of champions both within and outside the Ministry of Public Health to advocate for PAC and leverage donor resources; (2) the inclusion of PAC with postabortion family planning into national policies, standards, and guidelines; and (3) training large numbers of providers in PAC and LARCs as well as the integration of tools and performance standards for quality improvement and supervision to encourage orienting providers new to a facility. Efforts subsequent to this study to incorporate additional PAC family planning indicators into the HMIS, coupled with better analysis of HMIS data, should further sustain PAC with high family planning adoption. Improvements in the contraceptive supply chain to avoid stock-outs remain urgently needed. Guinea's experience with integrating and expanding voluntary family planning services, including LARCs, into PAC demonstrates that it is possible to achieve high family planning uptake among postabortion clients even when overall contraceptive use is low.

Acknowledgments: The authors gratefully acknowledge Havanatou Camara, Suzanne Austin, Bocar Dem, and Abdoulaye Diallo from Jhpiego/Guinea for their work in supporting the planning and implementation of data collection and supervising the data collectors during their field work. We also thank Abdourahmane Kadiatou Diallo, Thierno Souleymane Diallo, Ousmane Balde, Nènè Aissatou Diallo, Aida N'Diaye, Lamine Mohammed Barry, Ibrahima Koussy Bah, Aissatou Kindi Barry, Zézé Beavogui, and Aissatou Barry, the physicians contracted to conduct the data collection, including assessing provider performance in a simulated role play. They conducted the work under arduous travel conditions and just as the first cases of Ebola were reported in some of the sites. We also gratefully recognize Dr. Madina Rachid, from the Ministry of Public Health, not only for her championing of this study but also for her overall leadership to ensure that women experiencing complications of abortion are treated compassionately and according to standards throughout the Guinean territory. Finally, we thank EngenderHealth for commissioning this supplement and USAID for 3 decades of support for postabortion care including in Guinea.

Funding: Funding for this study was made possible through support provided by U.S. Agency for International Development, Office of Population and Reproductive Health, USAID/Washington D.C., under the terms of Award No. GHS-A-00-08-00002-00 (Maternal and Child Health Integrated Program) Leader with Associates Cooperative

Agreement. Manuscript development and printing were supported under the terms of the Cooperative Agreement AID-OAA-A-14-00028 (the Maternal and Child Survival Program).

Disclaimer: The contents are the responsibility of the authors and do not necessarily reflect the views of USAID or the United States Government.

Competing Interests: Pfitzer, Hyjazi, and Pleah have been employed intermittently with Jhpiego and have provided technical assistance to the government of Guinea in its implementation of PAC programs since their inception.

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Peer Reviewed

Received: September 15, 2018; **Accepted:** February 18, 2019

Cite this article as: Pfitzer A, Hyjazi Y, Arnold B, et al. Findings and lessons learned from strengthening the provision of voluntary long-acting reversible contraceptives with postabortion care in Guinea. *Glob Health Sci Pract*. 2019;7(suppl 2):S271–S284. <https://doi.org/10.9745/GHSP-D-18-00344>

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ORIGINAL ARTICLE

“They Love Their Patients”: Client Perceptions of Quality of Postabortion Care in North and South Kivu, the Democratic Republic of the Congo

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Women who sought postabortion care (PAC) at supported health facilities reported positive experiences, particularly regarding client-provider interactions, demonstrating the feasibility of implementing good-quality, respectful PAC in a humanitarian setting.

ABSTRACT

Background: Postabortion care (PAC) is a lifesaving intervention that, when accessible and of good quality, can prevent the majority of abortion-related deaths. However, these services are only sporadically available and often of poor quality in humanitarian settings. CARE International, the International Rescue Committee, and Save the Children strengthened the Congolese Ministry of Health to provide PAC, including voluntary contraceptive services, in North and South Kivu, DRC.

Objective: We aimed to gain understanding of the demographic and clinical characteristics of PAC clients, the experiences of women who sought PAC at supported health facilities, and the women’s perceptions of the quality of care received. We also explored how client perspectives can inform future PAC programming.

Methods: A PAC register review extracted sociodemographic and clinical data on all PAC clients during a 12-month period between 2015 and 2016 at 69 supported facilities in 6 health zones. In-depth interviews were conducted between September 2016 and April 2017 with 50 women who sought PAC in the preceding 3 months at supported health facilities. Interviews were recorded, transcribed, and translated into French for analysis. Thematic content analysis was subsequently used as the data analytic approach.

Results: In 12 months, 1,769 clients sought PAC at supported facilities; 85.2% were at less than 13 weeks gestation. Over 80% of PAC clients had a uterine evacuation, and of these, 90% were treated with manual vacuum aspiration. The majority (75.2%) of PAC clients chose voluntary postabortion contraception. All but one interview participant reported seeking PAC for a spontaneous abortion, although most also reported their pregnancy was unintended. Clients were mostly made aware that PAC was available by community health workers or other community members. Experiences at the supported facilities were mostly positive, particularly in regards to client-provider interactions. Most women received contraceptive counseling during PAC and selected a modern method of contraception immediately after treatment. However, knowledge about different methods of contraception varied. Nearly all women said that they would advise another woman experiencing abortion complications to seek PAC at a supported health facility.

Conclusions: The findings demonstrate the successful implementation of good-quality, respectful PAC in North and South Kivu. Overall, they suggest that the organizations’ support of health workers, including competency-based training and supportive supervision, was successful.

INTRODUCTION

Among the 10 countries in the world with the highest maternal mortality ratios, 9 are affected by or

emerging from war.¹ Women and girls living in conflict settings have an increased need for sexual and reproductive health (SRH) services, while at the same time the availability of these services becomes limited.^{2–4} The collapse of health systems during conflict is often compounded by an emerging distrust in available services and health care providers.^{3,5} This barrier is particularly significant for services for which women and girls may face stigma from community members or health care providers, such as clinical management of rape, contraception, and care after unsafe abortion.⁶ Ultimately, women and girls living in conflict settings often face an

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increased risk of unintended pregnancy, unsafe abortion, and maternal mortality.⁷

Complications related to spontaneous or induced abortion account for an estimated 7.9% of maternal deaths globally and 9.6% in sub-Saharan Africa.⁸ Yet these figures are likely underestimations due to lack of reporting and misclassification of abortion-related deaths.^{8–10} The risk of dying as a result of spontaneous or induced abortion is significantly higher in settings with limited SRH services, and over 99% of abortion-related deaths occur in low- and middle-income countries.⁸ Further, where induced abortion is legally restricted or culturally stigmatized, women are more likely to resort to unsafe methods of induced abortion and may be less likely to access care for related complications.¹¹

Postabortion care (PAC) is a lifesaving intervention that, when accessible and of good quality, can prevent the majority of abortion-related deaths.¹² PAC includes 5 essential elements:

1. **Community and service provider partnerships** to prevent unintended pregnancies and unsafe abortions, to mobilize resources to ensure timely care for abortion complications, and to make sure health services meet community expectations and needs
2. **Counseling** to identify and respond to women's emotional and physical health needs
3. **Treatment** of abortion complications
4. **Counseling and voluntary contraceptive services** to help women prevent future unintended pregnancies and abortions
5. **Reproductive and other health services** that are preferably provided on site or via referrals to other accessible facilities^{12,13}

Despite the importance of PAC, such services are only sporadically available in humanitarian settings.^{2,7,14,15} Where services do exist, they are often of poor quality, and women face numerous barriers to receiving necessary care.^{3,4} Reviews of SRH services reveal that the quality of care is a critical factor in determining whether or not women seek care.^{3,16} Furthermore, evaluations of the quality of PAC services often rely on facility-level data, interviews with or observation of service providers, and client exit interviews.^{17–21} Rarely do studies seek a more in-depth understanding of client experiences with PAC services and their perceptions of quality of care, even though addressing client perspectives on quality of care

has been shown to improve client satisfaction, leading to continued and sustained use of services and improved health outcomes.²² Further, evidence suggests that trust in the health system, via client-provider interactions and relations between a health facility and the community, for example, is an important element in restoring the social contract in a post-conflict setting.²³ This article helps to address these gaps in the literature by demonstrating the feasibility of implementing good-quality, respectful PAC services in humanitarian settings, understood through the experience of PAC clients and their perceptions of quality of care.

■ CONTEXT AND PROGRAM DESCRIPTION

The Democratic Republic of the Congo (DRC) has one of the highest maternal mortality ratios in the world, with 846 maternal deaths per 100,000 live births.²⁴ Due in part to more than 20 years of conflict and instability, maternal mortality in eastern regions of the DRC is estimated to be higher than elsewhere in the country.^{25,26} Weakened health systems and limited health workforce capacity in North and South Kivu of the country have resulted in an inability to adequately respond to women's health needs, including the provision of PAC services.^{3,27,28}

Issues of availability and quality of PAC are compounded by a restrictive legal environment regarding induced abortion. The DRC has signed and ratified the *Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa* (Maputo Protocol), a legally binding treaty that authorizes abortion in cases of "sexual assault, rape, incest and where the continued pregnancy endangers the mental and physical health of the mother or the life of the mother or the fetus."²⁹ As of March 2018, the DRC published the Maputo Protocol in the official journal, moving it closer to inclusion in national law. However, national legislation is generally interpreted to permit abortion only to save the life of a woman.³⁰ Evidence suggests limited knowledge among both community members and health care providers on more detailed legal provisions.³¹ The DRC national health policy mandates the provision of PAC with manual vacuum aspiration (MVA) at health centers and hospitals, plus misoprostol at referral health centers and hospitals.³² However, misoprostol for PAC is not available at all mandated health facilities.

PAC is a lifesaving intervention that can prevent the majority of abortion-related deaths.

The Reproductive Health Access, Information and Services in Emergencies (RAISE) Initiative at Columbia University has collaborated with CARE International, the International Rescue Committee (IRC), and Save the Children to strengthen the capacity of the Congolese Ministry of Health (MOH) to provide PAC, including voluntary contraceptive services, in 4 health zones of North Kivu since 2011 and 2 health zones in South Kivu since 2008. This ongoing support to the MOH has included capacity building and supportive supervision of clinical providers, community mobilization activities, and provision of necessary equipment and supplies to facilities (Box).

RAISE staff conducted baseline facility assessments (in 2007 in South Kivu and 2011 in North Kivu) that revealed weak PAC services across all 5 elements; MVA for PAC was not available at any facilities, and contraception, if available, was limited primarily to short-acting methods. In 2015, RAISE conducted program reviews that found that PAC was available and of good quality, but utilization of care was lower than expected. This raised questions about whether and to what degree services were underutilized and why. Accordingly, the partners conducted a mixed-methods program evaluation to better understand barriers and facilitators to accessing PAC services at health facilities, supported by the partner organizations in North and South Kivu.

This study aimed to understand the sociodemographic composition of PAC clients and, based on existing evidence of how quality of care influences utilization of PAC and other SRH services,²² to also understand the experiences of women who sought PAC at supported health facilities. More specifically, this analysis examines how client experiences with PAC can inform future programming. To our knowledge, this study is the first to look at client perceptions of PAC in a humanitarian setting.

METHODS

Study Design, Participants, and Data Collection

This article presents findings from 2 components of a mixed-methods study: a systematic PAC register review to understand the sociodemographic and clinical profiles of women who accessed PAC at supported health facilities and in-depth interviews (IDIs) with PAC clients to understand their perceptions of the quality of care provided at supported health facilities.

BOX. Core Components of PAC Intervention

- **Supplies and logistics:** Ensuring availability of MVA kits, misoprostol, medications (e.g. oxytocin, misoprostol), equipment, and contraceptive commodities
- **Strengthen skills of providers:** Competency-based training for appropriately skilled and supervised MOH health workers who respect privacy and confidentiality, provide full and accurate information, and ensure free and informed consent; values clarification and attitudes transformation
- **Supportive supervision:** Regular joint visits by the MOH and NGO staff to improve performance and ensure respectful care
- **Data collection:** Improving registers to collect appropriate information; training and empowering MOH providers to use data to improve their services
- **Community mobilization:** Outreach activities to conduct education in the community about danger signs during pregnancy and where to go for services and about contraception to respond to myths before they spread

Abbreviations: MOH, Ministry of Health; MVA, manual vacuum aspiration; PAC, postabortion care.

The PAC register review included data from all clients over a 12-month time period in 2015–2016 who received PAC at 45 health facilities in North Kivu, including 21 supported by CARE in Kayna and Lubero health zones, 24 supported by Save the Children in Masisi and Mweso, and 33 IRC-supported facilities in Kabare and Kalehe, South Kivu. Registers were developed in partnership with the provincial MOH, and each partner adapted the register slightly according to their project needs. Variables for each PAC client were extracted and included age, gestational age, parity, presenting complications, treatment received, and voluntary postabortion contraceptive uptake.

The IDIs were conducted between September 2016 and April 2017. Purposive selection of participants was conducted using PAC registers of 16 supported facilities, including 1 hospital, 5 referral health centers, and 10 health centers. To represent a range of ages, 8–9 clients per health zone (2–3 per facility) were selected. All participants had an MVA procedure for PAC at a supported facility within 3 months of the study date. Selected PAC clients were then contacted by a health worker and asked if they would speak to an interviewer about their experience at the facility. Health workers did not report refusals, and no women refused to participate once approached by the interviewer. A semistructured interview guide was developed by the research team.

Following the completion of a 5-day training on research ethics and methods, Congolese female facilitators conducted the IDIs in local languages

Over a 12-month period, 1,769 clients utilized PAC services at 45 supported health facilities in 6 health zones.

(Swahili, Kinyarwanda, Kihavu, or Mashi). IDIs were held in a private room at the health facility to ensure the confidentiality of the discussion. Verbal informed consent was obtained from all participants. Participants were reimbursed for transportation between their home and the interview location. Interviews lasted 25–45 minutes. They were audio-recorded, transcribed, and translated into French for analysis. The researchers reviewed the French transcriptions to check the quality of translation and reverted back to the facilitators when clarification was needed.

Data Analysis

The PAC register review data were entered into CSPro (version 6.3) and subsequently exported to SPSS (version 23) for cleaning and analysis. Using an inductive approach, the transcripts were first read by 2 researchers to identify overarching themes for the creation of a draft codebook, organized by general themes and subthemes. After discussing the draft codebook, electronic files containing the French transcripts were uploaded to NVivo (QSR International Pty Ltd) qualitative analysis software for coding. Several transcripts were coded separately by 2 researchers and the results were discussed to make revisions to the codebook, adding, deleting, or collapsing codes as necessary.

Once the codebook was finalized, thematic coding was independently performed in NVivo by 2 researchers. The consistency of coding was assessed by intercoder reliability, calculated as the number of agreements divided by the total number of agreements and disagreements. Disagreements were discussed and resolved until the interrater agreement was in the 90th percentile range. All transcripts were coded by 2 researchers, and selected transcripts were coded by a third researcher to ensure reliability and validity of the coding. Finally, the data were analyzed and presented using the respondents' own words as illustrations.

75% of PAC clients in all health zones used voluntary postabortion contraception.

Ethical Considerations

Verbal informed consent was obtained from all participants. No participant names were recorded in the transcripts. Only study staff had access to the recordings. No personal identifying information was collected in the register review. Ethical approvals for the survey were obtained from the Columbia University Institutional Review Board and the Institutional Ethical Commission of the Catholic University of Bukavu (DRC).

RESULTS

Register Review

Over a 12-month period, 1,769 clients accessed PAC at 45 supported health facilities in 6 health zones. The average age of PAC clients ranged from 27.4 years old in Kayna/Lubero health zones to 29.3 years old in Kabare/Kalehe (Table 1). Only 10.3% of all PAC clients were under age 20 (data not shown). The mean parity of PAC clients differed significantly among health zones. In Kayna/Lubero, PAC clients had an average parity of 3.2, compared with 4.8 in Kabare/Kalehe and 5.0 in Masisi/Mweso. Similarly, in Kayna/Lubero, only 12.8% of PAC clients had 7 or more births, whereas in Kabare/Kalehe and Masisi/Mweso, 30.6% and 33.3% of PAC clients, respectively, had 7 or more.

The majority of PAC clients (85.2%) sought care prior to 13 weeks of pregnancy. Most PAC clients in all health zones had a presenting complication, with bleeding the most commonly reported. Yet in Kayna/Lubero, 74.7% had reported bleeding and 22.6% had no reported complications. In Masisi/Mweso, 51.2% had bleeding and 47.1% had no reported complications. In Kabare/Kalehe, complications were classified as severe (5.0%), mild (84.1%), or none (10.9%). (Specific definitions were not available for mild or severe complications. However, health workers described classifying an incomplete abortion without severe infection as a mild complication, and one with infection, severe bleeding, and other problems as severe.) In Kayna/Lubero and Kabare/Kalehe, over 90% of PAC clients received a uterine evacuation, compared with only 61.3% of clients in Masisi and Mweso; most (nearly 95%) of the uterine evacuations were performed with MVA. Medications provided for PAC clients were noted only in 2 of the 3 program areas. Antibiotics were given to 62.6% (Kayna/Lubero) and 50.9% (Kabare/Kalehe) of PAC clients, and uterotonics to 46.3% (Kayna/Lubero) and 64.7% (Kabare/Kalehe). Pain medication was only recorded in Kayna/Lubero, where 23.4% of PAC clients received it.

Voluntary postabortion contraceptive use was reported for the majority of PAC clients (75.2%) in all health zones. Most PAC clients in Kayna/Lubero (56.5%) and Kabare/Kalehe (68.3%) chose a voluntary long-acting reversible contraceptive (LARC) method (intrauterine device or implant). In Masisi/Mweso, 43.7% of PAC clients chose a LARC, and 31.5% chose a short-acting method (pills or injectable). Across all health zones, young women under 25 years old

TABLE 1. Postabortion Care Register Review Results

	Total (N=1,769)	Kayna/Lubero (n=477)	Masisi/Mweso (n=644)	Kabare/Kalehe (n=648)	P Value
Age, years, mean (SD)	28.5 (7.3)	27.4 (7.0)	28.6 (7.2)	29.3 (7.5)	.001
Age group, years, No. (%)					
<25	570 (32.6)	186 (39.1)	192 (30.4)	192 (29.9)	
25–34	751 (42.9)	204 (42.9)	273 (43.3)	274 (42.6)	
≥35	429 (24.5)	86 (18.1)	166 (26.3)	177 (27.5)	
Parity, mean (SD)	4.4 (3.2)	3.2 (2.8)	5.0 (3.1)	4.8 (3.3)	.001
Parity, No. (%)					.001
0	169 (10.6)	80 (17.3)	31 (6.0)	58 (9.5)	
1–3	548 (34.4)	205 (44.4)	152 (29.3)	191 (31.3)	
4–6	456 (28.6)	118 (25.5)	163 (31.4)	175 (28.6)	
≥7	419 (26.3)	59 (12.8)	173 (33.3)	187 (30.6)	
Gestational age, weeks, No. (%)					.001
<13 weeks	1,331 (85.2)	416 (89.7)	414 (79.0)	501 (87.1)	
≥13 weeks	232 (14.8)	48 (10.3)	232 (21.0)	110 (12.9)	
Uterine evacuation performed, No. (%)	1,367 (81.3)	428 (93.9)	359 (61.3)	580 (90.6)	.001
MVA	N/A	408 (95.3)	340 (94.7)	No data	
Misoprostol	N/A	3 (0.7)	0 (0.0)	No data	
D&C	N/A	17 (4.0)	19 (5.3)	No data	
Postabortion contraceptive use, No. (%)					.001
No modern method	422 (24.8)	116 (24.8)	158 (24.7)	148 (24.8)	
IUD	513 (30.1)	145 (31.0)	104 (16.3)	264 (44.2)	
Implant	436 (25.6)	118 (25.3)	175 (27.4)	143 (24.0)	
Tubal ligation	2 (0.1)	1 (0.2)	0 (0.0)	1 (0.2)	
Injectable	228 (13.4)	42 (9.0)	151 (23.6)	35 (5.9)	
Pills	100 (5.9)	44 (9.4)	50 (7.8)	6 (1.0)	
Condoms	2 (0.1)	1 (0.2)	1 (0.2)	0 (0.0)	
Facility type, No. (%)					
Health center	1,055 (59.6)	96 (20.1)	395 (61.3)	564 (87.0)	
Referral health center	548 (31.0)	299 (62.7)	249 (38.7)	N/A	
Hospital	166 (9.4)	82 (17.2)	N/A	84 (13.0)	

Abbreviations: D&C, dilation and curettage; IUD, intrauterine device; MVA, manual vacuum aspiration.

were less likely to use modern contraception after abortion. Nearly 1 in 3 (29.7%) PAC clients under 25 did not choose a modern method, compared with 22.3% of women 25 and older. Less than half (48.5%) of women under 25 years chose a LARC, compared with 59.3% of women over 25 years.

In-Depth Interviews Participant Demographics

A total of 50 IDIs were conducted with PAC clients who had an MVA at a supported facility: 34 in North Kivu and 16 in South Kivu. Participants were between 18 and 43 years old, and the

TABLE 2. Sociodemographic Characteristics and Reproductive History of Postabortion Care Clients Interviewed (N=50)

	No.
Age group, years	
18–24	8
25–34	22
35–49	20
Marital status	
Married	42
Unmarried	7
Unknown	1
Level of education	
None	16
Any primary	12
Any secondary or higher	21
Unknown	1
Gestational age	
First trimester	39
Second trimester	11
No. of lifetime pregnancies	
1–3	11
4–6	17
≥7	21
Unknown	1
Postabortion contraceptive use	
Long-acting method	20
Short-acting method	15
Modern method, unspecified	3
No modern method	12

Interviews revealed widespread awareness of PAC but varying degrees of knowledge about specific services offered.

majority were married (Table 2). Participants had varying levels of education. Most participants sought PAC during the first 12 weeks of pregnancy. Nearly half of participants had 7 or more pregnancies, and all had at least 1 prior pregnancy.

Clients’ Perceptions of the Quality of Care Received

Clients’ perceptions of the care they received are presented below, by essential element of PAC.

PAC Element 1: Community and Service Provider Partnerships to Prevent Unintended Pregnancies and Unsafe Abortions: When

asked about the pregnancy for which they sought postabortion care, most participants reported that it was unintended. For many, the age of their last child was cited as an indication of whether or not they were ready for another pregnancy.

I conceived when the baby was still very little, and I conceived without knowing, without wanting to. (26-year-old)

I had given birth to a new baby . . . a few months later, I noticed that I was pregnant again. After giving birth, the menstrual cycle normally stops . . . but me, I didn’t have that chance. (28-year-old)

Several women referred to the undesirability of having a baby due to displacement or poverty.

. . . among my 6 existing children, after so much displacement, at the time of conception I was feeling tired and asking myself how will I move and transport all those children, who were getting closer in age. (32-year-old)

No, I didn’t want any more [children] . . . I didn’t feel capable of handling another pregnancy, and I didn’t have the means to educate them or send them to school. (43-year-old)

All women except one reported that they sought PAC for a spontaneous abortion. The one participant who reported inducing abortion did so using quinine.

The interviews revealed widespread awareness of the availability of PAC but varying degrees of knowledge about specific services offered. Some women knew of services at supported facilities due to community mobilization activities, from community health workers and radio messages.

For this information, [community health workers] come to our house and ask us, each woman who is pregnant, to go quickly to the health center for care, because staying at home, many women die. (35-year-old)

. . . this message is even broadcast on the radio, they tell us that if a woman observes complications when she is pregnant, she must necessarily go to the health center. (43-year-old)

Many women knew of supported facilities since they went there for other health care for themselves or for their children. Others who were unaware of available services sought advice from family or friends, who informed them of the need to seek care and where to go.

When I told [my friend] about my problem, she said that she has no help to offer other than to tell me to go to the hospital. . . . That’s how I came here. (36-year-old)

PAC Element 2: Counseling to Respond to Women's Emotional and Physical Health Needs:

Participants reported overwhelmingly positive interactions with service providers at supported facilities, often citing their kindness and emotional support.

They told me, Mama [Name], don't be scared, you will be healed. It's true, we know you feel pain, but it will pass. There is so much pain, but you will heal. (32-year-old)

Yes, [the provider] sat next to me, consoled me. You see, when you are ill, like for example, when I am sick . . . I can think that I will die. But since you are there, you take care of me, you sit next to me, you console me, telling me that I will not die, and me, I feel very at ease. (18-year-old)

Most women noted that they felt welcomed upon arrival at the facility and that providers neither discriminated against patients nor neglected them. Several women gave examples of how providers went above and beyond to care for them.

. . . she warmly welcomed me even though my condition was precarious. I had come with only one pagne [skirt], but she took courage to wash me and took her own pagne [skirt] to clothe me. (35 year old)

. . . a nurse bought me a Vital'o [soft drink] the day that I miscarried . . . I had some joy. And [she] bought me fruit. I was very happy. (22-year-old)

Not everyone had the same experience, however. The woman who reported an induced abortion indicated that providers were not entirely supportive.

. . . They asked me if I'm going to repeat this [act], and I said I will not. . . they teased me, saying it's not good. (18-year-old)

When asked if they believed that the information they shared with providers would be kept private, nearly all women expressed trust in the confidentiality of services. Many explained that maintaining privacy is the duty of health care providers. Further, several PAC clients commented on the lack of discrimination by the providers.

Because a nurse cannot reveal the secret, even if she saw a good or bad thing; she must keep it to herself. (40-year-old)

. . . the nurse should not disclose or reveal the secrets of the hospital. . . according to medical ethics, no nurse or doctor has the right to disclose a patient's information! (32-year-old)

We say that there is no discrimination here and that everyone is treated in the same way. The nurse is there to receive everyone. . . Whether you're Hutu, Hunde, or Tutsi, they should receive you. (36-year-old)

Participants were asked about the information they received during their visit and whether they felt that it was well explained. Several women described how providers framed ideas in a contextually accessible manner, passing along information with sensitivity.

[The provider] told me that I will be restored, I will be cured, and not to have bitterness about miscarrying, I will still be able to have another pregnancy. But he told me with how much I have suffered, I deserve care so that my health will recover so I can get pregnant again. (26-year-old)

Yes, we have discussed enough with him. He consoled me by helping me to understand what happened: it happened, better to hope for the next pregnancy and I should forget the past, and like this for 3 days, he comforted me until I was healed. (36-year-old)

Some, however, still had questions regarding their reproductive health. One explained how she remained uncertain as to the cause of her miscarriage.

The cause I cannot know, they often say it's because the uterus is tired, but I also miscarried my first pregnancy; was the uterus already tired? Help me to understand if it gets tired, how? Because that's what I'm often told. (32-year-old)

PAC Element 3: Treatment of Abortion Complications:

The interviews with PAC clients suggested that treatments were effective and prevented any further complications. Women often spoke of feeling relief that they were cured, which was used as a qualifier of good quality of care.

I felt free. After the miscarriage, they performed a good treatment, gave me a serum, and after having finished the infusion, I felt good. (36-year-old)

I thank God through the nurses for the medicines that I had. . . before, when a woman aborted, she didn't get better. But with these medicines, we have seen their effectiveness. This has helped us so much. (41-year-old)

Several women noted that, if not for the prompt services that they received, they would have died.

Without [the provider] I would have died, truly. . . I would have died. When I arrived here, I was outside,

Participants reported overwhelmingly positive interactions with service providers at supported facilities.

Interviews with PAC clients suggested that treatments were effective and prevented further complications.

then they went to look for him where he was treating other patients. When he realized that my problem was an abortion, he quickly left these patients to the other nurses to come take care of me, and immediately, he started treating me. (30-year-old)

They did something important for me, when I came, they welcomed me directly, they brought me to a place where they should receive me and treat me. . . . I appreciated that, [because] according to the situation in which I arrived here, if they hadn't welcomed me well, I was going to die. (33-year-old)

Some negative experiences were mentioned in regards to overcrowding and pain.

Most women noted that the facilities were clean and well maintained, with adequate privacy. However, some negative experiences were mentioned in regards to overcrowding, including one woman who reported she was unhappy being placed in the postpartum ward after losing her pregnancy.

Why do they put the women who have aborted in the same room as the women who have babies? Normally they should separate them so that there is no confusion, also to not distress the women who have aborted. (32-year-old)

Despite having to pay for receiving care, many women believed that the cost was reasonable.

Other negative experiences described by participants were mostly related to pain from the procedure or lack of appropriate medications.

They cleaned me out. . . . my screams reached the road when I cried, they were doing the treatment; I felt a lot of pain. (22-year-old)

I felt a lot of pain during the treatment. I cried until people came to see, I was in a lot of pain, and the nurse told me to bear it. . . . I cried and asked him to give me anesthesia. He told me that they don't provide anesthesia anymore, so I tolerated it. (36-year-old)

All participants were asked whether or not they paid anything when they received PAC. Most women in Masisi and Mweso stated that they had not paid for the care received, nor any component of contraceptive services. While some had sought assistance assuming they would have to pay, others had already been aware that services would be free due to outreach by community health workers and through word of mouth.

. . . and also they didn't charge me money. I thought that we were going to pay even 5 or 10 dollars, but I left the hospital without paying; they told me the care is free. (22-year-old)

However, at facilities in Kabare, Kalehe, Kayna, and Lubero, nearly all women reported a

cost associated with services, with most paying between US\$8 and \$15, and sometimes up to US\$75. Some women believed they were paying directly for certain medications, while others were not sure what the cost was associated with.

This money, it's not the nurse who keeps it, but it's to buy medicines to help people. (41-year-old)

I think they took care of me and also bought the medicines, they paid the state taxes, that's why I have to pay this money to the nurses. (32-year-old)

Several women highlighted how they were unable to pay the bill themselves and required assistance from friends, family, or community groups.

. . . the Church noticed that we weren't able to pay the bill; my husband asked them to lend us the money. Since we were told to find half of the sum that they asked to release me and my child [who was ill at the same time]. The Church made a contribution of \$30; we stayed with a debt of \$20. . . . (35-year-old)

Despite having to pay for receiving care, many women believed that the cost was reasonable and were more than willing to pay when their health was at risk. A few women mentioned that they chose the supported facility because the cost was lower than elsewhere.

It [the cost] was not much compared to the medications I received. . . . And they did a great job cleaning my belly, giving me drugs. It [the cost] was really warranted. (32-year-old)

The price of the medication pushed me to come here because if I went to the general referral hospital, they would have to charge \$50 or maybe \$40, but here I don't know if it's their usual practice or not, I paid according to what women who abort pay. (30-year-old)

Moreover, women frequently explained that, even though they had to pay, they were first treated before being given a bill.

. . . it's not just any nurse who can treat you without asking first for money. If he thinks of money, he can't take good care of you. But also, I was in a critical state, if they neglected me, I was going to die. But despite my economic situation, they treated me. Yes, I would say that that they had the spirit of love. (35-year-old)

PAC Element 4: Counseling and Voluntary Contraceptive Services: Nearly all participants described receiving counseling on voluntary contraceptive services during their stay at the facility.

For the most part, women understood that they could quickly become pregnant. The need to delay their next pregnancy was commonly described as giving their uterus a rest in order to improve their chances of having a future healthy pregnancy.

Afterwards they gave us instructions by showing that often when you abort, sometimes you get pregnant again directly after. This is why it's better to protect myself by using family planning to recover. (33-year-old)

And she told me, Mama [Name], what do you think about it? Did you not risk dying? I told her that I had never used a contraceptive method like Depo or others, but this time, teach me if I can do something. (32-year-old)

Despite receiving contraceptive counseling, knowledge of the types of methods and their efficacy varied, and questions and worries regarding side effects often persisted.

If today at this very moment I decide to have this [method] removed, can they find it or not? And also, there are times that you want to get pregnant again, can they remove the [method] or can it disappear in the body and you become sterile—is this true or false? (22-year-old)

One often takes [the implant], it will disappear in the body, and then you find yourself in the hospital, the nurse looking for it unsuccessfully, you will be transferred to one of the big hospitals to undergo interventions. . . . Rather than use these things, it's better to get pregnant and give birth. (20-year-old)

Several women's comments suggested concerns about the quality of contraceptive services. For example, 3 women mentioned that the provider refused to administer a method without their husband present or requested their husband's presence in order to receive a method.

[My husband] had categorically refused [contraception], so I began asking the doctor to give it to me in his absence. The doctor refused, saying that it could create problems for me at home. (22-year-old)

That's when he told me about family planning. He told me about the methods and that I go tell my husband to write an authorization letter to allow them to give me the method. (40-year-old)

Ultimately, the majority of interview participants (38) reported that they chose a modern method of contraception at the time of receiving PAC. They expressed generally positive attitudes regarding their ability to delay or limit future childbearing.

In any case, this program that you've brought, it is a good program. Using family planning is very good because many carry pregnancies, especially the mothers you see that all have a pregnancy; a year passes; you have another pregnancy. . . . the other children are still very little, you ask yourself what to do since you lack [resources]. (28-year-old)

PAC Element 5: Reproductive and Other Health Services:

Participants were not asked specifically about their need for reproductive and other health services, yet a few provided suggestions for how supported facilities may be improved. One woman mentioned the need for more specialized doctors to provide care for women.

I mean, if they can help us in settings like this, to find someone who can take charge, a medical specialist for women, who can help other general practitioners to treat women as necessary. (40-year-old)

Some participants were more specific in describing elements of care that were unavailable at the supported facility. For one woman, being transferred to another facility would have posed an unmanageable financial barrier.

Yes, even the bleeding continued and then the nurses . . . said that after trying and using all of the medicines, if it didn't improve, they were going to transfer me to [Hospital]. . . . Unfortunately, I didn't have money for treatment at the referral hospital or even for a transfer to another health center. (43-year-old)

Overall, women expressed that their health needs were met at the supported facilities. Often, this was relayed when they were asked whether or not they would recommend the facility to another woman who needed care. Overwhelmingly, participants were enthusiastic to explain how they would urge women to go to the supported facility, not only for PAC, but for other services as well.

I can inform her that [at this facility] they love their patients. They don't neglect the patients. Sometimes there are hospitals that neglect their patients so that you don't have the courage to send your friend or family. But if it's a good hospital, you are encouraged to send your friends. (35-year-old)

■ DISCUSSION

This study highlights women's perceptions of the quality of PAC services in North and South Kivu, DRC, at health facilities supported by CARE, IRC,

Nearly all participants described receiving counseling on contraceptive services, but knowledge about methods varied.

Overall, women expressed that their health needs were met at the supported facilities.

Most interview participants reported accepting a modern method of contraception when receiving PAC.

Participants stated that they would recommend PAC to other women requiring care.

The findings from this study indicate that the program was successful in addressing the 5 components of PAC.

Perceptions of quality of care as well as respectful care may be particularly relevant in humanitarian settings.

and Save the Children. The findings reveal that women who sought PAC services at supported facilities had extremely positive experiences, particularly in regard to client-provider interactions. The interviews also demonstrated an overall awareness of available PAC, suggesting that communication strategies are reaching communities as intended. The demographics of the interviewees were similar to the demographics of all PAC clients found in the register reviews, providing a means of triangulation of findings from both components of this study.

To our knowledge, this study is the first to explore how women perceive the quality of PAC in a humanitarian setting, and it fills a gap in the literature on the provision of PAC services in such settings.^{4,14} The findings from this study indicate that the program was successful in addressing the 5 components of PAC, particularly in regards to raising awareness of services and providing counseling, treatment, and postabortion contraceptive services. This demonstrates the successful implementation of good-quality PAC in a humanitarian setting. Similar to an evaluation of PAC services in Somalia, our findings suggest that a program approach of improved service delivery through capacity building of health providers and engagement of community members is successful and could be replicated in similar contexts.¹⁴ The interviews with PAC clients also suggest that perceptions of quality of care were not a significant barrier to seeking PAC.

The PAC register review findings are somewhat limited due to insufficient use of clear definitions for complications. Bleeding was recorded at high rates when providers recorded few serious complications, suggesting that any bleeding was marked as a complication. Additionally, antibiotics were often provided despite no record of infection. Both findings suggest a need to improve providers' ability to accurately record complications and treatment. Program staff have noticed overadministration of antibiotics, and the problem is now discussed during supervision visits with providers. The register review also reveals that use of MVA for PAC, the standard of care recommended by the World Health Organization, and voluntary postabortion contraceptive uptake, including LARCs, were common. The lower percentage of PAC clients who did not receive uterine evacuation in Masisi/Mweso may be linked to the fact that 47% of women had no reported complications and interview participants from these health zones reported no cost for PAC services. Program staff

believe women may be coming to supported facilities with miscarriages that do not require treatment.

The interviews highlighted the positive experiences women had with their care. Overwhelmingly, participants stated that they would recommend PAC to other women requiring care. Such statements were often a result of the woman herself being treated with kindness and dignity by the service provider. Further, supported facilities were often described as having a reputation of providing good-quality services, thus encouraging women to seek care for abortion complications. These findings are in line with existing literature on how quality of SRH services encourages care-seeking behavior.^{22,33–36} Research has also demonstrated that when providers are equipped with the tools necessary to deliver services and receive supportive supervision, they are more likely to treat clients with respect and take pride in their work.³⁷

While participants were satisfied with services, many reported pain during the procedure, suggesting the need to ensure that providers follow the pain management protocols on which they were trained. These include use of ibuprofen or paracetamol prior to the procedure and use of lidocaine and “verbacaine” or “vocal anesthetic” during the procedure. After the study, the MOH and NGO supervisors revisited pain management procedures with providers during supportive supervision visits.

Perceptions of quality of care as well as respectful care may be particularly relevant in humanitarian settings. Strengthening health systems that have been destroyed by conflict is essential not only to improve the health of the population but also to promote social cohesion and restore accountability.²³ Trust in health care providers in North and South Kivu was apparent through women's descriptions of their interactions with them, including with respect to confidentiality and nondiscrimination. The overall aim of these programs is to strengthen the capacity of the MOH to provide comprehensive SRH services. Client perceptions of PAC may very well translate into restored trust in the ability of the government to provide other health services.

This study also provides insights into contraceptive knowledge, attitudes, and practices among women in the supported health zones. The majority of pregnancies ending in abortion were unintended, and the majority of women reported use of a modern contraceptive method following PAC, consistent with the register review

findings that 75% chose a voluntary postabortion contraceptive. This finding indicates an acceptability of modern methods in the program areas, as well as a need for continued programming to increase awareness and access to appropriate contraceptive methods. Findings are in line with Demographic and Health Survey results that show high rates of unintended pregnancy and unmet need for modern contraceptive methods in North and South Kivu.²⁴ The register review revealed that younger women are less likely to use a postabortion contraceptive, but it is unclear how much of this lower usage is due to client preference or provider bias. Contraceptive uptake among younger IDI participants was mixed, and thus their experiences did not help to answer this question.

Interviews with PAC clients revealed mostly positive attitudes toward contraception, yet attitudes were often undermined by confusion regarding method effectiveness and duration of use and by fears about side effects. While postabortion contraceptive counseling is one avenue of addressing these concerns, it is perhaps insufficient in providing a comprehensive knowledge of contraceptive methods and answering all questions regarding different methods. Several studies in similar contexts have found that postabortion contraceptive counseling leads to increased uptake of modern methods of contraception.^{14,17,38} Yet a systematic review of postabortion contraceptive counseling and services for women in low-income countries found insufficient evidence that postabortion contraceptive counseling leads to comprehensive knowledge of contraceptive methods or sustained contraceptive use.³⁹

Notably, only one IDI participant reported seeking care after an induced abortion. It may be true that nearly all women sought care for a spontaneous abortion, but it is also possible that women decided not to disclose an induced abortion to the interviewers. Given the restrictive legal environment for abortion and strong social stigma, nondisclosure may be likely.³¹ Research in similar settings demonstrates that stigma is a significant barrier to care seeking for women who have induced abortion.⁴⁰⁻⁴² The register review showed that, in all health zones, few nulliparous women sought treatment. This finding suggests that young unmarried women are less likely to seek PAC at supported facilities, perhaps due to fear of stigma. Common methods of inducing abortion in North and South Kivu are ineffective and often necessitate PAC services.^{43,44} Meeting the needs of women who have induced abortion is therefore

essential in order to reduce abortion-related complications and mortality in North and South Kivu.

Limitations

While the findings are mostly encouraging for the program, several key limitations may influence the reliability of the findings. The PAC register review data on complications and treatment were less consistent across partners and appeared to lack clear definitions, thus limiting their usefulness. Women who agreed to participate in interviews may have been those with a more positive experience at the facility, or women may have demonstrated a courtesy bias to please interviewers. Furthermore, only one woman reported seeking PAC after an induced abortion, which means we do not know about differences in quality of care for women who induce.

CONCLUSIONS AND RECOMMENDATIONS

The findings from this study provide several key recommendations for future PAC programming, both in North and South Kivu and other humanitarian settings.

Empower providers to provide good-quality care: These programs have placed great emphasis on clinical training and ongoing supportive supervision, as well as working with providers to reinforce attitudes that promote good-quality care. These programming components empower providers to take pride in their services, and go above and beyond their duties to ensure that women are treated with care and dignity, as noted by all respondents.

Provide ongoing support to ensure high-quality postabortion contraceptive counseling: Providers require ongoing support to address the specific needs and challenges of PAC clients. During contraceptive counseling, providers should respond to any remaining concerns regarding the client's method of choice. Developing materials for low-literacy populations that illustrate details on different contraceptive methods may help if women have follow-up concerns about their method of choice. Programs should also discuss provider attitudes that influence contraceptive care negatively, such as requiring a husband's consent. More investigation is needed to assess whether provider attitudes are affecting lower uptake of postabortion contraception among younger women.

Modern methods are acceptable in the program areas, but increased awareness of and correct information about appropriate contraceptive methods is needed.

Examine effective community mobilization strategies: Community mobilization is a core component of the programs in North and South Kivu, and the findings reveal success in increasing community awareness of PAC. However, continued efforts are needed in raising awareness of the availability of contraception and dispelling myths surrounding various methods. Different strategies may be needed to serve young women, who were less likely to choose a postabortion contraceptive, and women who have induced their abortions, who may be less likely to seek PAC.

Improve provider skills in pain management and accurate diagnosis and recording of complications: The most commonly reported negative experience for PAC clients was related to pain during the procedure. Programs should reinforce provider skills in “verbal anesthetic” and use of recommended medications, such as non-steroidal analgesics and ibuprofen, and should recommend that clinical supervisors observe whether these techniques are being used by providers. At the time of the study, few facilities offered misoprostol as an option for PAC treatment. As misoprostol becomes more available for PAC, women will have a choice for PAC treatment and should be informed of what pain to expect from each method in order to make their decision. Inconsistencies in the PAC register review suggest the need to also reinforce provider skills in diagnosing and recording abortion complications.

Investigate costs paid by PAC clients: PAC provided at the supported facilities is meant to be free of charge, yet women in some program areas consistently reported paying for some aspect of care. While cost did not appear to strongly influence client perceptions of quality of care, nor did providers delay treatment until payment was made, cost may serve as a barrier for women who wish to seek care but cannot afford to do so. Rates of uterine evacuation were higher in health zones where IDI participants frequently mentioned costs associated with PAC treatment, suggesting that women may be likely to only seek treatment when symptoms are severe. Partner organizations are currently investigating what costs are being paid for out of pocket by PAC clients at supported facilities.

Further research to understand reasons for underutilization of PAC: One underlying purpose of this study was to understand reasons for underutilization of PAC, and whether or not quality of care was a potential barrier. These interviews indicate that quality is not a barrier because the women reported overwhelmingly positive

experiences at supported facilities. Further research is needed with women who do not come to supported facilities for PAC, and with women who may be more likely to experience poor quality of care, such as those who have induced abortion.

Acknowledgments: The authors would like to thank the participants for sharing their valuable insights as well as our IDI facilitators for their invaluable work conducting, transcribing, and translating the IDIs.

Funding: This study was funded by an anonymous private foundation.

Disclaimer: The opinions expressed herein are those of the authors and do not necessarily reflect the views of their respective organizations nor of the donor.

Competing Interests: None declared.

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Peer Reviewed

Received: September 20, 2018; **Accepted:** March 15, 2019

Cite this article as: Deitch J, Amisi JP, Martinez S, et al. "They love their patients": client perceptions of quality of postabortion care in North and South Kivu, the Democratic Republic of the Congo. *Glob Health Sci Pract*. 2019;7(suppl 2):S285-S298. <https://doi.org/10.9745/GHSP-D-18-00368>

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ORIGINAL ARTICLE

Women's Satisfaction With and Perceptions of the Quality of Postabortion Care at Public-Sector Facilities in Mainland Tanzania and in Zanzibar

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Tanzanian women expressed greater satisfaction with postabortion care received at district hospitals and health centers, where they experienced shorter waiting times, more family planning counseling, and threefold greater voluntary uptake of family planning, than at regional hospitals. Continued decentralization to district hospitals would likely enhance client satisfaction with postabortion care.

ABSTRACT

Background: In 2015, the government of Tanzania began to strengthen the quality of postabortion care (PAC). Limited research has been conducted to understand clients' perceptions of public sector provision of PAC. Accordingly, we carried out a mixed-method study between April and July 2016, using client surveys and in-depth interviews, both implemented immediately following PAC. Results were used to help guide the government's initiative.

Methodology: We assessed the quality of PAC in 25 public-sector facilities through a client survey of 412 women. Questions included satisfaction with client-staff interaction, counseling, provider competence, postabortion family planning, accessibility of care, and the facility environment. Based on responses, we developed and validated a scale representing women's overall satisfaction with the quality of care. We conducted bivariate analysis to identify the levels of care associated with clients' ranking of individual and composite measures of the quality of care. We used multivariate ordinal logistic models to assess the relative influence of multilevel factors on clients' overall satisfaction. We coupled our survey with qualitative analysis of in-depth interviews with 30 PAC clients.

Results: Clients reported moderately high levels of satisfaction with the quality of PAC, with an overall mean score of 2.6 on a 4-point scale. Bivariate analysis identified several areas for improvement, including family planning counseling and provision, especially at regional hospitals; pain management; and reduced use of sharp curettage. The factors most strongly associated with satisfaction were advanced parity, receiving care at lower-level facilities, brief waiting periods, and manual vacuum aspiration for treatment of incomplete abortion. Qualitative analysis illuminated how client-provider interactions; pain; desire for counseling and information, especially on family planning; and congested facility environments shape clients' perceptions of the care they received.

Conclusions: Although clear areas for improvement in public-sector provision of PAC existed at all sites, women were less likely to report satisfaction with care at referral facilities owing primarily to inadequate counseling, delays in receiving PAC treatment after admission, and poor emphasis on postabortion fertility, family planning information, and contraceptive provision. PAC programs should ensure availability of a wide range of contraceptive methods and high-quality family planning counseling, especially at tertiary facilities.

INTRODUCTION

Induced abortion occurs frequently in Tanzania, despite legal restrictions against it, and women often undergo the procedure secretly and under unsafe conditions.¹ In 2013, just over 405,000 induced and spontaneous abortions occurred in Tanzania, yielding a national ratio of 21 total abortions per 100 live births.² Complications include incomplete abortion, hemorrhage, infection, uterine

perforation, and damage to the genital tract and internal organs. One study found that for each woman in Tanzania that received postabortion care (PAC) for complications, another 6 did not seek or receive care after an abortion; however, not all of these women experienced complications.² Another study reported that unsafe abortion accounted for 38% of hospitalizations for obstetric complications.³ According to 2 other hospital studies, unsafe abortion caused approximately one-quarter of all maternal deaths.^{4,5}

PAC addresses mortality and morbidity from abortion-related complications. As an integrated clinical service package, PAC includes treatment for abortion complications, provision of family planning counseling, and access

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to a voluntary contraceptive method for healthy spacing of desired pregnancies and avoiding future unintended pregnancies.⁶ PAC includes what has been indicated, screening and treatment of STIs and HIV as well as community empowerment.

The Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) of Tanzania is strongly committed to PAC, which it includes in its National Package of Essential Health Interventions.⁷ Over time, international donors and NGOs have supported the government in expanding access to this service. A cornerstone of these efforts has been decentralizing PAC from tertiary to lower-level facilities and strengthening of the family planning counseling and service provision component of PAC, emphasizing access to a wider range of methods, especially long-acting reversible contraceptives (LARCs).^{8,9} To evaluate this process, the World Health Organization recommends assessing clients' perspectives as part of routine monitoring and evaluation of postabortion services, including postabortion family planning.¹⁰⁻¹² Multiple studies indicate that clients' age is an important factor in PAC delivery. Young women are often more likely to seek an unsafe abortion, develop complications, and either delay or refrain from seeking treatment,¹³ partly because they perceive bias, opprobrium, and discrimination from providers.¹⁴ A qualitative assessment of women's views on medical treatment for abortion complications in Zimbabwe found that women preferred misoprostol over vacuum aspiration techniques for PAC, perceiving it as less invasive, safer, and more affordable than surgery.¹⁵

We sought to learn about PAC clients' perception of the quality of care in 25 public-sector facilities in mainland Tanzania and Zanzibar.

In our study, we sought to learn about PAC clients' perception of the quality of care in 25 public-sector facilities in the Mwanza and Geita regions of mainland Tanzania and in Zanzibar, an island archipelago off the coast of the country. Data collection was done within a parent study to obtain baseline information on interventions aimed at improving family planning integration with PAC and accelerating decentralization of the service to lower-level facilities. Past research on the quality of PAC in Tanzania emphasized the feasibility of task shifting to midlevel providers,¹⁶ the acceptability of postabortion contraception services,¹⁷ and influences on follow-up care seeking.¹⁸ Using data from exit interviews and in-depth interviews with PAC clients following their discharge from care, we assessed their satisfaction with the care they received. Our specific objectives were to (1) compare the perceptions of quality among women who received PAC at referral hospitals and lower-level facilities, (2) identify the main drivers of client satisfaction with PAC, and (3) identify protocol

elements and client needs that the PAC programs do and do not adequately address.

METHODS

Health Systems Context

The MOHCDGEC has authorized the provision of surgical PAC in Tanzania, through both sharp curettage and manual vacuum aspiration (MVA). It has not approved the use of misoprostol, a uterotonic drug, for treatment of incomplete abortion. Zanzibar, which maintains a semi-autonomous relationship with the mainland and has its own Ministry of Health and Social Welfare, permits all these methods for PAC. All supplies and medications for PAC are procured by the MOHCDGEC without U.S. government support. According to global recommendations for PAC treatment of incomplete abortion, sharp curettage should be phased out and replaced with MVA and medical methodologies.^{10,11}

Sampling

We conducted quantitative exit interviews, employing structured questionnaires, with clients from 2 regional referral hospitals, 6 district hospitals, and 9 health centers, all in the public sector, in the Mwanza and Geita regions, and 1 regional referral hospital, 3 district hospitals, and 4 health centers in Zanzibar regions. All regional referral hospitals are in urban areas, and 2 of the 6 district hospitals are close to urban areas near regional capitals in the Mwanza and Geita regions. The remaining facilities are in rural settings. We selected these sites based on data from 2015–2016, which indicated service volume for public-sector facilities. Sites with a PAC client volume of 4 per month were considered eligible for inclusion in this study.

The number of clients recruited at each facility was determined based on the sample size needed to evaluate the effect of an intervention on voluntary postabortion contraceptive uptake before and after the quality improvement intervention. Given the difference in baseline measures for PAC clients' uptake of a modern contraception method, we made separate calculations for the mainland and for Zanzibar. We took into account the need to measure at 80% power a threefold increase in the proportion of PAC clients that chose a LARC before discharge. We also employed a design effect set at 2 to address clustering and assumed a client refusal or nonresponse rate of 10%. Using population proportionate to size sampling techniques, we established recruitment

targets for the proportion of PAC clients to enroll at each facility to reflect service utilization trends during the past year. We subsequently enrolled 228 PAC clients at 17 sites in Mwanza and Geita and 184 at 8 sites in Zanzibar (254 from regional referral sites and 158 from lower-level district hospitals and health centers), for a total of 412 participants.

For the present analysis, we assessed differences in PAC clients' overall satisfaction with PAC treatment. Informed by stakeholders in the study area, we hypothesized that women receiving PAC at lower-level facilities (district hospitals and health centers) would rate the services more highly than those at referral-level facilities because the latter receive more complex cases and are more crowded. We did not differentiate our sample between the mainland and Zanzibar study populations. Given our sample sizes, we determined that we could detect a 15 percentage-point difference in the proportion of women who classified their level of satisfaction with PAC as high or very high (see the dependent variable below). In both sampling exercises, our a priori significance level was $\alpha=.05$.

A subset of PAC clients who completed exit interviews were asked to participate in qualitative in-depth interviews (IDIs). For the IDIs, we equally enrolled clients based on their age (18–29 years and 30 years and above) and facility type (regional hospitals and lower-level facilities). Ultimately, 30 PAC clients participated in these interviews.

Study Instruments and Measures

The exit interview took 45 minutes on average and included binary or categorical questions on sociodemographic characteristics; reproductive health and family formation experiences; recognition of complications; care seeking and social aspects of negotiating access to care; perceptions of the facility environment; features of the client-provider interaction; post-procedure knowledge and recall of counseling; postabortion contraceptive use; and satisfaction with PAC received. The final section of the questionnaire included 12 questions that used Likert scales for ranking the level of satisfaction or agreement with various dimensions of PAC quality, such as waiting time, privacy, cleanliness, and treatment from staff and the PAC providers. Scoring was 1–4 (1, lowest; 4, highest) for each of the questions.

To identify the main influences on client satisfaction with PAC, we created a summary measure of overall satisfaction by combining participants' scores for each of the 12 domains of satisfaction,

respectively. We then developed the dependent variable for our analysis, a 4-point scale representing clients' overall evaluation of PAC quality. A Cronbach's alpha coefficient was calculated to validate the scale ($\alpha=.80$). Based on a recent systematic review of instruments to measure patient experience of health care quality and Quality Criteria for Measurement Properties, our scale was internally consistent and appropriate for our analysis.^{19,20}

The IDIs followed an open-ended guide that emphasized the different stages of PAC clients' experience. The interview was designed to last 30 minutes. Questions pertained to clients' perceptions of the accessibility of PAC; delays experienced after admission; respectfulness of staff and interpersonal relation with the PAC provider; providers' technical competence in PAC; the condition of the facility and its environment; choice and availability of services; and satisfaction with counseling and the information received. Data collectors digitally recorded the IDIs and transcribed them in their original Swahili. The transcripts were professionally translated into English, and the study team then entered them into QSR Nvivo-Pro for analysis.

Study Enrollment

At all sites, PAC providers oriented to the project screened clients who sought treatment for post-abortion complications for eligibility to participate based on whether they seemed physiologically and emotionally capable of understanding informed consent procedures. Prior to deployment, 20 data collectors with clinical and social science backgrounds, including experience conducting quantitative and qualitative interviews with women on related topics, received a 10-day training on the ethical, technical, and logistical aspects of data collection. This training included pretesting and refining the survey instrument and IDI guide. The data collectors were deployed from April to June 2016 to recruit PAC clients who had been identified as eligible to participate.

Informed consent included an explanation of the rationale for data collection; future use of data; rights to confidentiality and anonymity; rights to withdraw from the study; protections against adverse consequences in terms of future health care utilization; and review of other potential risks and benefits of study participation. Consenting individuals signed or provided an inked thumbprint on a consent form. Participants then completed an exit interview at the facility where they received PAC, either in a private room or immediately outside the facility.

To identify the main influences on client satisfaction, we created a summary measure of overall satisfaction.

Enrollment followed a consecutive sampling approach: every client that met the inclusion criteria was asked to participate until an acceptable sample size was achieved. During data collection, interviewers approached 436 eligible PAC clients to request their participation and 412 enrolled in the study. After the exit interview, a subset of 30 participants provided informed consent for an IDI, which was conducted in the same place as the exit interview.

Analytical Steps

Client data from the questionnaires were entered into an Epi Info database through “double entry” to ensure accuracy. We transferred data into Stata version 14 for statistical analysis. We first carried out a descriptive analysis by estimating the proportions and means for variables used in our analysis. To compare the satisfaction of women that received PAC at referral hospitals and lower-level facilities, we tested for associations, using Pearson chi-square tests, between client characteristics, characteristics of care received, and client satisfaction with the type of facility where they received PAC.

To identify the main drivers of clients’ satisfaction with PAC, we conducted an additional analysis of the questionnaire data collected at all study sites. We first constructed the dependent variable and conducted Pearson chi-square tests (1-sided significance) to assess differences between proportions of clients grouped according to overall satisfaction score (1–4, very low to very high). We used several independent variables in these analyses: participants’ sociodemographic characteristics, reproductive health backgrounds, care-seeking experiences, and PAC visit features. We then estimated ordinal logistic regression models, using cluster-robust standard error estimates to account for the dependent nature of our data caused by recruiting multiple women at the same facilities. With this model, we assessed the relationship between each independent variable that demonstrated significance earlier and the dependent variable. Bivariate tests were conducted, and those with significance of $\alpha \leq .05$ were subsequently analyzed in multivariate models with the same dependent variable. In multivariate tests, we followed an additive procedure to minimize the number of variables, while maximizing the model’s accuracy. Again, our a priori significance level was $\alpha = .05$.

To understand client perspectives, we analyzed the IDI. First, we used Frameworks Analysis²¹ to identify analytical categories about

clients’ perceptions of quality. Then, the team developed a codebook, assigning codes to each framework and conducted a “grounded theory” analysis,²² “open coding” the 30 transcripts. Interrater reliability assessments were conducted to ensure the reliability of coding, and the level of agreement was 93%. We then conducted “axial coding” to integrate codes and develop hypotheses. Afterward, we rearranged coded segments of data to display these hypotheses and identified viable explanations. Lastly, we returned to the transcripts and validated these explanations of clients’ level of satisfaction with PAC.

Ethical Considerations

The Tanzanian National Institute of Medical Research and the U.S.-based Western Internal Review Board approved the study protocol.

RESULTS

Participant Characteristics

The majority of clients were between 20 and 24 years of age, but the mean age was approximately 27 (Table 1). Among the 412 women in the study, 115 had no other children or live births; overall, the mean parity was 2.3 live births. Slightly more than four-fifths of participants were married, and 72% had completed primary school (n=297). Forty-one percent (n=167) of participants earned an income independently, and Christians and Muslims composed roughly half of the participant sample, respectively.

Apart from religion, participants from the mainland and from Zanzibar were fairly similar with regard to mean and median ages, mean parity, being married or in union, completion of primary school, and having income-generating occupations. With regard to participants’ religion, 75% and 14% of mainland participants were Christian and Muslim, respectively, whereas in Zanzibar 6% and 93% were Christian and Muslim, respectively.

The majority of participants waited between 1 and 4 days before seeking care for abortion complications (Table 2). One-quarter of participants waited 5 days or longer. Two-thirds of the women enrolled had been in the first trimester of pregnancy when postabortion complications arose, and 12.4% of participants (n=52) reported an induced abortion. Nearly 1 in 5 of participants (n=78) had had at least 1 previous abortion. Two out of 5 participants (n=165) reported that their pregnancy had been unintended, and 54 of these women

Apart from religion, participants from the mainland and from Zanzibar were fairly similar.

TABLE 1. Study Population by Sociodemographic Variables, Mainland Tanzania and Zanzibar

Age	No. (%)	Parity Mean	Married/In Union No. (%)	Completed Primary School No. (%)	Income-Generating Occupation ^a No. (%)	Christian No. (%)	Muslim No. (%)
<20	50 (12)	<1.0	28 (56)	37 (74)	15 (30)	18 (36)	32 (64)
20–24	113 (27)	1.0	85 (75)	86 (76)	38 (34)	49 (43)	63 (57)
25–29	82 (20)	2.0	68 (83)	61 (74)	41 (50)	46 (56)	36 (44)
30–34	70 (17)	3.0	62 (89)	51 (73)	34 (33)	34 (49)	36 (51)
35–39	54 (13)	4.3	49 (91)	31 (57)	23 (43)	29 (54)	25 (46)
40–46	30 (7)	5.4	27 (90)	21 (70)	13 (43)	22 (73)	9 (27)
Missing	13 (3)	3.6	13 (100)	10 (77)	3 (23)	10 (77)	3 (23)
Overall	412 (100)	2.3	332 (81)	297 (72)	167 (41)	208 (50)	204 (50)

^aParticipant had her own job that generated an income. Other participants reported that they were not working or were subsistence farmers or homemakers.

had been using a contraceptive method when they conceived. With regard to facility type, 61.4% (n=254) women were admitted to a regional referral facility and 38.6% to a district hospital or health center. Less than one-fifth of participants (n=72; 52 from mainland Tanzania and 20 from Zanzibar) were discharged from PAC having voluntarily chosen a modern contraceptive method.

Services and Client Satisfaction

Table 3 presents PAC clients’ ranking of their satisfaction with specific aspects of PAC, with clients’ classification serving as the dependent variable. By combining participants’ scores for the individual measures of satisfaction, we constructed a summative scale to reflect clients’ overall satisfaction with PAC. Each point (1–4) represented an ordered response category defined by participants’ relative evaluation of PAC services. The mean composite score on the summative scale was 2.6, and the median and mode were 2.75. Among all participants, 28% (n=115) and 20% (n=83) were classified into the first and second categories of our ordered response variable, respectively, and 32% (n=131) and 20% (n=83) of clients in the third and fourth.

Characteristics of the PAC received at referral and lower-level sites are presented in Table 4. Almost one-third of participants admitted at regional hospitals waited for over 2 hours before receiving PAC, whereas only 7.6% of those admitted at lower-level sites waited that long ($P<.001$). The use of PAC treatment methods varied significantly by facility type ($P<.001$), but no difference was found in appropriate use.

Participants were more likely to receive pain relief medication at referral hospitals than at lower-level facilities, where 43.7% reported receiving such treatment ($P<.05$). Participants’ recall of postabortion counseling was poor at both types of facilities and varied significantly for the following: counseling on the PAC treatment method ($P<.05$), post-procedure complications and danger signs ($P<.001$), and participants’ return to fertility after abortion ($P<.05$). Concerning postabortion family planning counseling, clients at referral and lower-level facilities varied significantly in terms of discussing fertility desires ($P<.001$), contraceptive methods ($P<.001$), and voluntary method uptake ($P<.001$). Overall client satisfaction with PAC differed significantly based on facility type ($P<.001$).

Factors Associated With Client Satisfaction With PAC

Table 5 shows the variables included in the multivariate ordinal logistics regression analysis based on their significance in bivariate tests. Participants with at least 1 earlier live birth were more likely to be satisfied with the services they received (odds ratio [OR]=1.66; $P=.02$). Those that received PAC at a district hospital or health center were more likely to be satisfied with PAC than participants who received care at a regional hospital (OR=1.79; $P=.001$). The amount of time clients waited to receive PAC after admission significantly influenced their evaluation of the service, with those who waited for 30 minutes or longer being less likely to be satisfied (OR=0.74; $P=.02$). Relative to participants treated with MVA, those PAC clients who received sharp curettage or

Overall client satisfaction with PAC differed significantly based on facility type.

TABLE 2. Study Population by Abortion Characteristic and PAC Visit Variables, Mainland Tanzania and Zanzibar (N=412)

Measure	No. (%)
Timing of care seeking after observing danger signs of complication	
1 day	110 (26.7)
2 days	98 (23.7)
3–4 days	99 (24.0)
≥5 days	105 (25.0)
Gestational age at onset of complications	
≤12 weeks	283 (68.7)
13–18 weeks	65 (15.8)
≥19 weeks	64 (15.5)
Client- Report of Spontaneous or Induced Abortion	
Induced	52 (12.4)
Spontaneous	360 (87.6)
Participants' prior experience	
Ever had an abortion in the past	78 (18.9)
Ever received PAC for a previous abortion	51 (12.4)
First abortion	334 (81.9)
Participants' recall of desire for the pregnancy leading to their need for PAC	
Pregnancy was intended	236 (57.3)
Pregnancy was unintended	165 (40.1)
Pregnancy was mistimed (desire to delay)	123 (29.9)
Pregnancy was unwanted (desire to limit)	28 (6.8)
Postabortion fertility preferences	
Would like to get pregnant immediately	92 (22.3)
Would like to get pregnant within 2 years	120 (29.1)
Would like to get pregnant again after 2 years	100 (24.3)
Would like to cease childbearing completely	43 (10.4)
No clear intention for future childbearing	32 (7.8)
Ever used a modern family planning method	198 (48.1)
Facility type where PAC was received	
Regional referral hospital	254 (61.2)
District hospital	138 (33.4)
Health center	20 (4.8)
Waiting time at facility before receiving care for abortion complication	
Immediately	140 (34.7)
≤30 minutes	87 (21.6)
31–120 minutes	88 (21.8)
>2 hours	88 (21.8)

Continued

TABLE 2. Continued

Measure	No. (%)
PAC treatment method used	
MVA	265 (64.3)
Sharp curettage	77 (18.7)
Misoprostol	35 (8.5)
Received pain medication	
Yes	215 (52.2)
No	197 (47.8)
Recall of counseling on emergency treatment procedure	
MVA clients	106 (40.0)
Sharp curettage clients	30 (39.0)
Misoprostol clients	14 (40.0)
Total	150 (36.4)
Recall of other counseling messages	
Post-procedure recovery and self-care practices	57 (13.8)
Post-procedure danger signs	158 (38.4)
STI/HIV	11 (2.7)
Postabortion return to fertility	113 (27.4)
Recall of postabortion family planning counseling and services	
Discussed future fertility intentions with provider	55 (13.4)
Discussed contraceptive methods with provider	124 (30.1)
Chose and received a modern postabortion contraceptive method	72 (17.4)
Condom (male)	4 (<1%)
Condom (female)	1 (<1%)
Oral contraceptives	23 (5.6)
Injectable (Depo Provera)	19 (4.6)
Implant	5 (1.2)
Intrauterine device	18 (4.3)
Tubal ligation	2 (<1)
Chose a traditional method	6 (1.5)

Abbreviations: MVA, manual vacuum aspiration; PAC, postabortion care; STI, sexually transmitted infection.

misoprostol for PAC were less likely to be satisfied (OR=0.69; P=.01). Clients’ recollection of counseling information, receipt of voluntary contraceptive services, and pain relief medication did not significantly influence their satisfaction with PAC.

Client Perceptions of Quality

IDI participants (n=30) offered diverse views of satisfaction with PAC and perceptions of the quality of care. The most ardent and prevalent

suggestions for service improvements, at times expressed as lamentations, concerned pain experienced during treatment.

I experienced a very painful moment. It was very painful while he (the doctor) had told me there couldn’t be such a severe pain. (MVA for PAC at 10 weeks gestation at district hospital, Mwanza)

Clients frequently reported that they had to pay for pain relief medication and sometimes

IDI participants offered diverse views of PAC satisfaction and perceptions of its quality.

TABLE 3. Study Population by Likert Scale Measures on Client Satisfaction, Mainland Tanzania and Zanzibar (N=412)

Satisfaction Measure	No. (%)			
	Very Low (1)	Low (2)	High (3)	Very High (4)
1 Waiting time before receiving care	42 (10)	12 (3)	63 (16)	292 (71)
2 Privacy of counseling and procedure	31 (8)	9 (2)	55 (14)	312 (77)
3 Cleanliness of facility/PAC room	21 (5)	19 (5)	111 (27)	258 (63)
4 Organization of services	15 (4)	12 (3)	78 (19)	304 (74)
5 Treatment from staff of the facility	9 (2)	12 (3)	58 (14)	327 (81)
6 Treatment from the PAC provider	17 (4)	2 (<1)	45 (11)	344 (84)
7 Clarity, thoroughness of counseling	46 (11)	17 (4)	67 (16)	279 (68)
8 Contraceptive counseling and access to methods	66 (16)	23 (6)	60 (15)	260 (64)
9 Perception of confidentiality of client information.	35 (9)	21 (5)	47 (11)	306 (75)
10 Technical skills of PAC provider	49 (12)	10 (2)	111 (27)	240 (58)
11 Agreement to recommend service to a friend	33 (8)	—	18 (4)	356 (87)
12 Agreement to come back to the same facility for the service again	20 (5)	1 (>1)	16 (4)	340 (90)
Composite score on satisfaction ^a	115 (28) ^b	83 (20) ^c	131 (32) ^d	83 (20) ^e

Abbreviation: PAC, postabortion care.

^aCronbach's alpha coefficient was calculated to validate the scale ($\alpha=.80$).

^bMean score of 1–12, ≤ 2.5 .

^cMean score of 1–12, >2.5 and ≤ 2.67 .

^dMean score of 1–12, >2.67 and ≤ 2.75 .

^eMean score of 1–12, >2.75 .

Counseling that IDI participants felt was lacking included information about postabortion fertility and contraceptive options.

leave the PAC treatment area to purchase it from the pharmacy and come back. As illustrated by the preceding quotation, women reported receiving inaccurate information and counseling on the evacuation procedure, not only concerning pain, but in general, prior to receiving treatment.

Clients frequently complained about the lack of thoroughness of post-procedure information provision and counseling. Counseling was often condensed into the brief period in the treatment room immediately after a procedure. For example, when trying to recall the post-treatment conversation she had with her provider, one participant responded.

I can't tell you. I had an injection and I was floating. (MVA for PAC at 8 weeks gestation, regional referral hospital, Zanzibar)

Clients frequently felt uncomfortable raising questions or expressing themselves when interacting with facility staff, especially their PAC providers.

One thing which I wished to see was my child although it was already dead. I wanted to see how it was and

when I wanted to tell the doctor, I thought that I was going to disappoint him so I had to keep quiet. (MVA for PAC, district hospital, Zanzibar)

Aspects of counseling that IDI participants felt were absent included information about postabortion fertility and contraceptive options. Clients ubiquitously reported confusion about when they could become pregnant again. Clients understood the imperative to delay future childbearing for 6 months, but not that fertility could resume as early as 10–14 days after the procedure.

[The providers] told me after 6 months if I have not used any family planning, and conceive I will get miscarriage, so probably in the coming 6 months I better use family planning otherwise if I conceive it will abort again. I have understood them, inshallah, but I have never used family planning. (Misoprostol for PAC, regional referral hospital, Zanzibar)

Clients also expressed a need for information about how contraception works, for example, “to know if you are supposed to be investigated before getting the injection . . . to know how to take those pills” (MVA for PAC, district hospital, Mwanza).

TABLE 4. Service Characteristics and Client Satisfaction at High- and Lower-Level Facilities, Mainland Tanzania and Zanzibar

Service Characteristics and Client Satisfaction	Regional Hospital (N=254) No. (%)	District Hospital or Health Center (N=158) No. (%)
Waiting time at facility before receiving care**		
Immediately	82 (33.3)	58 (36.9)
≤30 minutes	43 (17.5)	45 (28.7)
30–120 minutes	45 (18.3)	42 (26.8)
>120 minutes	76 (30.9)	12 (7.6)
PAC treatment method used**		
MVA	169 (72.8)	96 (65.8)
Sharp curettage	53 (22.8)	25 (17.1)
Misoprostol	10 (4.3)	25 (17.1)
Received pain relief medication*		
Yes	146 (57.4)	69 (43.7)
No	108 (42.6)	89 (56.3)
Recalled receiving counseling on treatment procedure*		
Yes	88 (34.6)	70 (44.3)
No	166 (65.4)	88 (55.7)
Recalled receiving counseling on post-procedure danger signs**		
Yes	114 (44.9)	27.9 (44)
No	140 (55.1)	114 (72.1)
Recalled receiving counseling on HIV/STIs		
Yes	8 (3.2)	3 (1.9)
No	246 (96.8)	155 (98.1)
Recalled receiving counseling on postabortion fertility*		
Yes	60 (23.6)	53 (33.5)
No	194 (76.4)	105 (66.5)
Recalled discussing fertility intentions**		
Yes	16 (6.3)	39 (24.7)
No	238 (93.7)	119 (75.3)
Recalled receiving counseling on contraceptive methods**		
Yes	50 (19.7)	68 (43.0)
No	204 (80.3)	90 (57.0)
Chose and received a modern family planning method**		
Yes	24 (9.5)	48 (30.4)
No	230 (90.5)	110 (69.6)

Continued

TABLE 4. Continued

Service Characteristics and Client Satisfaction	Regional Hospital (N=254) No. (%)	District Hospital or Health Center (N=158) No. (%)
Composite satisfaction score**		
Very low	92 (36.2)	26 (16.4)
Low	48 (18.9)	35 (22.2)
High	76 (29.9)	55 (34.8)
Very high	38 (15.0)	42 (26.6)

Abbreviations: MVA, manual vacuum aspiration; STI, sexually transmitted infection.
 * P<.05; ** P<.001.

Provider attitudes concerning clients’ prerogative to regulate their fertility affected postabortion family planning services:

I wished [the PAC provider] advised me between injection and pills which is the best. . .but they told me if your husband was here we could give you one right here, but because he is not around, they told me to wait, that I should not start taking family planning drugs now. (MVA for PAC, district hospital, Mwanza)

Some IDI respondents expressed dissatisfaction about excessive wait time for PAC in the facility. One respondent arrived at reception and “wasted much time there” because, “There were too many people, there was a jam” (MVA for PAC, regional referral hospital, Zanzibar). Others reported having to wait for care due to lack of funds:

They asked me if I had money. I told them I don’t have money now, until my relatives come. So he said go and let’s see until they come. I stayed and waited and they did not come. They asked me if they are not coming and told me to then come for cleaning. (MVA for PAC, district hospital, Mwanza).

Clients’ critical commentary was tempered by praise for their providers, whom they regarded with warmth and gratitude. One client felt “[the provider] was good because he was wise and encouraging to me, I felt so good” (MVA for PAC, health center, Mwanza). Clients were relieved and grateful to receive lifesaving PAC treatment, and dissatisfaction with aspects of the care did not affect their appraisal of staff. As one said, “I came here with a problem and it was removed. . . so what was supposed to be done has been done!” (MVA for PAC, health center, Zanzibar). At times, clients juxtaposed their tribute to their providers

with reports of physical and emotional discomfort. One reported:

I am grateful to him and my God. . . I am thankful . . . they gave a good service. . . I had severe pain, however, I endured . . . tolerated. . . I did not tell him anything. . . I was just looking at him. (Misoprostol for PAC at 10 weeks gestation, regional referral hospital, Zanzibar)

High percentages of women were satisfied with the PAC received and felt they were treated well, but they also identified areas for improvement.

DISCUSSION

In this study, we sought to understand how women experience PAC provided by the government of Tanzania, how they view the quality of care, and the factors that contribute to their overall evaluation of the service. We found mixed results. Although high percentages of women were satisfied with the privacy and organization of care and felt they were treated well, participants also identified important areas for improvement. These areas included the cleanliness of the PAC setting, the thoroughness and clarity of counseling, access to voluntary contraception, and the perceived technical skills of the provider. A comparison of referral facilities with lower-level facilities identified the need to address long wait times, particularly at referral facilities, and an overuse of sharp curettage for PAC treatment. The comparison also highlighted irregular use of pain medication and women’s poor recall of critical counseling information, such as on the PAC treatment procedure, postabortion fertility, and contraception options. Our multivariate analysis indicated that parous women tended to view the quality of PAC more favorably than nulliparous women. Similarly, quality was rated more highly by women who received PAC at lower-level sites versus referral facilities, received MVA rather than sharp curettage

TABLE 5. Factors Associated With Experience of Service Quality: Multivariate Analysis

Measure	OR (95% CI)	P Value
Parity		
No children	Reference	
≥1 child	1.66 (1.10, 2.52)	.02
Time to facility		
≤30 minutes	Reference	
>30 minutes	1.09 (0.69, 1.53)	.72
Facility type		
Referral hospital	Reference	
Lower-level site	1.79 (1.27, 2.56)	.001
Time waited at the facility prior to seeing a provider		
≤30 minutes	Reference	
>30 minutes	0.74 (0.58, 0.93)	.02
PAC treatment method		
MVA	Reference	
Other evacuation method	0.69 (0.51, 0.92)	.01
Received pain relief medication		
Yes	Reference	
No	0.90 (0.61, 1.32)	.58
Recalled counseling information on PAC treatment procedure		
No	Reference	
Yes	1.01 (0.67, 1.50)	.98
Recalled counseling information on contraceptive methods		
No	Reference	
Yes	1.05 (0.67, 1.65)	.81
Chose and received a modern family planning method		
No	Reference	
Yes	1.23 (0.98, 1.92)	.28

Abbreviations: CI, confidence interval; MVA, manual vacuum aspiration; OR, odds ratio.

or misoprostol for PAC, and received PAC within 30 minutes of admission.

Our qualitative results contextualized these findings. Women's almost unanimous appreciation and praise for the health care workers providing the service was interwoven with expressions of hardship. These expressions highlighted experiences of pain during PAC treatment, difficulties concerning demands for service fees, dissatisfaction and poor recall of desired counseling information, disappointment with the contraception information and method options available, and long wait times.

The government PAC in mainland Tanzania and in Zanzibar should address the gaps in delivery of pain medication. According to policies throughout Tanzania, public-sector facilities cannot charge user fees for PAC. While our study facilities appeared to follow this directive, many participants had to pay for pain relief medication as a separate service component. This factor may not have emerged from a study that only used quantitative data. Studies on health care worker behavior and performance in the context of maternal health care in Tanzania have reported that the government has poor responsiveness to the

workers' financial reimbursement claims for needed items that are not available through the public-sector supply chain. The workers may in turn resort to officially unpermitted user fees to maintain financial resources at the facility.²³ These studies and others in different countries describe how excessive workload, lack of time, lack of training on the need for pain medication, and insufficient knowledge about pain management among nurses and midwives might also explain these gaps in PAC provision.^{24,25} Training and practice, particularly at lower-level facilities (e.g., district hospitals), should emphasize pain management as a fundamental component of PAC. Review and possibly revision of curricula, training, and quality assurance materials should direct such guidance to those that perform PAC and those working at the pharmacy and inventory levels that regulate the availability of medical supplies. Broader efforts are also needed to address the structural constraints to improving the public-sector supply chain and the financial resources at the site level to prevent health care workers from imposing inappropriate user fees.

Counseling on PAC treatment procedures and postabortion fertility, typical danger signs, and contraceptive eligibility was generally poor.

We found that counseling on PAC treatment procedures and postabortion fertility, typical danger signs, and contraceptive eligibility, particularly in referral facilities, was generally poor. Similar to receipt of pain relief medication, these factors did not appear as significant drivers of satisfaction in statistical analysis; however, comparisons of performance by facility type suggested that efforts must be made at multiple levels to ensure that counseling addresses clients' informational and interpersonal needs. Weaknesses in counseling during PAC appear to hinge on lack of training of providers in communication and dealing with clients' feelings, insufficient time for counseling, lack of integration of counseling into other routine client-provider interactions, and provider biases against discussing abortion.²⁶

A need exists to revisit and potentially revise the processes used to decentralize PAC in the study areas.

Without adequate counseling on procedures and options for PAC treatment, practitioners in our study overused sharp curettage for PAC clients in their first trimester. We also found that the type of PAC treatment received influenced women's satisfaction with PAC. Women with incomplete abortion who did not receive MVA usually had sharp curettage, which is relatively invasive and painful; therefore, these women tended to have lower levels of satisfaction than women treated with MVA. Zanzibar, where the government has a policy approving misoprostol for PAC, has not adopted clinical guidelines on using it to treat abortion complications. Consequently, providers'

knowledge on its use for PAC is adapted from protocols for other conditions, such as postpartum hemorrhage. Considering the demand for PAC and availability of both surgical and medical treatment, women in Zanzibar should be given the choice between MVA and misoprostol for PAC treatment. Further, providers should be oriented to relevant guidelines on misoprostol use for PAC, including accurate dosing according to specific indications and route of administration.

Among the various sociodemographic factors examined, only parity emerged as being significant in our multivariate analysis of client satisfaction. Several factors could explain this result, including PAC not being youth friendly. Survey data on and qualitative narratives offered by multigravida clients depicted these women as being relatively older, married, and more experienced with the health system and obstetrical care, and having firmer preferences about fertility intentions and contraceptive use. This corroborates with others from studies on women's satisfaction with maternal health care. One study, in Sri Lanka, reported that multiparous women were more likely than primiparous counterparts to evaluate perinatal services highly, likely owing to their relative experience and realistic expectations.²⁷ A qualitative study on decision making and experiences seeking maternal care in Sierra Leone had similar findings, remarking that multigravida women appeared to have more autonomy and perceived control during their interactions with the health care system.²⁸ Altogether, these findings suggest that efforts concerning PAC should emphasize meeting the needs of younger women with relatively little childbearing experience.

A large majority of clients in this study were enrolled at regional referral hospitals, indicating a need to revisit and potentially revise the processes used to decentralize PAC in the study areas. These facilities performed relatively poorly in terms of counseling on PAC treatment and family planning, postabortion contraceptive provision, clients' waiting times, and clients' overall satisfaction. Other studies have shown that clients often bypass primary care facilities for regional hospitals in Tanzania (often at great expense), providers in rural areas tend to be less skilled than those in urban areas, and patients are aware of these deficiencies.^{29,30} Our findings suggest that redoubling efforts to decentralize services should also include improving quality at the tertiary level. In fact, the most robust predictor of clients' satisfaction was where they received PAC. Women treated for an incomplete

abortion at a regional referral hospital were significantly less likely to be satisfied with PAC than those at lower-level sites. Previous research conducted at the same facilities highlighted factors that might explain this finding, including the facilities' congestion, longer waiting periods, greater pressure on providers to multi-task and deal with higher case burdens, and the isolation of family planning services to separate sections of facilities.³¹ Future research and training programs should emphasize technical quality, communication, and service integration at all levels of care as service coverage expands from tertiary to lower-level facilities.³² Additional research should document the systems requirements for sustaining quality as coverage expands, first at higher-level facilities, and establish frameworks for scaling up to intermediate and primary sites accordingly.³³

Our analysis also illustrates the complexity of understanding quality of care from clients' perspective. Clients generally offer moderate to high appraisals of service quality when scoring their perceptions of quality quantitatively, despite their qualitative feedback largely focusing on dissatisfactory aspects of their experience with PAC. Although we cannot attribute these discrepancies to any particular factor in our study environment, previous research has illustrated how patients often positively reinterpret negative aspects of health care for various reasons including fear of reprisal, a sense of dependency on medical professionals, and expectations of etiquette.³⁴ Such findings underscore the importance of qualitative research. In this study, it helped us identify differences between clients' ratings of health care quality, their desires, and how they felt during care. The health system should respond by reviewing standards of care and improving implementation to address client needs. Based on PAC research and program experience, providing written guidance to PAC clients as well as information on post-abortion family planning, self-care, and when to seek health care improves the client experience and compels providers to comply with standards of care.³⁵ Program evaluators should use qualitative data and adapt quantitative measures for service quality that reflect clients' actual preferences and desires.³⁶

Of particular note, this study revealed extremely low levels of contraceptive provision and voluntary uptake among women at the study sites in both mainland Tanzania and in Zanzibar. Only 17% of the women actually received a modern contraceptive method and fewer than 7% received a voluntary LARC method. Quality gaps of

this magnitude likely involve multiple factors, such as informal task-sharing arrangements, staff being unfamiliar or unqualified to implement protocols on family planning counseling and provision of a variety of methods, and providers' time constraints and biases. Such biases may particularly exist toward young and nulliparous clients, who made up 28% of our study sample. This finding corroborates a larger analysis based on 4 years of data from 10 countries in sub-Saharan Africa that found contraceptive uptake was less likely among women younger than 20 years old compared with those over 25 years.³⁷ Additional reasons could include weak logistics systems that fail to consider the demand for contraceptives outside typical family planning settings and the tendency of quality assurance schemes to overlook PAC, including postabortion family planning, as services requiring routine supervision and follow-up. These problems being most observed in referral-level facilities mirrors findings from another meta-study that identified similar associations between care at primary-care facilities and contraceptive uptake in several countries.³⁸

Limitations

The study has some limitations. It compared women's experiences with PAC at different levels of the health system, but it only enrolled 20 women from health centers. To achieve sampling targets within timelines, it was necessary to enroll participants at sites where most women were seeking care rather than wait extensively to enroll participants at low-volume sites. Similarly, the study was unable to obtain a sample that contained robust strata by evacuation method type, most PAC cases involved surgical performance of MVA, with markedly fewer using curettage and medical techniques. Consequently, closer examination of women's preferences in terms of PAC treatment method was not possible. Because this study was intended to provide formative knowledge for a program to be implemented in specific regions of the country, it did not employ national probability sampling; therefore, findings cannot be generalized to the entire country. In Tanzania, PAC is also available from the private sector, and we only assessed it in public facilities. Thus, our results are not generalizable to women seeking PAC in the private sector. Our findings provide information for quality improvement interventions in settings identified by the government of Tanzania. In all settings, it is important to note the potential influence of courtesy bias on

This study revealed extremely low levels of contraceptive provision and voluntary uptake at the study sites.

participants' responses. They might not have felt at liberty or comfortable rendering negative feedback about the care they received, a limitation common in research on this topic.³⁹ Financial considerations limited the volume of data that we could collect, making it necessary to pool data from mainland and Zanzibar for our analysis. This approach may conceal important regional differences about PAC provision.

CONCLUSIONS

Overall, the study reveals considerable room for improvement in the public-health sector PAC program in our mainland sites in Mwanza and Geita regions and those in Zanzibar. We identified noteworthy discrepancies in the client-reported quality of PAC at referral-level and lower-level facilities. Although clear areas for improvement existed at all sites, women were less likely to report satisfaction with care at referral facilities owing primarily to inadequate counseling, delays in receiving PAC treatment after admission, and poor emphasis on postabortion fertility, family planning information, and contraceptive provision. Strategies to scale up PAC must encompass solutions to these problems and the capacity of the local health systems to sustain quality of care wherever PAC is introduced. Nevertheless, women's rating of overall service quality demonstrates moderate levels of satisfaction. Relevant factors were the women's parity, the type of facility where they received PAC, delay in receiving care, and the PAC treatment method used. The clients' narratives about their experiences receiving PAC provides a richer picture of what mattered to them. When asked to score their satisfaction, women expressed decisions that were often inconsistent with deeply felt desires and emotional reactions to using PAC. Understanding clients' preferences, expectations, and wishes is vital toward strengthening health care to address underutilization of services in general, including PAC. Improving the areas that fell short in this study will translate to critical progress for women's health in these regions.

In terms of policy and programming, our findings provide relevant implications. In particular, training, whether centralized or on the job, and other supervision and quality assurance systems should emphasize strengthening capacity to ensure and monitor availability of a wide range of contraceptive methods in PAC settings, as well as the quality of family planning counseling, especially at tertiary facilities.

In addition, the need for access to PAC treatment procedures merits attention in both the mainland and in Zanzibar. Where misoprostol is permitted for PAC, policy makers and technical assistance partners should develop guidelines and strengthen capacity among providers to deliver medical methods appropriately. They should also ensure postabortion family planning is offered equally to PAC clients regardless of the method of treatment they receive. Where possible, supporting task sharing to mid-level providers and decentralizing care to lower level health facilities can make PAC more available to women closer to where they live. In all cases, protocols, training and supervision tools, and practices need to emphasize pain management as an essential component of PAC. Ongoing efforts by the government and technical assistance partners should adopt a focus on the preferences, needs, and perceived barriers to PAC including family planning among youth and emphasize approaches that address those factors in their partnership with health care workers and managers at PAC service delivery points across the country.

Policy and programmatic implications notwithstanding, continued mixed-method research is necessary to explore how service delivery and client preferences shape satisfaction and decision making on use of PAC. Programs that integrate such work into routine monitoring and evaluation activities position themselves for improvements that are guided by clients' expressed perspectives and needs.

Acknowledgments: We thank Claudia Morrissey Conlon and Erin Mielke for their technical review of the manuscript as well as their expertise and assistance throughout all aspects of our study.

Funding: This manuscript was generated from a study conducted under the Post Abortion Care Project in Tanzania funded by the United States Agency for International Development under agreement AID-OAA-A-00050.

Disclaimer: The views expressed in this article are solely the views of the authors and do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Competing Interests: None declared.

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Peer Reviewed

Received: December 19, 2018; **Accepted:** March 25, 2019

Cite this article as: Baynes C, Yegon E, Lusiola G, Kahando R, Ngadaya E, Kahwa J. Women’s satisfaction with and perceptions of the quality of post-abortion care at public-sector facilities in mainland Tanzania and in Zanzibar. *Glob Health Sci Pract*. 2019;7(suppl 2):S299-S314. <https://doi.org/10.9745/GHSP-D-19-00026>

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ORIGINAL ARTICLE

The Quality of Postabortion Care in Tanzania: Service Provider Perspectives and Results From a Service Readiness Assessment

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Of the approximately 2,000 postabortion care (PAC) clients treated over 6 months in 2016, 55% chose a contraceptive method before discharge. Gaps in PAC availability and quality spanned multiple domains including human resource capacity and availability of supplies and contraceptives. While PAC providers generally expressed commitment to providing high-quality care, several facility and systems factors constrained their efforts, including limited training and facility space, lack of time, and supply chain challenges.

ABSTRACT

Introduction: In 2015, the government of Tanzania launched an effort to strengthen the quality of postabortion care (PAC), an integrated health service that includes treatment for abortion complications and provision of family planning counseling and voluntary services, in 25 facilities in mainland Tanzania and in Zanzibar.

Methods: To help guide the government's initiative, we conducted a mixed-method study in 2016 using health facility surveys and in-depth interviews with health care workers that offer PAC. Surveys of the 25 facilities assessed the current use of services and readiness to deliver them. Provider performance in PAC was assessed through direct observation of client-provider interactions. In-depth interviews (IDIs) with 30 staff from the facilities provided qualitative information on priorities for PAC quality improvement.

Results: In the 6 months preceding the study, 2,175 PAC clients sought care at the facilities. Of these PAC clients, 55% chose a family planning method, of whom 6% chose a voluntary long-acting reversible contraceptive. The median facility PAC readiness scores were 45% for health centers, 49% for district hospitals, and 61% for regional referral hospitals. Direct observations of manual vacuum aspiration provision for PAC revealed that providers implemented, on average, 69% of the critical clinical steps. For misoprostol provision, PAC providers implemented, on average, 42% of the critical steps. Multilevel influences affected PAC providers' work, often adversely, by shaping their confidence in their technical competency, confusing their role as health care workers and as clients' peers, and coloring their attitudes toward clientele. The PAC providers also felt that their ability to implement their responsibilities was shaped by lapses in essential support and functionality of the health care system, as well as by social and cultural norms.

Conclusions: Technical assistance approaches that blend training, clinical quality improvement, systems strengthening, and social interventions that address demand-side barriers are needed to ensure providers achieve their potential and are able to deliver high-quality PAC.

INTRODUCTION

According to the Ministry of Health, Community Development, Gender, Elderly and Children of Tanzania (MOHCDGEC), 19% of maternal deaths in the country are due to abortion complications.¹ Postabortion care (PAC) prevents such deaths, whether the risk arises from abortions that are spontaneous or

induced, and this care is critical to reducing overall maternal mortality. Essential elements of PAC include managing and treating postabortion complications, providing counseling on reproductive intentions and family planning, and providing voluntary contraceptives if the client desires, and screening and treatment for STI/HIV and RH, and community empowerment. Management of the most common complications of abortion involve controlling severe bleeding and providing treatment for incomplete abortion, either surgically (e.g., manual vacuum aspiration [MVA] or curettage) or medically with a uterotonic drug. Within PAC, increasing attention has been placed on preventing future unintended pregnancy

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and abortion by providing voluntary contraceptive services to women admitted to health facilities for treatment of abortion complications.² When treated medically, a PAC client may immediately start using hormonal methods—including oral contraceptives, injectables, and implants—but an intrauterine device (IUD) requires the client to return to the provider for a follow-up visit to ensure treatment is complete before insertion. After MVA, eligible PAC clients may start using any type of method, including IUDs and implants.³

Despite the Tanzanian government's commitment to PAC, significant gaps in services remain. Data compiled from 120 sites in the Lake Zone of the country show that between 2005 and 2014 83% of the 18,688 PAC clients received a voluntary family planning method, but only 9% of these clients chose a voluntary long-acting reversible contraceptive (LARC) or permanent method.⁴ In public-sector facilities in Zanzibar, only 30% of PAC clients received a contraceptive method, and of these clients, less than 1% chose a voluntary LARC.⁴ In 2016, the Postabortion Care Family Planning Project, a global project funded by the U.S. Agency for International Development (USAID) and implemented by EngenderHealth, conducted a mixed-method investigation on PAC in the Mwanza and Geita regions of mainland Tanzania and in Zanzibar. The study included exit interviews with women who had just received PAC. This study, conducted among 412 PAC clients, found that 69.9% of participants could not recall receiving any information on contraception from their PAC provider, and 82.6% left facilities without a modern contraceptive method.⁵

As a complement to the study of PAC clients' perspectives, a mixed-method study was conducted in Geita, Mwanza, and Zanzibar regions of Tanzania on the service delivery process and experience from the perspective of providers and managers. Insights from the user perspective are essential for delivering service that best meets the characteristics and preferences of its clientele^{6,7}; however, eliciting the views of those who provide service is also vital to providing quality PAC. Training is obviously fundamental, but it is often inadequate to address the underlying demands of service strengthening, such as continuous performance improvement, management efforts to effectively organize PAC within facility environments, and attention to systemic issues that influence the functionality of, for example, logistics and supervision systems.⁸ Continuous quality improvement is a salient aspect of family planning

and reproductive health programs. It is accompanied by the need to understand multiple factors that influence performance and to identify interventions that are feasible to implement, effective in practice, and sustainable in the wider health system.^{9,10} A study in Nigeria of family planning provider perspectives illustrated the need for ongoing clinical education and sensitization to address prejudices or biases in service delivery.¹¹ In Uganda, another study elucidated how organizational factors, such as human resource shortages, inadequate staff training and skills, and logistical problems, encumber provider efforts to strengthen the quality of contraceptive services.¹² Studies have also adopted the provider perspective to explore the quality of PAC.^{13,14} A recent publication from Togo described a quality improvement approach to strengthen the contraceptive component of PAC, drawing upon detailed process documentation and service statistics.¹⁵ Few studies triangulate findings on the PAC delivery process with information about providers' perspectives on what generally influences their performance in providing contraceptive services with PAC.

Our mixed-method study had 3 purposes. First, it documented the availability of PAC, the process of delivering PAC, and the quality of those services. Second, it captured providers' perceptions of the factors influencing their performance and organizational capacity to deliver PAC. Finally, it explored the feasibility of improving the quality of PAC.

METHODS

Sampling

We assessed the availability, quality, and utilization of PAC at 25 sites in Geita and Mwanza regions of mainland Tanzania and in Zanzibar between April and July 2016. In mainland Tanzania, the MOHCDGEC has authorized the provision of surgical PAC in Tanzania, through both sharp curettage and manual vacuum aspiration (MVA). It has not approved the use of misoprostol, a uteroton drug, for treatment of incomplete abortion. Zanzibar, which maintains a semi-autonomous relationship with the mainland and has its own Ministry of Health and Social Welfare, permits all these methods for PAC. In Geita and Mwanza, the facilities included 2 regional referral hospitals, 6 district hospitals, and 9 health centers, all in the public sector under the direction of the MOHCDGEC. In Zanzibar, 1 regional referral hospital, 3 district hospitals, and 4 health centers were

We assessed the availability, quality, and utilization of PAC at 25 sites in mainland Tanzania and in Zanzibar between April and July 2016.

included. Site selection was based on PAC volume data for public-sector facilities during the previous year (2015–2016). Only facilities that maintained a PAC client volume of at least 4 per month during this period were eligible for enrollment in this study. At each site, the research team, made up of data collectors that were qualified as PAC and LARC trainers, conducted a 3-pronged assessment. First, they assessed the facility readiness to perform PAC and the service statistics to delineate PAC utilization trends (n=25). Second, they conducted direct observations of the service delivery process for all types of PAC treatment for incomplete abortion during this period using MVA (n=20) and misoprostol (n=20). Finally, they conducted in-depth interviews (IDIs) with PAC providers (n=30) at enrolled facilities.

Study Instruments and Measures

To obtain information on the provision of PAC and readiness of sites to deliver it, the data collectors gathered 3 types of data. First, they examined recent trends in the utilization of PAC during the 6 months prior to the study, including clients that obtained a voluntary contraceptive method before facility discharge. Second, they used cross-sectional data on the availability and functionality of essential medicines, supplies, and equipment for PAC to rate the facility readiness (Table 1). Third, the data collectors used standardized direct observation checklists customized for surgical and medical treatment of abortion complications to document providers’

compliance with PAC clinical standards and protocols. Indicators of compliance were expressed as the proportion of steps providers adhered to for (1) each critical component of PAC provision and (2) overall for all critical components combined (Table 2).

The IDIs were based on an open-ended guide designed to elicit information from providers on the factors that influence service delivery. The lines of questioning addressed the domains under which these factors play out: the individual and interpersonal level, where providers’ characteristics shape their interactions with clients; the organizational level, where health systems factors influence performance; and the sociocultural context. Data collectors digitally recorded the IDIs and transcribed them in their original Swahili. The transcripts were then professionally translated into English and entered into QSR Nvivo-Pro by the study team for analysis.

Data Collection and Study Enrollment

Data collectors received a 10-day training in the ethical, technical, and logistical aspects of data collection, which included pretesting and refining the assessment tools. The 12 data collectors then spent 1 month completing the exercise. Direct observations of client-provider interactions and PAC procedures were contingent upon informed consent by both the PAC provider and client. Informed consent included explanation of the rationale for data collection; future use of data; rights to confidentiality and anonymity; rights to

TABLE 1. Domains of Structural Quality Assessed to Determine the Readiness to Provide PAC

Domains of Structural Quality	Measures Assessed
Service availability	Reported service availability of uterine evacuation and contraceptive methods; times of service availability; availability of contraceptives to PAC clients by treatment method and contraceptive method type
Human resource capacity	Number of staff by training status in all PAC treatment methods, LARCs; reported proportion of time trained staff are available at facility to perform PAC
Service delivery environment	Observed privacy and cleanliness of PAC provision environment, availability of running water, electricity, toilet, and information, education, and communication materials on PAC; presence of sink, operating furniture, and essential linens
Supplies and contraceptives	Availability of essential supplies, medications, and contraceptives in PAC provision setting (i.e., those required to implement the signal functions)
Infection prevention and waste management	System in place for solid infectious waste disposal, liquid infectious waste disposal, availability of protocols for collection and processing of waste, facility staff trained in waste management, and availability of infection prevention materials and supplies
Health information system	Availability and completeness of PAC register, documentation of gestational age, and treatment detail of clients in obstetrical register and maternal death register

Abbreviations: LARCs, long-acting reversible contraceptives; PAC, postabortion care.

TABLE 2. Critical Components of PAC Service Delivery Assessed in Direct Observations of Client-Provider Interaction

Treatment Method	Critical Components
MVA	Initial counseling and assessment; triage; initial history; family planning history; family planning counseling; medical evaluation; discussion of treatment options; initial infection prevention; MVA preparations; MVA procedure; post-MVA infection prevention; post-procedure care/other; and predischage care (13 components)
Misoprostol	Initial counseling and assessment; initial and reproductive health history (including family planning); medical evaluation; establishes diagnosis/ confirms eligibility for misoprostol; informs of treatment options; provides correct information on misoprostol; ensures client understands expected effects and side effects; ensures client understands signs of complications; counsels women on return to fertility and family planning; and follow-up (10 components)

Abbreviations: MVA, manual vacuum aspiration; PAC, postabortion care.

withdraw from the study; protections against adverse consequences in terms of future health care utilization or performance review; and review of other potential risks and benefits of study participation. Consenting individuals signed or provided an ink thumbprint on a consent form.

A separate informed consent procedure was conducted to enroll PAC providers and managers in the IDIs. Participants ranged from 26 to 54 years in age (median 39), and the number of years they had practiced PAC ranged from <1 to 12 years (median 5). IDI participants included 20 women and 10 men.

Analytical Steps

Data from the health facility assessments and direct observations were entered into an Epi Info database through “double entry” to ensure accuracy and then transferred into Stata version 14 for statistical analysis. A descriptive analysis was carried out by estimating the proportions and means for variables used in the analysis. To understand provider perspectives contained in the IDI, Frameworks Analysis¹⁶ was used to identify analytical categories for providers’ understanding and conceptions of quality as they pertained to PAC and the influences that shape them. Analytical categories were derived based on Social Ecological Theory to strengthen our thematic frameworks. This theory posits that individuals are nested within different contextual domains that influence them at different levels and in different ways and the overall effect defines their agency as providers and teams.¹⁷ A codebook was developed that assigned codes to each framework and was used to guide a “grounded theory”

analysis¹⁸ of data obtained during the IDI. This analysis started with “open coding” of the 30 transcripts. Interrater reliability assessments were conducted to ensure the reliability of coding. The level of agreement in coding was 93%. “Axial coding” was then conducted to integrate codes and develop hypotheses. We then rearranged coded segments of data to display the hypotheses and identify viable explanations. Finally, we returned to the transcripts to validate these explanations of the quality of PAC including family planning services provided to PAC clients.

Ethical Considerations

The Tanzanian National Institute of Medical Research and the U.S.-based Western Internal Review Board approved the study protocol.

RESULTS

Utilization and Quality of PAC

Table 3 shows utilization of PAC, including uptake of a contraceptive method, from September 2015 to March 2016 at the 3 regional hospitals, 9 district hospitals, and 13 health centers enrolled in the study. Overall, 2,175 women had reported to the 25 facilities for PAC during this time period; 74% were treated with MVA, 16% with sharp curettage, and 10% with misoprostol. With regard to voluntary contraceptive uptake, 55% chose a method before discharge, with 6% of these clients choosing a LARC. Clients most frequently resorted to regional referral hospitals for PAC, and the provision of family planning counseling and services appeared to be the weakest at these sites. LARC provision during PAC was low at all sites; however, provision of other modern contraceptives

Overall, 2,175 women had reported to the 25 facilities for PAC, where nearly three-quarters were treated with MVA.

TABLE 3. Utilization of PAC and Uptake of Contraception by Level of Care, September 2015 to March 2016

	Health Center (n=13)	Hospital (n=9)	Regional Referral Hospital (n=3)	Total (N=25)
PAC volume, total number (min, max per facility)	520 (13, 70)	827 (61, 183)	828 (114, 503)	2,175
Family planning uptake, mean % (min, max)	62 (51, 92)	66 (99, 0)	39 (8, 81)	54
LARCs uptake, mean % (min, max)	4 (0, 30)	5 (0, 26)	2 (0.6, 7)	4

Abbreviations: LARCs, long-acting reversible contraceptives; PAC, postabortion care.

TABLE 4. Median Percentage of Structural Quality and Readiness Criteria Fulfilled by Key Subjects for Health Centers, Hospitals, and District Hospitals

Key Subject/Variable	Health Center (n=13)	Hospital (n=9)	Regional Referral Hospital (n=3)
Triage and service availability	42	44	62
Human resource capacity	58	58	73
Service delivery environment	60	60	73
Supplies and contraceptives	41	43	53
Infection prevention and waste management	55	67	66
Health information system	38	46	72
Overall	45	49	61

during PAC was relatively strong at district hospitals and health centers, where almost two-thirds of clients received a modern method.

Table 4 shows the median proportion of readiness criteria fulfilled at each facility for the respective structural quality domains. These measures reflect the availability of essential service components at the time of data collection at the 25 sites in Geita, Mwanza, and Zanzibar in April 2016. Overall, health centers and district hospitals had lower median readiness scores than regional referral hospitals (45% and 49% for health centers and district hospitals, respectively, compared with 61% for regional referral hospitals).

Figure 1 and Figure 2 illustrate provider compliance with the critical steps for the components of PAC, based on the method of treatment of complications (MVA and misoprostol) as assessed during direct observations. Overall, the mean critical steps competency score for all items assessed in the direct observation of MVA for PAC was 69% (range, 49% to 87%). Among the direct observations of complications treated with misoprostol for PAC the mean critical step competency score was 42% (range, 27% to 72%).

Provider Perspectives on the Quality of PAC and Postabortion Family Planning

The analysis of IDIs revealed different layers of individual (PAC provider), organizational (health facility and system), and sociocultural and normative contexts that shaped providers' perceptions.

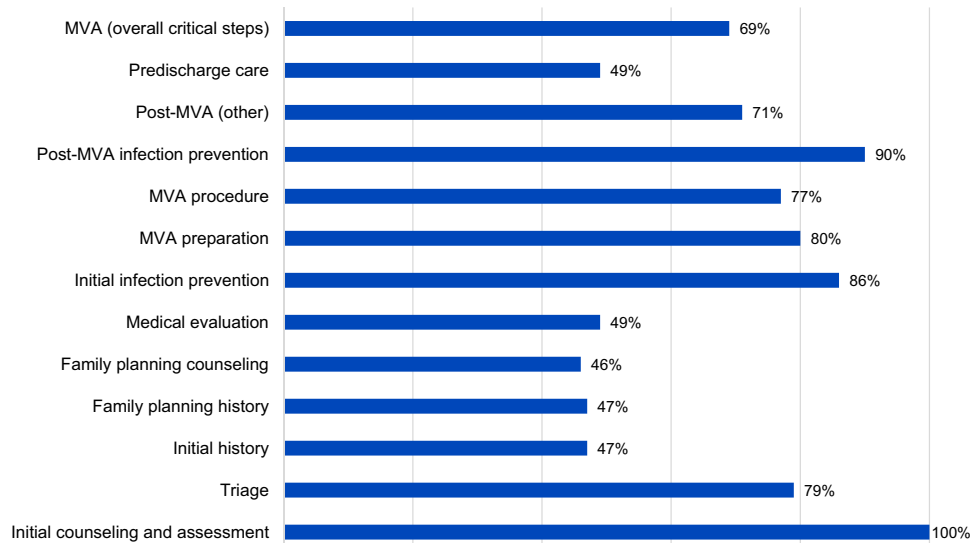
Individual Influences

Providers frequently expanded on perceptions of their own technical competence during discussions on PAC performance. Occasionally, they expressed a lack of confidence in their ability to treat incomplete abortion safely, remarking on the brevity of the technical training, supervision that inadequately addresses gaps in their performance, and the absence of clarity on appropriate use of misoprostol for PAC. A nurse from a health center in Zanzibar remarked:

In the long time lapses before repeating the training, it is likely for one to forget some things. If I cannot continue to provide [MVA for PAC] then I will send the client to this hospital.

During IDIs, providers frequently expanded on perceptions of their own technical competence.

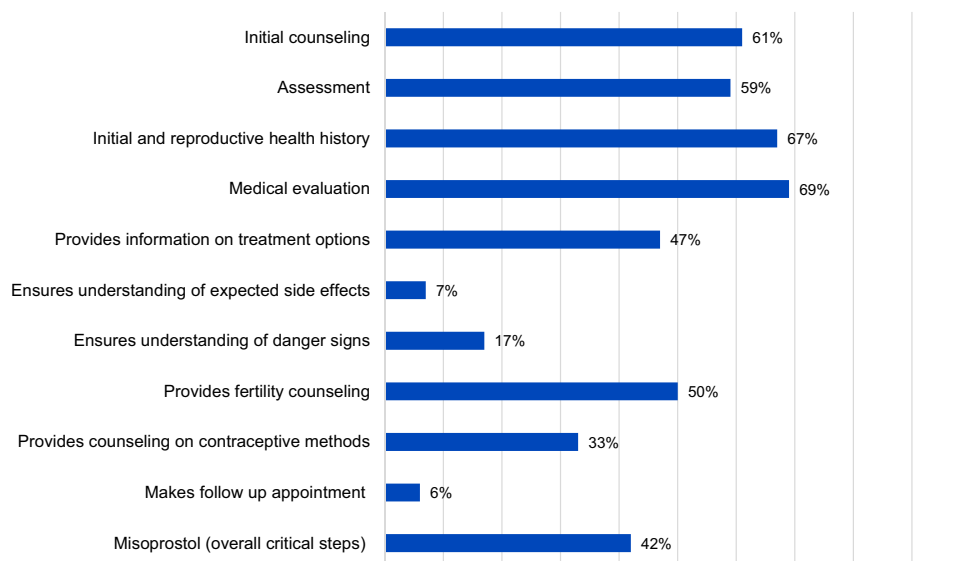
FIGURE 1. Critical Steps Component and Overall Score of PAC MVA Cases Directly Observed



Abbreviation: MVA, manual vacuum aspiration.

Note: The categories of PAC critical steps were drawn from separate sources, hindering direct comparisons of provider performance between MVA and misoprostol treatment approaches in Figure 1 and 2.

FIGURE 2. Critical Steps Component and Overall Score of PAC Misoprostol Cases Directly Observed



Note: The categories of PAC critical steps were drawn from separate sources, hindering direct comparisons of provider performance between MVA and misoprostol treatment approaches in Figure 1 and 2.

Participants conveyed their insecurities most acutely with respect to provision of family planning services to PAC clients.

It happens to some women after evacuation that [they] request for the long term [IUD] and I am not competent on that. . . . So, you find that the woman is in need of it and you have no expertise. Because many of us are not well skilled about it, a patient may keep being referred to another center and they will miss that service in the end. (Nurse-midwife, Mwanza)

Participants described how being unable to provide family planning services undermined their abilities to connect with clients and establish trust, which they viewed as essential for effective counseling. A nurse-midwife from Mwanza explained:

It's uncomfortable for a patient who has already built trust in you to bring in another provider to continue with family planning services because you can't provide them.

Providers' narratives illustrated how they viewed their roles including functions within the broader social dimensions of PAC including family planning. Echoing the perspectives offered by several respondents, a provider remarked:

My role is to save the woman's life and give her education on birth control. [Family planning] is approved by the male and that is why a man should come for family planning services after [treatment of complications]. Some men tell their wives if they keep using family planning they will end up in a divorce, so they do not use it anymore. (Clinical officer, Zanzibar)

Although providers acknowledged the importance of contraception after treatment for abortion complications, facilitating a couple's decision-making process remained beyond their clinical purview; it was a spousal matter. Providers reflected similarly on the role of religion on post-abortion contraceptive decision making. According to an assistant medical officer from Mwanza:

We are there to provide information and [family planning] services. [PAC clients] understand [the information], but sometimes the problem is religion. They are told if they take family planning they are killing organisms, therefore, it's a sin. That's a big issue.

The social controversy stirred by PAC and contraception forms a challenging context for PAC providers to be attuned to their clients' needs. Emergency treatment is mandatory when the clients' life is in danger, but family planning provider and uptake seems to be inherently based on social considerations or norms. To many of the providers

interviewed, interfering with decision making on family planning fell beyond their clinical mandate.

The majority of service providers reported salient biases with respect to postabortion family planning. Most reported that they would discourage it if a client were younger than 20, unmarried, or childless because of assumptions about her underlying fertility desires or the role of her spouse. Although providers conveyed no partiality for any method over others, they felt that clients' parity was an important consideration; for example:

You can't do long-term contraception to [a PAC client] with a single child. This is unfair. So it is to be advised to use the appropriate method. (Nurse, Mwanza)

One respondent reflected on how their attitudes affect the openness of the client and their willingness to engage with providers in the clinical setting:

We have to change. We must be approachable so that if the patient comes, she should not face difficulties in expressing what she has. . . . Some patients withhold information just because they find we are not welcoming and they go back with their problems not addressed. If we were welcoming, she would have expressed all that she has. If she tells you, "I normally have such problems and my pregnancies are usually lost when it is some months after pregnancy," you can have the way to help her because she has told you everything. So we service providers, we have to change our attitude. (Clinical officer, Mwanza)

In summary, PAC providers' confidence, perceptions of their roles and responsibilities to their clients, and attitudes toward particular clientele affected the quality of care and limited clients' access to family planning during PAC.

Health Facility and System Influences

Study participants identified a range of facility and overarching health systems issues that shaped the quality and content of PAC. The most frequently discussed factor was shortages and stock-outs of essential PAC supplies, medications, and contraceptive methods—even items as basic as sterile gloves might be missing. Occasionally, providers reported having to send clients or their relatives to purchase items from pharmacies and come back.

Most of the times most of the clients come and find the medications are out of stock so they have to give out their money and buy these medications, and yet some of them do not have money to buy the required drugs, they can't afford to buy the antibiotics, neither can they buy the

Providers frequently identified shortages and stock-outs of essential PAC supplies, medications, and contraceptive methods as issues that shaped the quality and content of PAC.

analgesics. Then you have to perform sharp curettage [for PAC] without the diclofenac injection and the patient complains of pain. We have to do it in order to save a life. (Nurse-midwife, Zanzibar)

The erratic supply chain also affects contraceptive choice. As one provider said:

Challenges come when our clients choose the method that is not available at that time. She might choose the implants and we only have the pills and Depo-Provera, so you have to brief her on the available methods so that she can select one. (Nurse, Zanzibar)

The consequences of chronic shortages of essential PAC equipment and supplies affect providers' behaviors and their conduct. Needing to generate revenue to acquire supplies, providers have to request additional funds from clients, which one respondent referred to as "bribery":

If we were working in a place where all the items were available, it would have been very good. But we [do not]. We [providers] are few then you keep on running around and you do not know where you should get a drip. It becomes very dangerous! This may lead [one] to encourage bribery. If the items were available, it would have helped to stop the idea of bribery. (Nurse-midwife, Mwanza)

Respondents spoke at length about the shortage of human resources, particularly those trained in PAC. One provider explained:

You find that a clinician is working 'round the clock. The only clinician provides services to [outpatient department] patients and those of CPAC [comprehensive postabortion care]. There is no time to rest even for a few minutes. This means that there is an acute shortage of staff. There is no motivation given to the staff. (Nurse, Mwanza)

One provider reflected on how this especially undermines the family planning component of PAC:

Time is very limited, you might have gone for performing MVA at the same time the labor ward awaits you, and again you are called to see the new patient in the ward. [Time is limited] especially during counseling, just some shallow explanations. She will leave with little knowledge. (Nurse-midwife, Zanzibar)

Providers frequently mentioned issues related to the facility environment. They reported that they often have to ask multiple clients to be in the same room for PAC treatment, or they have to deliver emergency treatment in labor wards if the PAC treatment room is not available. PAC clients

rest before discharge, often needing to share beds with one another. This constrains the potential for counseling, according to one provider who said:

Both the service provider and the customer are not comfortable; [there's not] enough privacy for the services. (Clinical officer, Mwanza)

Such lack of privacy has compelled providers to fit in family planning counseling immediately after the PAC treatment procedure, before clients have the opportunity to rest. The tight window of time, which often occurs when women may be in pain and distressed, is not conducive to client-provider rapport and informed decision making. These problems are often compounded by the physical separation of family planning services from emergency treatment. Many providers offered provision of contraceptives in PAC settings at their facilities, but many others could not:

It is difficult because after we have done our part upstairs, we send you to the downstairs clinic for family planning and we do not do any follow-up. (Nurse, Zanzibar)

Another participant remarked:

At first during PAC, we had not started family planning. We used to refer them to family planning and counseling, but we came to realize that we are losing them. Why are we losing them? It is possible that she talks with one person here and then she goes to another person. It is possible that there can be a difference in explanation. (Clinical officer, Zanzibar)

Sociocultural and Normative Influences

Participants perceived social and cultural norms as heavily influencing the quality of care, particularly with regard to women's contraceptive choices and family planning counseling. Providers frequently elaborated on the perceived influence of peers on clients' disposition toward family planning. According to one participant:

When [clients] come for counseling, it is hard to change their mind. They think long-term family planning methods have side effects. They listen to what other people are saying rather than listening to what is said by the health providers. (Nurse, Mwanza)

Reports on clients' misconceptions about side effects from LARCs were joined by accounts regarding stigma against family planning and those who used it. One participant explained:

The ones who are not conceiving are seen as bad by people in the community. You may educate them on family

Participants perceived social and cultural norms as heavily influencing the quality of care.

Providers reported that they often have to ask multiple clients to be in the same room for PAC treatment.

planning and provide the mother with these services, but in fact she was not willing and as the result, she doesn't use them at all. You would provide pills, she doesn't use them. Likewise, you provide condoms to the mother, while the one going to wear that condom is the husband. So, the mother carries those condoms and when she is at home she resorts not to tell her husband and thus abandon the method. . . . So, the majority were coming back after a short time for the same problem. (Midwife, Zanzibar)

Providers also reported that peer circles perpetuate fears that contraception after abortion can lead to long-term infertility and cause weight gain and that methods such as implants or an IUD can become stuck inside women's bodies. Perceptions of the social cost of choosing family planning after PAC go beyond worries about their public image. Indeed, participants discussed how their clients' marriages might be undermined:

If a woman had the first abortion and, unfortunately, she got the second one or cannot get pregnant after, the community will regard her as bad luck, blasphemed or so. If she is married, then her marriage will likely break up. (Nurse, Mwanza)

Spousal issues and male-dominated decision making emerged frequently in our discussions with providers. According to one provider:

The main challenge is the patrilineal system that we have in our community. . . . most of the women when they are advised to use methods of family planning don't agree until they ask their husbands. (Clinical Officer, Mwanza)

As highlighted earlier, most providers explained that they do not challenge the norms in the course of their work. Instead, they counsel women to obtain spousal permission before returning to receive a contraceptive method. Providers admitted:

When you advise them she has to consult her husband first before making the decision, it may be easy for him to agree, but many men become tough. If he has not been educated, then he will not agree to that idea and the woman will not have any other option but obey the husband. We have to educate the husband and that is the obstacle we are facing. (Nurse-midwife, Zanzibar)

Providers thus find themselves with the additional responsibility of educating spouses, who are often not available during PAC provision. Even when husbands are present, challenges persist. One respondent described this issue, alluding to the influence of religion, gender, and organizational separation of family planning and PAC.

It is difficult to follow these programs as far as religion and traditions are concerned. A few people understand this initiative but others do not understand it. A client and her husband may say yes [to receiving a contraceptive], but after going downstairs [to the family planning clinic] she disappears. (Clinical officer, Zanzibar)

■ DISCUSSION

Quantitative findings revealed gaps in the availability and quality of PAC at public-sector health facilities in mainland Tanzania and in Zanzibar. Assessment of the 6 domains of PAC readiness at the 25 sites revealed an overall median score of 45% at health centers, 49% at district hospitals, and 61% for regional referral hospitals. According to observations of PAC using MVA, providers implemented slightly over two-thirds of critical clinical steps on average; observations of misoprostol use found that providers implemented less than half of the critical steps on average. However, the categories of PAC critical steps were drawn from separate sources, hindering direct comparisons of provider performance between the 2 different treatment approaches.

Interviews with providers contextualized these results. Findings are consistent with those from studies that emphasized clinic logistics, workforce factors, and organizational arrangements adverse to high-quality performance of PAC.^{19,20} This analysis further underscores how multilayered contextual influences interact and form a complex environment that needs to be considered for improving the quality of care, as observed in similar studies in Tanzania.^{21,22} In general, providers seemed committed to delivering high-quality PAC; however, facility and systems constraints frustrated their best intentions and resulted in deviance from standards and within practices. Providers wanted to address PAC clients' underlying needs for voluntary contraception, but this desire was undermined by their levels of confidence, stereotypes and biases, and adoption of roles that are shaped as much by their clinical orientation and training as by the wider sociocultural context of family planning.

This study expands on the substantial literature on providers' attitudes, role adoption, and shared decision making. A study from the United States highlighted provider assumptions about clients' capacity to undertake shared decision making and the clinical appropriateness of this practice in the context of specific disease conditions.²³ Another, from Pakistan, described tensions between community midwives' technical

The facility readiness assessment revealed gaps in the availability and quality of PAC at public-sector health facilities in Tanzania.

Most providers do not challenge social norms in the course of their work.

duties and their prevailing social status, and how these tensions affected the midwives' performance.²⁴ Research in Tanzania revealed how pharmacists' cultural stereotypes and judgments shaped their provision of sexual health services to men that have sex with men.²⁵ The findings of the current study suggest in part that providers' low confidence in their own technical competence necessitates more frequent and rigorous supportive supervision and quality assurance. This approach, however, overlooks the social dimensions of decision making with regard to the content of counseling and services. The clinical and contextual demands on providers exert a confounding influence on their performance. The objectives of training and quality improvement, as well as medical eligibility criteria for postabortion contraceptive use, conflict with how providers relate on a social basis to the communities and clients they serve.⁸ Whereas large-scale change in culture and norms may ultimately be required, interim strategies to address providers' perspectives on clients and contraceptive methods, such as values clarification exercises, are currently worth considering.²⁶

Our results also suggest that supply-side strategies can help providers strengthen the quality and integration of family planning with treatment for postabortion complications.¹⁴ Findings from exit interviews with PAC clients revealed that over two-thirds of participants did not recall receiving any counseling on family planning services during their receipt of PAC and that fewer than one-fifth received a contraceptive method.⁵ In response to these findings, providers expressed that organizational challenges, such as limited facility space and lack of time and in-service training opportunities, undermined their ability to more effectively provide contraceptive counseling and services within PAC. As recommended by other studies, comprehensive interventions, including ensuring availability of essential supplies and offering clinical mentoring for providers to sustain their competence and confidence and overcome biases, may increase voluntary postabortion contraceptive uptake and reduce unintended pregnancy.²⁷

The study findings highlight the challenges of gender and religious norms for providing PAC and in particular counseling on postabortion contraceptive use. Regardless of providers' understanding of their roles and responsibilities, respondents frequently said that PAC clients have deep-seated fears and misconceptions about contraceptive use after abortion and may lack agency to make decisions about family planning by themselves.

Providers feel they cannot surmount these barriers because of limited time and available space for providing contraceptive counseling and voluntary PAC. Involving male partners in postabortion counselling may improve the effectiveness of service provision on family planning uptake,²⁸ but careful consideration of gender dynamics in the aftermath of this intervention may be needed. A study in Ghana on the introduction of family planning outreach services that engaged men in decision-making documented strains on gender relations, including physical abuse and reprisals from extended family, and found that women experienced substantial threats after this program was initiated.²⁹ Counseling approaches that support women in selecting a method that meets their needs, while also acknowledging the limitations on women's autonomy and decision-making ability, are important in the context of PAC in Tanzania and similar settings.

The results of this study cannot be generalized to all PAC settings and providers in Tanzania. Although broad themes may be applicable to other contexts, the facilities in Mwanza, Geita, and Zanzibar regions included in this study may have unique, site-specific issues and viewpoints. However, the themes that emerged in our qualitative analysis highlight areas for further inquiry regarding the quality of PAC treatment and contraceptive services in Tanzania and elsewhere. Complementary research is needed regarding PAC clients' perspectives on selecting PAC treatment approaches and postabortion contraception.

■ CONCLUSION

This study documents the availability and quality of PAC in 3 regions of Tanzania and contextualizes these findings with the perspectives of PAC providers on the factors that influence their performance in providing treatment and voluntary family planning components of PAC. Providers were dedicated to meeting clients' needs and providing quality care, and they recognized the importance of family planning to PAC. However, they identified various factors that constrained their abilities to deliver services. These factors existed across multiple layers of context, affecting providers as individuals, workers within the local health system, and members of a traditional society. Holistic and coordinated interventions aimed at addressing the multilevel barriers to PAC provision may be informed by our findings.

With regard to the treatment component of PAC, our assessment revealed problems pertaining

Providers were dedicated to meeting clients' needs and providing quality care, but constraints existed.

Providers frequently said that PAC clients have deep-seated fears and misconceptions about contraceptive use after abortion.

to misoprostol use in PAC service delivery. These included infrequent use despite approval as a first-line treatment for complications related to incomplete abortion, errors in its administration, and gaps in the integrated delivery of family planning counseling and services. Policy in Zanzibar permits use of misoprostol for medical management of incomplete abortion, and health care workers should be oriented to relevant guidelines and trained on the correct use of misoprostol in PAC, including dosage and route of administration. The program could benefit through a review of evidence from other countries on task sharing with midlevel providers, such as midwives and nurses, who frequently deliver PAC.³⁰ Where possible, supporting task sharing of PAC to mid-level providers and decentralizing care to lower level health facilities can make PAC more available to women.

Findings from service providers also underscore the need for coaching and mentoring after basic training to sustain confidence in provision of surgical and medical PAC treatment methods. In addition, training is needed to better enable delivering a wide variety of voluntary contraceptive methods with PAC, including LARC. Meeting these needs could be facilitated by modularizing current lengthy, centralized trainings into onsite peer-learning approaches that emphasize continuous quality improvement vis-à-vis clinical guidelines and consider the practical realities of operationalizing quality and choice during PAC provision at a particular location. These activities should incorporate values clarification exercises to support providers in overcoming some of the impediments they perceive in ensuring contraceptive availability and choice for PAC clients. Although important, strategies that identify the provider as the object of capacity building cannot succeed absent an enabling systems environment. Our results illustrate the extent to which structural problems, especially logistics and supply chain inadequacies and workforce shortages, undermine readiness to delivery PAC and discourage service providers who remain on the job nonetheless. Overall, the results highlight the importance of adopting a comprehensive approach to planning capacity building that addresses the individual and organizational requirements for establishing and sustaining high-quality PAC.

Findings elucidate that the needs of providers and the wider health system are nested within a social and cultural context that is naturally averse to postabortion-related health services and family planning. Values clarification transforms provider

attitudes on these topics; however, adaptations of these activities are required at the societal level, employing social and behavioral communication strategies to sensitize communities regarding the importance of preventing unintended pregnancy and obtaining timely emergency treatment for complications.

In conclusion, strategies to address providers' needs must adopt a multilevel perspective on the contexts, processes, and factors that shape how providers perform in order to improve the quality of PAC.

Acknowledgments: We thank Claudia Morrissey Conlon and Erin Mielke for their technical review of the manuscript as well as their expertise and assistance throughout all aspects of our study.

Funding: This manuscript was generated from a study conducted under the Post Abortion Care Project in Tanzania funded by the United States Agency for International Development under agreement AID-OAA-A-00050.

Disclaimer: The views expressed in this article are solely the views of the authors and do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

Competing Interests: None declared.

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Strategies placing providers at the center of capacity building cannot succeed without an enabling systems environment.

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Peer Reviewed

Received: January 16, 2019; **Accepted:** April 9, 2019

Cite this article as: Yegon E, Ominde J, Baynes C, et al. The quality of postabortion care in Tanzania: service provider perspectives and results from a service readiness assessment. *Glob Health Sci Pract.* 2019;7(suppl 2):S315-S326. <https://doi.org/10.9745/GHSP-D-19-00050>

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ORIGINAL ARTICLE

The Unit and Scale-Up Cost of Postabortion Care in Tanzania

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Given the high burden and cost of postabortion care (PAC) in Tanzania, health policy should strengthen voluntary family planning programs and the availability of a variety of contraceptive methods to PAC clients. A particular focus should be placed on decentralizing PAC to lower-level facilities, including health centers and dispensaries, which can provide safe, accessible, and appropriate PAC at the lowest cost including surgical or medical options.

ABSTRACT

Introduction: Based on research conducted in 2017, we estimated the cost to the Tanzanian health care system of providing postabortion care (PAC). PAC is an integrated service package that addresses the curative and preventive needs of women experiencing complications from abortion. PAC services include treating complications of miscarriage and incomplete abortion, providing voluntary family planning counseling and services, and engaging the community to reduce future unintended pregnancies and repeat abortions.

Methods: Thirty-one public and private health facilities, representing 3 levels of health care, were selected for data collection from key care providers and administrators in 3 regions. We gathered data on the direct costs of PAC startup (i.e., training and capital costs), as well as the recurrent costs of medicines, supplies, hospitalization, and personnel, and the indirect costs of PAC provision. We also gathered data to estimate PAC clients' out-of-pocket expenses. Estimates of the average cost per client (i.e., unit cost) were calculated for treatment of routine and severe abortion complications, treatment at different levels of health care, postabortion contraception, and various available treatment methods.

Results: We found that the unit cost of PAC training per provider was US\$163.43. The total unit cost was \$72.91. The unit recurrent cost of treating routine complications, which included 81% of the cases in our sample, was \$36.23. The cost of treating incomplete abortion through manual vacuum aspiration was \$22.63, while the cost of treatment with misoprostol was \$18.74. The average cost of providing voluntary postabortion family planning was \$11.56. We estimated an average client out-of-pocket expenditure on PAC of \$22.96.

Conclusion: We applied our unit cost estimates to those on PAC utilization and provision and unmet need for PAC that were derived from research conducted in Tanzania in 2013–2016, and we estimated an annual national cost of PAC of \$4,170,476. We estimated the cost of providing PAC for all women who have abortion complications, including those who do not access PAC, at \$10,426,299. Investing more resources in voluntary family planning and PAC treatment of routine complications at the primary level would likely reduce health system costs.

INTRODUCTION

Deaths of women from complications of pregnancy or childbirth are unacceptably high in Tanzania. By 2016, the maternal mortality ratio (556 deaths per 100,000 live births) had changed little from the preceding decade.¹ Complications arising from abortion—regardless of whether it is spontaneous or induced—substantially contribute to this burden of preventable suffering in Tanzania. The little evidence available for Tanzania, which is mainly from small-scale hospital-based studies, suggests that abortions are widespread, largely unsafe, and associated with high morbidity and mortality. According to these

studies, slightly over 60% of women admitted to a hospital for a miscarriage had had an induced abortion.^{2–4} One study indicated that complications from abortion account for 38% of hospitalizations for obstetric complications.⁵ Two other hospital studies reported that complications from abortion account for approximately one-quarter of maternal deaths.^{6,7}

Caring for women that require treatment for abortion complications is often expensive in terms of skilled personnel, surgical procedures, drugs and supplies, and hospitalization.^{8–10} Across countries, the financial burden of postabortion care (PAC) is considerable. Studies in Ethiopia, Rwanda, and Uganda suggested that treating abortion complications consumes between 4% and 6% of total expenditures on reproductive health in these countries.^{11–13} In Uganda and Rwanda, such treatment accounts for 29% and 11%, respectively, of annual per capita income.¹⁴ Prior research from this region has

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Across countries, the financial burden of PAC is considerable.

identified strategies that might reduce health care costs with regard to PAC. Studies in Uganda and Malawi found that the mean health facility cost per case of PAC could be reduced by 43% by shifting from the use of dilation and curettage for incomplete abortion to manual vacuum aspiration (MVA), which the World Health Organization (WHO) recommends, and by increasing the proportion of PAC cases handled by midlevel providers and low-level health centers.^{15,16}

Although no formal studies have estimated the cost of PAC in Tanzania, Keogh and colleagues¹⁷ reported valuable information on the incidence of abortion and utilization of PAC in the country. Specifically, they estimated the annual number of abortions to be 405,000 (36 per 1,000 women of reproductive age) and a ratio of 1:6 with regard to the number of women that access PAC versus the number who had abortions and may have required the service. In mainland Tanzania, the Ministry of Health, Community Development, Gender, Elderly, and Children has authorized the provision of surgical PAC services using sharp curettage and MVA, but not medical treatment of incomplete abortion using misoprostol, a uterotonic drug that women can take orally or sublingually. Zanzibar, which has its own Ministry of Health, permits MVA, sharp curettage, and misoprostol for PAC. According to global recommendations, for PAC treatment of incomplete abortion, sharp curettage should be phased out and replaced with vacuum aspiration and medical methodologies.¹⁸ All women who receive PAC are eligible to choose from a wide range of contraceptive methods immediately after their treatment procedure, regardless of its type.¹⁹

We conducted a study in 2017 in Arusha and Mwanza regions in mainland Tanzania and in Zanzibar, a semiautonomous island region of the country, to obtain detailed cost estimates of the unit and health system costs of PAC provision in these settings. By applying unit cost calculations to earlier estimations of PAC utilization and unmet need for treatment for incomplete abortion, we estimated the current health system cost of PAC and the cost of ensuring access for all women needing treatment for incomplete abortion, including those who do not access it.

■ METHODS

The data used for this study were collected at 31 health facilities between June and September 2017. These facilities were selected from a sample frame of 176 facilities that were providing PAC and

had enrolled in projects led by EngenderHealth, an international women's health NGO working to strengthen the integration of emergency treatment for postabortion complications and the provision of a wide range of voluntary contraceptive methods. Our sample frame included facilities representing different levels of care of Tanzania's health care system (regional and district hospitals, intermediate health centers, and primary-level dispensaries) and ownership structures (public and private) in 3 regions of the country—Arusha, Mwanza, and Zanzibar. At the tertiary level, we selected all referral hospitals (n=4) and randomly selected 9 district hospitals, at least 1 in each region. Stratifying by regions, we randomly chose 13 health centers and 5 dispensaries, ensuring that we had an adequate balance between rural and urban facilities. Because of cost and time considerations, collecting data from more facilities or a greater number of regions was not possible. Sensitivity analyses were used to test for variability in our estimates of direct medical costs, capital and indirect costs, percent distribution of PAC cases by facility type, and percent distribution of cases by complication type. All estimates reported in this analysis pertain to economic costs, rather than financial costs.

Prior to commencing the research, we obtained clearance letters from the National Ethics Committees in both the mainland and in Zanzibar. All potential participants were read an informed consent form, and all participants signed the document before data collection began. Information compiled from participants emphasized startup costs for establishing PAC services in terms of training and infrastructure (i.e., capital costs); recurrent costs, including those associated with medicines, supplies, commodities, personnel, and hospitalization (i.e., direct costs); and indirect costs. These inputs collectively compose the health system cost of PAC (i.e., treatment of complications and voluntary family planning services). In addition, we randomly sampled PAC clients immediately after they were discharged from care to obtain information on out-of-pocket (OOP) expenditures. Costs were further broken down according to the 5 major abortion complications included in the WHO study on costing in its "Mother Baby Package": incomplete abortion, shock, sepsis, vaginal or cervical laceration, and perforation of the uterus or lower abdomen.²⁰

A primary feature of the methodology used for obtaining data on recurrent and capital costs is its reliance on a key informant approach to estimation. The respondents were experts knowledgeable about PAC through years of experience at the facilities where our study took place. They

We estimated the current health system cost of PAC in Tanzania and the cost of ensuring access for all women who need it.

included medical officers in charge of health facilities, hospital health secretaries, PAC and family planning providers (namely, midwives, nurses, and clinical officers), matrons (i.e., nurses in-charge), anesthetists, operating theater nurses, laboratory providers and managers, and health management information personnel. For costs related to medicines and supplies and hospitalization, key informants estimated the total number of PAC clients admitted at their respective facilities by complication type during 2016 and whether they were hospitalized or seen as outpatients. For administrative questions, such as salaries and overhead expenditures, we interviewed health administrators and district and hospital levels. Area managers and engineers were also interviewed in order to gather information on capital costs. Respondents were asked to provide estimates of the many detailed inputs that, in total, constitute a complete intervention for treating the respective abortion complications. We assumed that the respondents' estimates would on average yield a good approximation of the true values of the various rates and amounts of specific inputs. Overall, 124 interviews were conducted with key informants to obtain data on startup and recurrent costs.

Information on 2016 PAC training expenditures—items, their quantities, and amounts spent—at the 176 sites that composed the sampling frame were obtained from 3 sources: facilities-in-charges, who reported on the numbers of staff trained in PAC provision; project activity expenditure records of the EngenderHealth program that facilitated these trainings; and interviews with EngenderHealth staff who provided necessary clarifications. To estimate the cost of carrying out these same activities through the PAC training operations of the Ministry of Health, Community Development, Gender, Elderly and Children, we carried out in-depth interviews with management staff and financial officers, reviewed available expenditure records for the same items and quantities identified for the EngenderHealth trainings at government training centers in the respective regions. With this information, we determined the costs of the training health care workers in PAC at public-sector training institutions. Information on capital (infrastructure) and recurrent costs used for PAC was collected from a questionnaire that was divided into 5 sections, one for each abortion complication for which PAC clients were treated. The questionnaire gathered data on inputs needed for estimating the cost of treating each complication, respectively, including information

on personnel inputs of time, personnel wages, hospitalization, and capital costs. Detailed data on the quantities of all medicines, commodities, and supplies used in specific postabortion treatments were also collected. The questionnaire collected information separately for treating inpatient and outpatient cases. For each complication, several detailed probes solicited information on (1) the percentage of patients with a particular complication who needed the specific input, and (2) the input that an average patient was given during the full course of treatment. The reference year for this study's estimates was 2016, and all costs are given in US dollars from that year. These costs were converted from Tanzanian shillings (TSH) based on the average exchange rate for 2016 (US \$1=2,186 TSH).

Lastly, the study gathered information from PAC clients on the OOP expenses they incurred to access PAC. These clients were consecutively sampled at certain facilities chosen from among the 31 sites where the other data were collected. PAC clients reported OOP costs on travel, hospitalization, food, medicines and supplies, laboratory tests, and any other expenditures they made to access PAC. This information was obtained from 25 PAC clients at 16 facilities in Arusha, Mwanza, and Zanzibar regions.

This study also drew upon research carried out by the Guttmacher Institute in Tanzania between 2013 and 2016, which estimated that 405,000 women in Tanzania have abortions annually and that for each woman treated in a facility for abortion complications, 6.08 women had an abortion but did not receive PAC.¹⁷ This lack of PAC might be because they did not have complications or because their complications were untreated. The Guttmacher Institute also reported that only 40% of women who have abortion complications receive PAC.²¹ Based on this information, we estimated out of all women who have abortions, 143,009 women experience abortion complications and require medical care, of whom 57,203 receive PAC.

RESULTS

We first present the details of our sample of sites and cases, based on data collected in 2017, which reflect cases and inputs estimated for 2016. We then present estimates of the startup costs on training, per health worker trained, and capital expenditures, overall and per client in 2016 (N=6,336). Unit costs (average cost per client) per category of recurrent expenditure and overall are then presented and explained. We

TABLE 1. Number of Postabortion Cases Estimated by Facility Type by Complication and Hospitalization Status During Data Collection, June–September 2017

Facility Type	Type of Complication and Hospitalization Status													
	Incomplete Abortion		Shock		Sepsis		Laceration		Uterine Perforation		All Complications		Total	
	H	OP	H	OP	H	OP	H	OP	H	OP	H	OP	H	OP
Regional hospital	1,881	286	228	20	216	7	11	7	18	4	2,354	324	88%	12%
District hospital	940	859	114	1	129	0	21	95	16	3	1,220	958	56%	44%
Health center	296	695	89	2	82	20	41	12	10	6	518	735	41%	59%
Dispensary	NA	206	NA	0	NA	21	NA	0	NA	0	NA	227	0%	100%
Total	3,117	2,046	431	23	427	48	73	114	44	13	4,092	2,244	65%	35%
%	60%	40%	95%	5%	90%	10%	39%	61%	77%	23%	65%	35%		

Abbreviations: H, hospitalized; NA, not applicable; OP, outpatient.

then apply our estimate of the unit cost to the estimated 57,203 women who are able to receive PAC each year. We also estimate the cost of treating all women expected to experience abortion complications each year, including those who do not access PAC.

Characteristics of PAC Cases Estimated

Table 1 presents the total number of PAC cases estimated by key informants. Across all facilities and complications, the informants conjectured that 6,336 women received PAC in 2016, of whom nearly two-thirds (65%; n=4,092) were hospitalized. Among the women receiving PAC, incomplete abortions accounted for 81% of all treatments for abortion complications (n=5,163); 7% each for sepsis (n=475) and shock (n=453); 3% for lacerations (n=188); and 1% for perforations (n=57). Overall, 42% of cases were managed

at regional hospitals (n=2,678) and 34% at district hospitals (n=2,178). Less than a quarter of cases were managed at the primary level, with 20% at health centers (n=1,253) and 4% at dispensaries (n=227).

Regarding cases of incomplete abortion, informants estimated that 84% (n=4,340) of PAC clients were treated with 1 of 3 treatment methods (MVA, misoprostol, or sharp curettage) and 16% (n=823) treated by way of expectant management. Of those who received treatment for incomplete abortion, 64% (n=2,759) were treated with MVA, 17% (n=737) with misoprostol, and 19% (n=844) with sharp curettage. Of all PAC clients, no matter the complication, informants estimated that 73% (n=4,643) were discharged from PAC with a voluntary modern contraceptive method of whom 52% (n=2,414) received a short-acting method and 48% (n=2,229) received a long-acting reversible method (LARC) or permanent method (Box 1).

Key informants estimated that more than 6,000 women received postabortion care in 2016.

BOX 1. Key Informants' Estimates of Key Postabortion Care Indicators

- Almost two-thirds of postabortion care clients are hospitalized for more than 24 hours.
- Almost one-fifth are admitted for a severe complication (sepsis, shock, cervical/vaginal laceration, uterine perforation).
- Roughly three-quarters of postabortion care clients are seen at tertiary facilities (regional and district hospitals).
- Of clients admitted for routine complications from incomplete abortion, almost one-fifth receive sharp curettage.
- Of clients admitted for routine complications from incomplete abortion, nearly three-quarters receive a voluntary contraceptive method.

Startup Costs for PAC Provision Training

We estimated the cost of training 352 providers from the 176 sites in Arusha, Mwanza, and Zanzibar in 2016. These sites constituted the frame we used for sampling the 31 sites used for the other components of our study. Our estimates of the training cost per provider vary significantly between those calculated for the mainland sites, where we estimated an average cost of training per provider of \$125.30, and sites in Zanzibar, where our estimate was \$201.56. Reasons for this

discrepancy relate to differences in training capacity. Unlike Arusha and Mwanza, which have long-standing PAC programs that include established zonal training centers, for trainings in Zanzibar, national trainers from the mainland are needed to facilitate training activities. Of note, we also analyzed the cost of supplementing essential training in PAC (which includes postabortion treatment, counseling on complications management, and provision of voluntary family planning) with technical training on the insertion and removal of LARC methods. This analysis was done in accordance with the government of Tanzania's recent decisions to integrate training in these methods in the curricula on the essential elements of PAC.²² We found that integrating LARCs into essential PAC training substantially increased the average training cost, by \$517.24 per provider in mainland and \$856.64 per provider in Zanzibar.

Capital Costs

Capital costs include expenditure on construction and health facility equipment, including operating theater costs, required for PAC provision. Since these costs are essential for initiating services but are amortized gradually over time, we considered capital costs as startup investments. We also considered them to be a key expenditure to include in the unit health system cost estimations of PAC, mindful that PAC is typically provided as an outpatient service, not in operating theaters. In our analysis, we estimated capital costs from inputs having more than 1 year of useful life, and we annuitized these inputs over that period. The mean number of years of useful life for inputs included in the estimation of capital costs was 28 years. Based on a literature review, we applied a discount rate of 3% per year.²³ We found that the total cost on amortized annual constructions and equipment was \$85,209.47. However, this figure was highly skewed and was significantly larger with the level of facility, ranging from \$84,304 per annum at regional hospitals (n=3) to \$604.18 at district hospitals (n=5), \$264.76 at health centers (n=14), and \$36.45 at primary-level dispensaries (n=9). The unit capital cost per PAC client was \$13.46 (N=6,336).

The large differences between estimated capital costs at regional hospitals and lower-level facilities, respectively, relate to several factors. First, regional hospitals are referral facilities for all facilities in their regions, including district hospitals. Their mandate to provide advanced health care

services, primarily by medical specialists, entails the need for expenditure on maintaining and equipping treatment settings, such as operating theaters, with expensive equipment, including ultrasound, X-ray machines, and laboratory equipment, which lower-level facilities in Tanzania typically do not have. The size of regional hospitals and the need to equip them for more frequent and longer hospitalizations relative to lower-level facilities may drive up capital costs on equipment. Regional hospitals also maintain larger ambulance fleets for emergency transport compared to lower-level facilities, and thus they incur higher capital expenditures for the purchase, maintenance, and refueling of these vehicles.

Recurrent Costs for PAC Provision

We estimated the recurrent cost of PAC provision by complication for the following categories: personnel, medicines and supplies, and hospitalization.

Personnel

Several factors were used in calculating personnel costs: the percentage of cases that needed the attention of each category of health worker; the number of minutes health personnel spent attending to patients, including an upward adjustment for time related to direct service provision; and salaries, allowances, and benefits. The average number of minutes that separate cadres of health workers spent attending the different abortion complications is presented in Table 2. Treating incomplete abortion (average of 22.5 minutes per cadre) required the least input of labor, whereas treatment of uterine perforation needed the most (average of 58.3 minutes per cadre). For all complications, enrolled nurses spent the most time on managing PAC clients (51.6 minutes), followed by anesthetists and medical officers (42.7 and 42.6 minutes, respectively).

In Table 3, we present the personnel unit costs by type of complications and category of health care worker. As with type of complication, we found that the personnel costs for nurse-midwives accounted for a significantly larger proportion of total costs on personnel than personnel costs of other workers for all complication types.

We estimated that the overall average cost on personnel was \$18.01. However, the cost varied considerably by complication type, from \$15.06 and \$15.85 per case of laceration and incomplete abortion, respectively, to \$53.13 per case of uterine perforation. The first panel of Table 4 presents this information by type of complication and level of

Our estimates of the training cost per provider vary significantly between mainland sites and sites in Zanzibar.

Estimated capital costs for PAC varied widely based on level of facility, from about \$84,000/year at regional hospitals to \$36 at primary-level dispensaries.

TABLE 2. Average Time Spent on Each Type of Postabortion Complication by Health Worker Category

Health Worker	Time Spent (minutes) per Complication					
	Incomplete Abortion	Shock	Sepsis	Laceration	Uterine Perforation	All Complications
Obstetrician/gynecologist	11.3	190.0	47.5	41.3	130.0	26.1
Anesthesiologist	0.0	0.0	3.3	7.5	20.0	9.7
Anesthetist	11.3	16.7	13.3	35.0	102.5	42.7
Anesthetist assistant	10.0	15.0	10.0	30.0	100.0	38.0
Doctor/medical officer	30.0	133.8	96.3	53.8	120.0	42.6
Assistant medical officer	26.3	10.0	3.3	3.8	5.0	23.2
Clinical officer	30.6	2.5	24.0	3.8	5.0	28.5
Registered nurse/principal enrolled nurse	23.6	94.0	123.5	66.3	25.8	39.3
Enrolled nurse (nurse midwife)	101.5	41.3	39.2	66.3	31.3	51.6
Medical attendant	25.3	20.0	55.3	20.0	86.7	24.1
Laboratory technician	22.5	12.6	16.4	13.8	35.0	19.0
Laboratory assistant	10.0	38.8	26.7	10.0	10.0	12.4
Sonographer	14.5	31.3	10.8	5.0	102.0	12.4
Pharmacist	11.3	13.3	22.5	18.8	75.0	7.7
Drug dispenser	8.8	23.3	6.3	13.8	26.3	8.4

TABLE 3. Distribution of Personnel Costs of Postabortion Care per Health Worker and Complication Type

Health Worker	% of Total Personnel Costs per Complication Type					
	Incomplete Abortion	Shock	Sepsis	Laceration	Uterine Perforation	All Complications
Obstetrician/gynecologist	3.6	58.4	14.8	16.7	13.4	9.4
Anesthesiologist	0.0	0.0	0.0	0.0	0.0	0.0
Anesthetist	2.5	0.6	3.0	4.6	5.7	2.1
Anesthetist assistant	2.5	1.0	2.3	5.2	3.8	1.7
Doctor/medical officer	15.1	6.5	17.4	14.7	7.2	14.8
Assistant medical officer	4.7	2.2	2.8	3.1	4.3	4.7
Clinical officer	0.8	0.6	1.8	2.0	2.1	0.8
Registered nurse/principal enrolled nurse	9.7	3.8	12.4	8.3	5.7	9.2
Enrolled nurse (nurse midwife)	42.8	21.9	29.7	39.0	33.7	41.0
Medical attendant	7.4	1.6	4.1	3.6	3.2	5.7
Laboratory technician	3.1	0.6	4.1	0.6	3.0	3.0
Laboratory assistant	1.8	0.3	0.8	0.6	2.6	1.6
Sonographer	2.6	2.1	1.9	0.0	9.5	2.7
Pharmacist	2.3	0.2	4.5	1.1	5.3	2.4
Drug dispenser	1.2	0.1	0.4	0.4	0.4	1.0
Total for all workers	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 4. Average Costs of Direct Inputs for Personnel, Medicines and Supplies, and Hospitalization for PAC Provision by Type of Complication (US\$ in 2016)

	Type of Complication					
	Incomplete Abortion	Shock	Sepsis	Laceration	Uterine Perforation	All Complications
Average cost of personnel used in PAC treatment						
Primary care ^a	10.01	54.85	12.48	22.83	17.01	13.42
District hospital	7.51	10.39	18.44	9.27	11.16	8.43
Regional hospital	25.94	44.21	25.21	29.46	115.64	28.33
Overall	15.85	37.14	20.07	15.06	53.13	18.01
Average cost of medicines and supplies used in PAC treatment						
Primary care	9.25	0.89	22.18	44.38	21.92	11.21
District hospital	15.82	9.89	122.76	54.61	0	23.77
Regional hospital	20.40	29.49	22.56	10.06	131.67	22.26
Overall	16.22	18.79	49.67	47.42	56.97	20.20
Average cost of hospitalization for PAC treatment						
Primary care	0.80	5.16	3.51	3.17	10.50	1.41
District hospital	1.66	7.35	10.06	1.36	7.68	2.50
Regional hospital	8.08	6.88	10.08	6.70	10.91	8.15
Overall	4.16	6.65	8.37	2.39	8.02	4.63
Total (by complication)	36.23	62.58	78.11	64.87	118.02	42.84

Abbreviation: PAC, postabortion care.
^aHealth center and dispensary combined.

health care. The range of average personnel costs was significantly skewed upward; at the regional hospitals, which admitted 2,678 PAC clients, the average cost on labor was \$28.33, over 2 times as much as such costs at district hospitals and lower-level facilities (health centers and dispensaries combined).

Medicines and Supplies

The average cost for medicines and supplies used in treating PAC cases was \$20.20. However, the cost varied by complication type, from \$16.22 and \$18.79 for cases of incomplete abortion and shock, respectively, to \$47.42, \$49.67, and \$56.97 for lacerations, sepsis, and perforations, respectively. These expenses varied considerably by facility type, with costs averaging \$11.21 at lower-level health centers and dispensaries and increasing to \$22.26 and \$23.77 at regional and district hospitals, respectively. As would be expected, inputs of medicines and supplies increase with the care level of facilities, partly because more severe complications

tend to be concentrated in tertiary facilities because lower-level sites frequently lack the required personnel, supplies, and infrastructure to treat critically ill patients and are thus more likely to refer them to larger facilities. This relationship may also be influenced by higher-level facilities having better access to a wider range of drugs, technology, and equipment and therefore being positioned to achieve a better standard of care than lower-level facilities.

Hospitalization

Not surprisingly, the average cost per PAC client for hospitalization was highest at regional hospitals, \$8.15, compared with \$2.50 at district hospitals and \$1.42 at lower-level health centers and dispensaries. Notably, hospitalization estimates include treatment costs associated with hospital stays over 24 hours. Basing our calculations on complication type, we found that the average cost of hospitalization ranged from \$2.39 for cases of lacerated vagina or cervix to \$8.02 for uterine perforation.

The average cost for medicines and supplies to treat PAC was \$20.20 but varied by complication type and facility type.

Overall, for complications and levels of care, the average cost of hospitalization for PAC treatment among all clients who were hospitalized (n=4,092) was \$7.18. Among all PAC clients in general (N=6,336), it was \$4.63 (Table 4).

Overall, we found an average direct cost per case, excluding capital costs, of \$42.84: 47% of this cost was attributed to medicines and supplies, 42% on personnel, and 11% on hospitalization. Management of complications was the least expensive at the primary care level, \$26.04 per case, compared with \$34.70 and \$58.74 per case at district and regional hospitals, respectively. On average, treating incomplete abortion cost \$36.23, nearly half the average cost of treating the 4 other more severe complications.

Costs of Provision of PAC Treatment for Incomplete Abortion, Contraceptive Counseling, and Voluntary Access to Contraceptive Methods

Based on the information presented in Table 2, we estimated the comparative cost of using particular methods for treating incomplete abortion and providing family planning counseling and voluntary access to a range of contraceptive methods as a key component of PAC. Overall, the average cost per PAC client for treating incomplete abortion with either MVA, misoprostol, or sharp curettage and providing these clients with family planning counseling and voluntary access to short-acting, long-acting, or permanent methods was \$35.32. Misoprostol was the least expensive treatment alternative on average (\$18.74), followed by MVA (\$22.63), and sharp curettage had the highest average cost (\$32.02). Overall, the average cost of providing contraceptive counseling and voluntary

method provision as a part of PAC was \$11.56 per client, with costs varying by method: \$6.23 for short-acting methods, \$9.80 for LARCs (i.e., intrauterine device or implant), and \$74.22 for permanent methods.

Indirect Costs for PAC Services

Indirect costs were estimated based on reports of approximated wages paid to all nonmedical staff and expenditures on outsourcing, maintenance, electricity and utility charges, and other assorted goods and services. Although we included these in our analysis, we acknowledge that indirect expenditure likely included additional costs that we could not account for in this estimation. Such costs would include general program management and supervision, health education, monitoring and evaluation, information systems, and management of the supply chain. For example, in the United Nations Population Fund (UNFPA) Reproductive Health Costing Tool, indirect costs are roughly twice the magnitude of direct costs in sub-Saharan Africa.²⁴ In other studies, one-quarter to one-third of the total PAC costs were on indirect expenditures. Thus, we believe that our approximation should be considered as an underestimate. Nevertheless, we included them in order to determine an overall cost that is as accurate as possible. An allocative method was used to classify PAC overhead cost from the overall hospital overhead costs. The average overhead cost was \$16.62. However, it varied widely by level of health care, ranging from \$33.34 at regional hospitals to \$5.92 and \$2.09 at district hospitals and lower-level health centers and dispensaries, respectively (Box 2).

Total Unit Cost of PAC

We calculated the total health system cost per case by adding the total costs of expenditure on capital costs, medicines and supplies, personnel, hospitalization and indirect costs and dividing the sum by the total number of PAC clients estimated to have received PAC at all study sites (N=6,336). We thus calculated a total cost of \$72.91 per case. Based on our calculation, 59% of the cost was from direct costs associated with medicines and supplies, personnel, and hospitalization (i.e., medical costs), and 41% was from capital and indirect costs (i.e., nonmedical costs). Table 5 presents the health system cost per case by health care level and type of complication, and it shows the proportion of the total amount that is attributable to the different cost categories.

The average cost of integrating contraceptive counseling and voluntary method provision with treatment for postabortion complications was \$11.56 per client.

BOX 2. Key Postabortion Care Cost Considerations

- 18% of the unit cost of postabortion care is expended on capital costs (e.g., amortized annual costs of infrastructure and equipment), 59% on recurrent costs (personnel, medicines and supplies, hospitalization), and 23% on indirect costs.
- Treating abortion complications before they become severe (i.e., routine complications from incomplete abortion) costs on average roughly half as much as treating severe complications.
- Of the cases of routine complications from incomplete abortion, those treated with misoprostol cost on average \$18.74; those treated with manual vacuum aspiration, \$22.63; and those treated with sharp curettage, \$32.02.
- The average cost of voluntary postabortion contraception was \$11.56, roughly one-third the recurrent cost of postabortion care.

TABLE 5. Unit and Total Health System Cost of Postabortion Care at 31 Sites in Tanzania

Cost Category by Complication Type	Costs by Health Care Level (US\$)				% by Category
	Regional Hospital (n=2,678)	District Hospital (n=2,178)	Lower-Level Sites ^a (n=1,480)	All Facilities (N=6,336)	
Personnel, total					
Incomplete abortion	56,218.53	13,507.28	12,133.12	81,858.93	
Sepsis	5,621.06	2,378.18	1,534.56	9,533.80	
Shock	10,963.72	1,194.84	4,704.29	16,862.86	
Lacerations	530.22	1,075.32	1,210.18	2,815.72	
Uterine perforation	2,544.13	211.96	272.25	3,028.35	
Total	75,877.66	18,367.59	12,133.12	114,099.66	25%
Medicines and supplies, total					
Incomplete abortion	44,201.42	28,458.45	11,071.97	83,731.84	
Sepsis	5,030.30	15,836.12	2,728.23	23,594.65	
Shock	7,312.56	1,136.79	80.83	8,530.19	
Lacerations	181.12	6,334.45	2,351.98	8,867.55	
Uterine perforation	2,896.66	0	350.77	3,247.42	
Total	59,622.05	51,765.81	16,583.78	127,971.65	28%
Hospitalization, total					
Incomplete abortion	17,516.65	2,990.67	958.03	21,465.35	
Sepsis	2,248.37	1,297.29	431.74	3,977.39	
Shock	1,706.13	844.94	469.88	3,020.95	
Lacerations	120.59	157.61	168.01	446.21	
Uterine perforation	239.97	146.00	70.9	456.86	
Total	21,831.70	5,436.51	2,098.56	29,366.76	6%
Capital costs, total	84,304.07	604.18	301.21	85,209.47	18%
Indirect costs, total	89,287.79	12,901.78	3,099.08	105,288.66	23%
Medical costs, total	157,331.41	75,569.91	38,536.75	271,438.07	59%
Nonmedical costs, total	173,591.87	13,505.96	3,400.30	190,498.13	41%
Overall total	331,143.53	89,145.83	41,937.04	461,936.20	100%
Total per case (N=6,336)	123.65	40.93	28.34	72.91	

^a Health centers and dispensaries combined.

Out-of-Pocket Expenditures for PAC

Some data on OOP costs were collected, although the main purpose of this study was to evaluate how much is spent on PAC to guide systems-level planning, not who pays. Nevertheless, it is relevant to understand the proportion of these expenditures that are effectively recouped by the health system and to realize the financial burden that women and households face in seeking this service. Notably, the OOP costs presented here provide only a partial

picture of this burden. Many other costs may be involved during care seeking and PAC.²⁵ Table 6 reports on the average OOP costs incurred by clients when accessing PAC. Given its relevance to the overall purpose of this analysis, we present the OOP expenditure in general terms and by type of expense and rural and urban location of the facility where PAC clients received care. We did not compile information on OOP costs by complication type. The overall average OOP cost incurred by PAC clients at

TABLE 6. Total Average Out-of-Pocket Costs for Postabortion Care by Place of Residence (US\$2016)

Out-of-Pocket Costs	Urban	Rural	All
Travel cost	3.59	6.64	4.69 (20.43%)
Hospitalization	5.59	0	3.58 (15.58%)
Food	3.93	3.09	3.63 (15.81%)
Medicines	5.82	3.03	4.89 (21.30%)
Laboratory tests	4.89	1.16	3.65 (15.90%)
Other ^a	3.12	1.90	2.52 (10.98%)
Total out-of-pocket costs	26.94	15.82	22.96 (100.00%)

^a Includes hospital registration fees, paying for miscellaneous drugs and supplies (e.g. gloves, Panadol), bed covers, and sheets for ultrasound.

Clients incurred on average \$23 in overall out-of-pocket costs for PAC.

the surveyed facilities was \$22.96. On average, PAC clients bore the most expense, roughly 21% of the total OOP cost, for medicines (\$4.89). The specific costing category that represents the lowest proportion of OOP cost, 16%, was hospitalization per patient (\$3.58). Differences in the level of OOP costs in urban and rural facilities apparently reflect the fact that regional hospitals, which are more likely to hospitalize PAC clients, require laboratory tests, and prescribe costly medications, are situated in urban areas.

National Costs of PAC

Using our estimates for providing PAC from 2016, we calculated the total annual cost for treating abortion complications, including provision of voluntary postabortion contraceptive services. For this, we drew upon the conclusions of Keogh and colleagues,¹⁷ who reported that annually 405,000 women in Tanzania have abortions, with approximately 6 times as many women having an abortion but not receiving PAC. We also applied our estimates to other findings from the Guttmacher Institute, which estimated that annually about 40% of all women who experience complications from induced abortion receive PAC.²¹ Based on this, we estimated that 57,203 women in Tanzania received PAC in 2016, while 143,009 actually needed it. We found that the total cost incurred by the national health system on PAC provision in 2016 was \$4,170,476 and that the total cost of providing PAC to all women estimated to have needed it would have been \$10,426,299.

Sensitivity Analysis

Since the data for our analysis came from different sources, mostly from key informant PAC experts,

we expected a degree of uncertainty in our estimates. Consequently, we conducted a univariate sensitivity analysis of key variables to assess the impact that changes in particular parameters used to estimate unit costs would have on the output results of our unit cost analysis. This analysis tested the robustness of the models used for our estimations, focusing on the direct costs on PAC provision (medicines and supplies, personnel, and hospitalization), capital expenditures, and indirect costs. The central estimates from these data as well as the minimum and maximum estimates are presented in Table 7. Several ad hoc decisions were made regarding minimum and maximum estimates. For example, our estimates of salaries and allowances likely underestimated the actual levels of labor costs; therefore, we set the minimum estimate for labor costs at 10% less than the central estimate, and the maximum at 25% higher. However, for hospitalization, which we believe could have been overestimated as easily as underestimated, we set the minimum and maximum estimates at 20% less and greater than the central estimate, respectively. We assumed that the distribution of abortion complications could vary from the central estimates by ±15%. In addition, capital and indirect costs were assumed to have been underestimated during our study. Therefore, we set our minimum estimates at 8% of the total direct medical expenditures less than the central estimates. For our maximum estimates, we adopted the assumption reflected in the UNFPA Reproductive Health Costing Tool that indirect and capital costs amount to twice the amount of direct medical expenditure.

Using the minimum and maximum estimates as the likely boundaries of the actual cost for PAC expended by the health system we found wider ranges when including indirect and capital costs than when accounting for the direct medical costs per intervention only. Overall, we found that, across all complications and including indirect and capital costs, the total cost of PAC to the health system per client is likely between \$54.13 and \$147.64 (Table 8). Expressed as the total cost to the health system, the cost is approximately \$4.2 million, within a range of \$3.1 and \$8.4 million.

DISCUSSION

In our study, conducted in 2017, we aimed to estimate the previous year’s unit and health system cost of PAC provision and offer guidance on the budget requirements for satisfying the total

We found that the total cost of PAC to the health system per client lies between about \$54 and \$148.

TABLE 7. Central, Minimum, and Maximum Estimates Used in Sensitivity Analysis

Parameters	Estimates	Minimum	Maximum
% Distribution of complication			
Incomplete abortion	81.5	72.5	100
Sepsis	7.4	3.9	11
Shock	7	4.5	11
Laceration	2.9	1	5
Uterine perforation	1	0.5	2
Personnel			
Total work hours for postabortion care per year	1,920	1,720	2,400
Salaries/allowances	—	10% lower	25% higher
Hospitalization	—	20% lower	20% higher
Capital costs (% of direct medical costs)	31	23	100
Indirect costs (% of direct medical costs)	39	31	100

demand for PAC, including for those who needed PAC but could not access it. We employed data collection and analysis methods used in earlier studies for estimating PAC costs. Our methodology emphasized key informant interviews and an “ingredient approach” to costing components of the WHO Mother Baby Package,

in this case the 5 major abortion complications: incomplete abortion, sepsis, shock, vaginal or cervical laceration, and perforation of the uterus or lower abdomen. We also estimated and compared the unit cost of various available methods of treatment for incomplete abortion and voluntary postabortion family planning.

TABLE 8. Sensitivity Analysis for Cost to the Health System for PAC per Case (US\$)

Overall Cost	Minimum	Reported	Maximum
Direct medical costs			
Incomplete abortion	153,506.21	187,057.72	256,336.13
Sepsis	18,367.74	37,104.48	57,619.47
Shock	17,092.98	28,413.55	42,851.40
Lacerations	3,735.90	12,132.92	22,003.43
Perforations	3,221.23	6,729.37	13,750.38
All complications	195,924.05	271,438.04	392,560.18
Medical cost per PAC case	30.92	42.84	61.96
Direct nonmedical costs			
Capital costs	63,497.21	85,209.47	271,438.04
Indirect costs	83,573.62	105,288.66	271,438.04
Total annual overhead (capital and indirect costs)	147,070.83	190,498.13	542,876.08
Nonmedical cost per PAC case	23.21	30.07	85.68
Overall cost per PAC case	54.13	72.91	147.64

Abbreviation: PAC, postabortion care.

The health system spent between \$3.1 million and \$8.4 million on PAC, which could increase to \$10.4 million if all women needing PAC received it.

Pro-poor strategies are needed to enhance the accessibility of PAC for women with limited financial means.

We estimated that the unit cost of PAC in Tanzania stood at \$72.91. Our analysis benefited from previous research that reported a 1:6 ratio of women in Tanzania who receive PAC to those who experience abortion, per year, and that women who access PAC represent 40% of those in the country who need it. We approximated that the total cost incurred by the health system for delivering PAC was \$4.2 million. Given the uncertainty of some of the assumptions made in computing this estimate, we subjected the data to a sensitivity analysis, which showed that the total health system spent between \$3.1 million and \$8.4 million. This amount would increase to roughly \$10.4 million, with a range of \$7.7 to \$21.1 million, if all women in the country who have abortion complications were to receive PAC.

Our estimates align reasonably well with those derived through similar methodologies in neighboring countries.^{11,12} Our estimate of the direct medical cost per PAC client, \$42.84, is close to estimates of \$41.43 and \$47.05 reported for Uganda and Rwanda, respectively. In both of these countries, the methodology derived higher overall unit costs due to differentials in the estimation of capital expenditures and indirect costs. Although our estimation for indirect costs, \$16.62 per PAC client, is similar to the estimate of \$18.89 in Uganda, our measure of the unit capital cost is much lower, \$13.44 to \$70.91. In Rwanda, whose overall unit cost estimate is closer to that derived for Tanzania, our estimate for the unit capital costs was nearly identical, \$13.44 to \$13.57. However, the Rwanda estimate for unit indirect costs was nearly twice our estimate for Tanzania, \$32.18 to \$16.62. Higher expenditures on capital costs per PAC client in Uganda arises from differences in key informants' estimation of amounts spent on infrastructure and equipment. Key informants in Uganda also differed from those in Tanzania in terms of how they perceived the durability of PAC-related infrastructure and equipment inputs, which they conjectured had a greater number of useful life years. Estimations of indirect costs in Rwanda were nearly double those that we derived for Tanzania. As with differences between capital cost estimates between Uganda and Tanzania, key informants in Rwanda and Tanzania differed in their estimates for expenditure on annual wages for nonmedical workers at sampled facilities, the cost of outsourced contracts per facility, and annual building maintenance and operational expenses.

According to Tanzania's Health Sector Strategic Plan IV, the government's total budget for health for 2016 was \$484,810,000.²⁶ The total amount

required for reproductive, maternal, newborn and child health during 2015–2016 were estimated to be \$108 million.²⁷ Thus, our estimates suggest that the cost of treating abortion complications in Tanzania may have been about 4% of the expenditure required for reproductive, maternal, newborn, child, and adolescent health programming. While the evidence is very limited, surveys of key informants indicate that a large proportion of women experiencing abortion complications never access care through the formal health system.²⁸ In Tanzania, where this proportion is estimated to be 60%, we found that if all women who experienced abortion complications were to have received PAC, this amount would have been about 10% of the Government of Tanzania's total expenditure on reproductive, maternal, newborn, child, and adolescent health programming. Although our estimates are based on expert opinion, not population-based data, and it is likely that women not attending health facilities may generally have less severe symptoms than those seeking treatment, it seems clear that the cost of abortion complications on the health system is appreciable.

Given what we have learned about the unmet need for PAC and the cost, health systems improvements are clearly required. We report an average OOP cost of \$22.96 per woman who receives PAC, based on reports from clients who had just received the service. This OOP cost is significantly greater than those for other women's health services, such as maternity care, which has been estimated to be \$5.10 per client in Tanzania.²⁹ This finding raises critical equity concerns, drawing attention to the need for pro-poor strategies to enhance the accessibility of PAC for women with limited financial means. We estimate that the cost recovered by the health system from PAC clients' OOP expenses, excluding transportation costs, stands at \$18.27, which is more than our estimate of the average indirect costs per client and approximately 25% of the overall unit cost.

Reductions of the health system cost of PAC could partly be achieved by improving the availability of appropriate treatment for incomplete abortion, particularly at the primary care level. Our analysis suggests that this would occur most precipitously if vacuum aspiration and medical methods were available at this level of care. In doing so, planners could avoid the higher costs of PAC at tertiary sites, where levels of hospitalization are high and often unnecessary, and make the service more accessible to women nearer to where they reside and need care. Although misoprostol for PAC is permitted in Zanzibar, the

region lacks clear policy and technical guidance on its use for PAC. In the mainland, misoprostol is not permitted for PAC. Several examples from other countries in the region demonstrate how addressing those issues enabled public health care systems to improve equity and coverage of PAC for women in need.^{30,31} Findings from a recent analysis of Service Provision Assessment data in Tanzania also suggest the need to strengthen emergency obstetric care, which includes emergency uterine evacuation as a key signal function, at lower-level health facilities, which were significantly less likely to maintain emergency obstetric care readiness.³² We found that contraceptive services cost \$11.56 per client on average, which is less than half the cost of treating a routine abortion complication. This finding highlights the importance of investments in voluntary family planning services, not only as part of PAC but also independently to prevent unintended pregnancies in the first place.

Limitations

This study has several limitations. First, we focused on the immediate costs incurred by the health system on treating abortion complications, and we did not address expenditures that systems accrue due to longer-term morbidities arising from complications, particularly those from unsafe abortions.¹⁰ Although we were unable to obtain credible estimates of longer-term abortion-related morbidity, we acknowledge that this limitation might have resulted in underestimating the total health systems cost of treating abortion complications. Furthermore, our examination of OOP used a relatively small sample size and failed to deeply explore the economic consequences of enduring abortion complications. Additional costs of this nature include opportunity costs associated with care seeking and productivity time lost due to abortion-related morbidity and mortality, all likely to severely affect the well-being of women, households, and societies.^{25,33} Not including these potential costs in our analysis likely resulted in an underestimation of the true economic consequences of resorting to PAC. Our approximations for capital and indirect costs reflect challenges faced by similar studies, which also acknowledged the difficulty of relying upon expert estimations for this measure. In our study, this factor likely resulted in an underestimation of the true capital and indirect costs related to PAC. Further, as noted in similar studies, we also emphasize the need to continue refining methods in order to capture these costs more accurately.¹³ Finally, we used data based on expert opinion, rather than population-based

data, and the projections of national-level costs relied on data from a different study.

CONCLUSIONS

Ultimately, better policy would be aimed at addressing the root cause of abortion—that is, the high incidence of unintended pregnancies, which reflects an unmet need for modern contraception among women who wish to delay, space, or limit future childbearing and who are not currently using a method. In Tanzania, approximately 1 million unintended pregnancies occur per year and 20% of women of reproductive age have an unmet need for family planning. It has been reported that 39% of all unintended pregnancies end in abortion.³⁴ Our study illustrates the large burden this imposes on the Tanzanian health care system, as well as some aspects of the high costs incurred by PAC clients when they access needed care. Cost-effectiveness studies have demonstrated that increased investments in voluntary family planning services can generate net benefits by reducing the budgetary allocations required for treating complications from abortion.³⁵ Nevertheless, the need for PAC to treat abortion complications can never be eliminated in a health system as it is also a key component of emergency obstetric care. Efforts to expand coverage, ensure affordability to PAC clients, and equity of access, while minimizing costs, should emphasize provision of appropriate PAC treatment and voluntary postabortion contraception, particularly at primary care levels with greater reach where the service can be introduced and sustained with minimal capital and other startup costs. The wider implications of this approach in terms of health systems strengthening should occupy a prominent place in countries' planning and priority setting processes.

Acknowledgments: We thank Claudia Morrissey Conlon and Erin Mielke for their technical review of a draft version of this article as well as their expertise and assistance throughout all aspects of our study.

Funding: This manuscript was generated from a study conducted under the Post Abortion Care Project in Tanzania funded by the United States Agency for International Development under agreement AID-OAA-A-00050.

Disclaimer: The views expressed in this article are solely the views of the authors and do not reflect the views of the United States Agency for International Development or the United States Government.

Competing Interests: None declared.

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Peer Reviewed

Received: January 13, 2019; **Accepted:** April 11, 2019

Cite this article as: Baynes C, Yegon E, Kimaro G, Lusiola G, Kahwa J. The unit and scale-up cost of postabortion care in Tanzania. *Glob Health Sci Pract*. 2019;7(suppl 2):S327-S341. <https://doi.org/10.9745/GHSP-D-19-00035>

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FIELD ACTION REPORT

Exploring Barriers: How to Overcome Roadblocks Impeding the Provision of Postabortion Care to Young People in Togo

Stembile Mugore^a

Before providers were trained in offering youth-friendly postabortion care (PAC), including provision of voluntary contraceptive methods, no youth PAC client chose a modern method before leaving the facility. After training, over a 6-month period 41% of youth PAC clients chose a modern method, most commonly oral contraceptive pills followed by implants and injectables.

ABSTRACT

Background: Family planning counseling and provision of a variety of contraceptive methods during postabortion care (PAC) can increase voluntary contraceptive use and prevent unintended pregnancies, helping to reduce maternal morbidity and mortality. Youth in Togo, however, face many barriers to accessing contraceptives during PAC including provider bias, parental consent policies, stigma, and pressure on young people to have children. This article describes the lessons learned from follow-up with providers who were trained on PAC to build their willingness and skills in offering youth-friendly PAC.

Methods: With assistance from the Evidence to Action (E2A) Project, Togo's Division for Maternal and Infant Health and Family Planning (DSMI/PF) systematically applied IntraHealth International's Optimizing Performance and Quality (OPQ) approach to improve the quality of PAC at 5 health facilities from 2014 to 2016. OPQ identified gaps and helped establish solutions to shortcomings that hinder youth's access to contraceptive choice during PAC. To address these shortcomings, staff trained providers to improve their knowledge, attitudes, and skills with regard to (1) medical eligibility criteria for contraceptive use to remove age as justification for denying contraceptives; (2) AFPAC to increase the ability to consider gender-based violence and to encourage client-focused and age-sensitive counseling; and (3) monitoring through disaggregation of data by age, method, and parity for data-driven planning and delivery of AFPAC.

Results: Providers reported improved attitudes and empathy toward young PAC clients, efforts to screen for exposure to sexual and gender-based violence, and willingness to explore reproductive health needs and assist clients in choosing contraceptive methods. Previously, no youth PAC clients chose contraceptives during PAC or returned to the facility for routine follow-up. After providers received OPQ training, they treated 775 PAC clients in 5 health facilities between June and December 2016; 351 were ages 14–24, of whom 142 (40.5%) chose a modern contraceptive. The most common method selected by youth was oral contraceptive pills (44%), followed by implants (41%) and injectables (15%). Of the 142 youth PAC clients who chose a method, 86 (58.5%) returned for the 7-day follow-up.

Conclusions: Training providers to offer AFPAC along with the application of OPQ to improve the quality of PAC increases voluntary contraceptive uptake, including implants, among youth who make up a substantial portion of all PAC clients. Incorporating AFPAC in family planning/reproductive health policies, norms, protocols, and PAC training, as Togo's DSMI/PF did, is an important element to ensuring institutionalization of the practice.

BACKGROUND

Adolescent girls—15–19 years old—are twice as likely to die during pregnancy or childbirth as women 20 years of age or older. Further, girls younger than 15 are 5 times more likely to die during pregnancy or childbirth than women 20 years of age or older. Of the approximately 252 million adolescent girls in developing regions, about 38 million are sexually active and the majority of these girls (23 million) have an unmet need for

family planning. Approximately half of adolescent pregnancies are unintended,¹ and the World Health Organization (WHO) estimates that 2–4.4 million adolescents in developing countries undergo unsafe abortions performed by unskilled providers under dangerous and unhygienic conditions each year.²

Adolescent girls have a high unmet need for contraception for multiple reasons, including their own misperceptions that they are at low risk of pregnancy due to infrequent sex and being unmarried, fear of side effects, and social stigma around being sexually active. Studies that have reviewed reasons for adolescent girls

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encountering barriers to obtaining contraception include providers' judgmental attitudes and bias, a lack of privacy and confidentiality, and a lack of sound policies and guidelines on postabortion care (PAC) and family planning services.³

Many countries lack guidelines regarding the provision of PAC, including high-quality voluntary family planning services, to adolescents although the WHO recommends provision of quality PAC to adolescents as an international standard. Quality PAC is defined as including emergency treatment for abortion complications; access to voluntary family planning services that offer counseling for informed choice and a wide range of contraceptive methods inclusive of long-acting reversible contraceptives (LARCs); referrals for other reproductive health services, such as treatment for sexually transmitted infections and screening for cervical cancer, regardless of whether a pregnancy ended with miscarriage or an abortion; and community empowerment through community awareness and mobilization.⁴ High maternal morbidity and mortality highlight the need for voluntary family planning services and yet adolescents often do not use these services, underscoring the importance of including adolescent friendly services with quality PAC. Interventions that increase voluntary modern contraceptive use and reduce the unmet need for contraception among adolescents would break the cycle of repeated unintended pregnancies, reducing them by 6 million every year. Achieving this goal would avert 3.2 million abortions and 5,600 maternal deaths globally each year.¹

Adolescent and youth reproductive health (AYRH) indicators in Togo reveal a great need for quality PAC and other evidence-based interventions for encouraging voluntary contraceptive use to reduce unintended pregnancies among adolescent girls. Togolese youth who are 25 years or younger compose the majority (61%) of the total 6.2 million population. Among Togolese women and girls, the unmet need for contraception is highest among adolescents, with 42% of sexually active 15- to 19-year-olds lacking access to contraception compared with 40% of sexually active 20- to 24-year-olds. Togolese girls become sexually active early: 11% before age 15, 47% before age 18, and 71% by age 20. Among all women of reproductive age, modern contraceptive use is extremely limited. The prevalence of modern contraceptive use is 17% among married or in-union women 15–49 years and 12% among unmarried, sexually active adolescents.⁵ Among the married women 15–49 years old who use contraception,

many choose injectables (7%) and implants (5%). In addition, according to a 2010 study by the Ministry for the Advancement of Women, 5.5% of girls ages 9–18 are victims of sexual violence. More than 40% of adolescent girls and young women have suffered some type of physical violence in their home, while more than 89% have experienced psychological abuse at home.

Since 2014, the Evidence to Action (E2A), supported by the U.S. Agency for International Development and under the leadership of Togo's Division for Maternal and Infant Health and Family Planning (DSMI/PF), has worked to increase voluntary access to family planning services during PAC, particularly among adolescents. From 2014 to 2016, E2A applied IntraHealth International's Optimizing Performance and Quality (OPQ) approach to improve the quality of PAC at 5 high-volume health facilities—2 regional hospitals, 2 district hospitals, and 1 health center. Efforts included provider trainings meant to:

- Update the contraceptive technology available, remove barriers that prevent clients from accessing contraceptives, and broaden the range of contraceptives offered (including LARCs)
- Support counseling for voluntary informed contraceptive choice regardless of age, marital status, or whether the abortion was induced or spontaneous
- Improve recordkeeping and use of data to monitor quality of PAC being provided

The OPQ approach required managers of maternity and family planning units to provide supportive supervision and to help identify gaps and weaknesses in PAC service delivery and ways to address these gaps. The managers were engaged in developing solutions to problems and facilitating peer meetings to review progress and lessons learned, reinforce skills, and address common performance gaps.⁶

METHODS

First, a team comprising DSMI/PF and E2A conducted a needs assessment to identify current practices and barriers to provision of PAC, including counseling, family planning, and availability of a broad range of contraceptive methods to foster voluntary informed choice. The team E2A reviewed PAC registers at each of the 5 facilities for the period from July 2014 to February 2016 to assess the number of adolescents and youth ages

15–24 years seeking PAC. Individuals were grouped according to age and parity, and family planning policies and PAC guidelines with regard to the management of adolescent PAC clients were reviewed.

Interviews were conducted with facility providers to establish practices related to provision of PAC for adolescent and youth clients, and the facility was observed to assess the organization of services for youth friendliness and the structural barriers that hinder youth from accessing voluntary family planning services.

Following the needs assessment, a set of interventions, described below, were implemented to address the identified barriers, including institutionalization to facilitate scale-up. Also, during the training a written questionnaire was administered pre- and post-training to assess the impact of the training.

Adaptation of a Global Training Module

In 2012, the PAC Consortium developed a Youth-Friendly PAC Supplemental Training Module⁷ for comprehensive PAC training. The module, intended to improve providers' abilities to offer high-quality PAC to adolescents, includes the following sessions:

- Overview of youth-friendly PAC supplemental training module
- Overview of adolescence
- Youth-friendly PAC
- Counseling of adolescent PAC clients
- PAC procedures for adolescent clients
- PAC contraception for adolescent clients
- Referral for other reproductive health services

Between January and May 2016, E2A worked with EngenderHealth, the EngenderHealth-led Agir pour la Planification Familiale (Agir/PF), and the DSMI/FP to adapt the training module developed by the PAC Consortium for use in Togo and translated it into French. The resultant AFPAC Training Module for Togo was then updated using WHO's 2015 *Medical Eligibility Criteria for Contraceptive Use*⁸ and resources from the Postabortion Care website.⁹ It also incorporated statistics and youth-related reproductive health guidelines from Togo.¹⁰ A new session, "Understanding and detecting sexual and gender-based violence among teenage PAC clients," was developed to address judgmental attitudes among providers, such as the belief that all young

unmarried PAC clients are promiscuous. The session was intended to create awareness among providers about sexual and gender-based violence (SGBV), increase sensitivity about it (particularly with regard to young PAC clients), and encourage SGBV counseling and support.

Provider Training

In May 2016, trainers from DSMI/PF and Association Togolaise pour le Bien Etre Familiale (ATBEF) were oriented on the AFPAC Training Module and prepared for their role in cofacilitating the 3-day training workshop. Doctors, clinical officers, and midwives constituted the 27 training participants from the 5 E2A-supported facilities as well as facilities in 3 regions supported by Agir/PF, ATBEF, DSMI/PF, and the AYRH division of the Ministry of Health. The training focused on improving participants' attitudes toward adolescent PAC clients; integrating gender considerations into the provision of services; and developing skills to support voluntary, adolescent- and youth-friendly family planning counseling and provision of a wide range of contraceptive methods, including LARCs. This training marked the first time that the AFPAC Training Module was used in a Francophone country. The module underwent modifications during training, and it was then finalized and handed over to the DSMI/PF. A written questionnaire was administered pre- and post-training to assess improvements in knowledge after the training (N=27).

Reorganization of Services

Immediately after the training, E2A and DSMI/PF continued to provide onsite and remote support to the 5 health facilities to help reorganize services to ensure confidentiality in the provision of youth-friendly services. Efforts were also made to help providers identify and establish linkages with other facilities in their districts that offer AYRH and SGBV services.

Data Collection, Analysis, and Use

Between June and December 2016, monthly data from PAC registries were entered into a Microsoft Excel database to track progress in PAC counseling and method provision. Data were disaggregated by age, parity, type of abortion, whether the client was counseled, the type of contraceptive method she selected, and whether she returned for the routine 7-day follow-up visit. E2A analyzed and used these data to monitor changes in counseling, method uptake, and return for follow-up among

adolescent clients. The 5 facilities received remote support for data use and quality improvement.

Preparing for Scale-Up

DSMI/PF expressed interest in both vertical (government ownership) and horizontal (geographic expansion) scale-up to improve contraceptive method choice among PAC clients. DSMI/PF therefore prioritized updates to policies, norms, and protocols to address the lack of clear guidance regarding provision of PAC. The lack of such guidance had resulted in provider-driven policies based on misperceptions about AYRH, and these policies contributed to the barriers encountered by adolescents and youth when trying to access PAC. Agir/PF was included in adaptation of the training module and cofacilitation of the workshop because project leadership expressed interest in scaling up of AFPAC in Togo and possibly expanding the AFPAC training to other West African countries.

In 2017, E2A, EngenderHealth, Agir/PF, and DMSI/FP updated Togo's national family planning policies, norms, and protocols to align with the AFPAC module and to support systematic scale-up. Providers from the 5 facilities participated as a resource in updating the guidelines to share practical experiences and make recommendations about key elements that should be included. Examples include parental consent for treatment of abortion complications (particularly when the adolescent client is very sick and needs referral or surgery), guidelines on SGBV, and guidelines on the use of OPQ for quality improvement. DSMI/PF and Agir/PF disseminated the updated policies, norms, and protocols to regional directorates in Togo along with technical and policy updates on management of adolescent and youth PAC clients and MEC for contraceptive use.

RESULTS

Pre-Intervention PAC Service Delivery Data

The review of the monthly PAC register entries from July 2014 to February 2016 showed that young clients (15–24 years of age) who were unmarried and pregnant for the first time tended to be the only clients recorded as having complications related to unsafe abortion. None of these clients were counseled, obtained contraception, or returned for routine follow-up at any of the 5 facilities. Regardless of age, married clients who had previous pregnancies were recorded as having had complications related to spontaneous

miscarriage; these clients were counseled and could select a contraceptive method.

Pre-Intervention Provider Knowledge, Attitudes, and Competencies

Providers at the 5 health facilities had already received technical support on the use of OPQ to improve quality PAC to expand method choice. They had also received a contraceptive technology update and were sensitized on the importance of removing age alone as a medical barrier to contraceptives, including LARCs. The providers were highly competent in the provision of PAC, including the provision of a wide range of contraceptive methods. However, none of the 5 facilities were offering AYRH services, and none of the providers had received AYRH training. They also lacked training on providing SGBV services in the context of PAC. For example, history taking did not include questions on coerced sex and SGBV.¹¹

These findings highlighted a need to further explore provider competencies in provision of AYRH services, particularly focusing on their attitudes toward unmarried adolescent clients and structural barriers, such as the high cost of services and compromised confidentiality. The barriers described in the following sections were found to inhibit the provision of quality PAC to adolescents.

Provider Attitudes and Bias

Discussions with providers revealed that their bias and judgmental attitudes and the provision of poor-quality services blocked adolescent clients from accessing needed PAC. The providers also cited a policy that parental consent was required for provision of voluntary family planning services to adolescents, although no such policy existed. These providers received a contraceptive technology update and values clarification training, and their service-delivery managers were trained on OPQ. Provider comments prior to training included the following examples:

Young clients are always in a hurry to get services and go home before they are found out. We make them wait, and when we treat them we do not give pain medication. This will make them not come again. They are happy to get rid of the pregnancy and do not show remorse. —Midwife

If they are not accompanied by a parent or an adult, we cannot treat them because we fear getting into trouble should anything happen. We send them away to bring a parent. —Midwife

Giving them a contraceptive method only encourages them to continue to have sex. They have to realize they might be infertile in the future. —Midwife

Institutional Barriers

Policies and guidelines: Policies and guidelines on managing adolescent clients and the provision of contraception were largely not available at the facilities. When policies and guidelines did exist, they were not explicit about the age of clients that can receive PAC with or without parental consent.

Cost of services: Among structural barriers, cost was cited at all the health facilities as a major barrier to adolescents accessing services. The cost for PAC treatment ranged from US\$18 to \$20. If clients opted to obtain contraception, they had to pay an additional fee: \$2 to \$3 if they chose an injectable contraceptive, or \$7 to \$10 if they chose implants. The following comment was illustrative of the cost barrier:

Young clients do not always have money even to pay for the treatment of abortion complications and would therefore not afford to pay for contraceptive methods. —Midwife

Privacy and confidentiality/organization of services: Weak infrastructure and poor organization of services compromised privacy, which is a key quality-of-care element in providing services to adolescents. Client reception and the waiting area were typically in the maternity ward, where management of labor and delivery were a priority. Management of PAC clients was only made a priority if they were in shock.

Client Management

Manual vacuum aspiration (MVA) is a standard method of treatment in PAC. However, most of the facilities lacked both the necessary equipment and providers trained in the method. Providers typically resorted to manual removal of retained products of conception, which is not recommended because it has a high risk of incomplete removal and is more uncomfortable for the client. Clients were not always offered pain medication.

These findings are consistent with those from a baseline assessment conducted at 48 health centers in Lomé, Sokodé, and Kara by the Agir/PF Project between March and June 2014. That assessment found that most providers:

- Do not believe adolescents should be sexually active, do not offer them contraceptives, and simply encourage them to stop having sex

- Believe that only men and women who have had a child should access contraceptives
- Ask about marital status due to the belief that only married clients should have access to contraceptives and the belief that single adolescent clients should have parental consent to leave the PAC service with a contraceptive
- Believe young married clients should seek spousal consent for contraceptive use despite this action not being a policy directive

Post-Interventions Results

In January 2017, 7 months after the training, interviews were conducted with some of the AFPAC-trained providers who attended the workshops. The interviews covered reproductive health policies, norms, and protocols to find out how the providers had applied their learning and whether they observed significant changes in provision of services to adolescents. We also used the service delivery registers to capture the type of contraceptive method that clients selected and whether they returned for the 7-day routine follow-up visit. A formal evaluation was not conducted due to budget constraints.

Pre-Post Training Knowledge Assessment

Workshop participants completed a written questionnaire before and after the training. The initial set of results showed that most participants had limited knowledge on how to manage adolescent and youth clients seeking PAC; 55.5% were unable to attain the acceptable cutoff score of 75%. The post-training results revealed a marked improvement in knowledge, with only 11.1% of participants not reaching the 75% cutoff score (Figure 1).

Provider Feedback

The trained providers agreed that the workshop had prepared them to manage adolescent clients. They also indicated that the sessions on SGBV were particularly enlightening because they had previously never considered the link between SGBV, age of consent, and PAC among adolescent clients.

The providers reported changed attitudes and increased empathy toward adolescent clients, mentioning that they were no longer judgmental, had greater patience with their young clients, and took time to establish rapport with them. They also mentioned that they were screening for SGBV and providing counseling. However,

referral facilities for victims of sexual violence are in major urban areas and therefore not easily accessible for rural clients. Providers shared what they had learned about the importance of AFPAC with peers to foster youth friendliness in the provision of PAC and voluntary family planning services. Some mentioned that they were also applying what they learned from the AFPAC training to provision of maternal health services to adolescent and youth clients. The following provider statements illustrate how services for young clients changed:

[Previously,] providers were in a rush and rude toward youth/adolescents, and young clients did not opt for family planning methods easily and did not come to seek for help. Now there is more use of family planning by postabortion care clients including youth/adolescents. —Midwife

They trust us because we assure them of confidentiality and show them respect and sympathy. We tell them they do not need to bring a parent to leave the PAC service with contraception. —Midwife

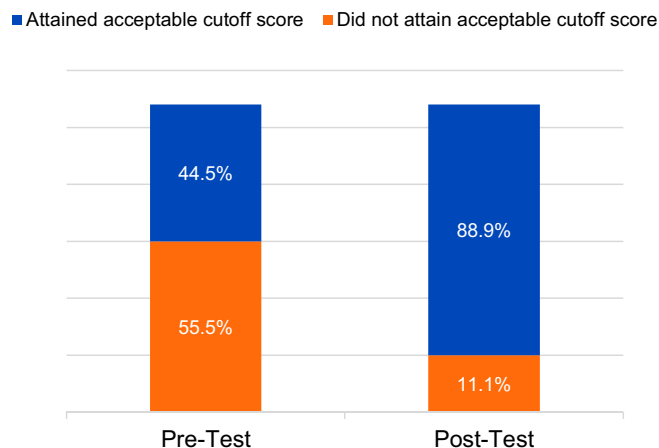
At two of the facilities, providers had reorganized the client flow and available space to create separate waiting areas for adolescent and youth PAC clients and to reduce their waiting time.

Family Planning Uptake Among Youth PAC Clients

Prior to the provider training, no youth PAC client had selected a contraceptive or returned to the facility for routine follow-up. Of the 775 PAC clients who sought services at any of the 5 health facilities within the 6 months after the training, 351 (45.3%) were 14 to 24 years old (Figure 2). Of these PAC clients, 142 (40.5%) chose a modern contraceptive. (It should be noted that although PAC clients aged 14 years old were included in the sample, they were not a statistically significant portion of all PAC clients. Only 2 of the facilities had any PAC clients who were 14 years old.)

Among the adolescent and youth PAC clients who chose a contraceptive method (n=142), the most commonly selected method was oral contraceptive pills (44%), followed by implants (41%) and injectables (15%). In addition, 86 (58.5%) of these clients returned for the 7-day follow-up (Figure 3). Providers stated that they provided information on all contraceptive methods.

FIGURE 1. Percentage of Training Participants Attaining Acceptable Cutoff Knowledge Score of 75%, Pre- and Post-Test Results (N=27)



LESSONS LEARNED AND RECOMMENDATIONS

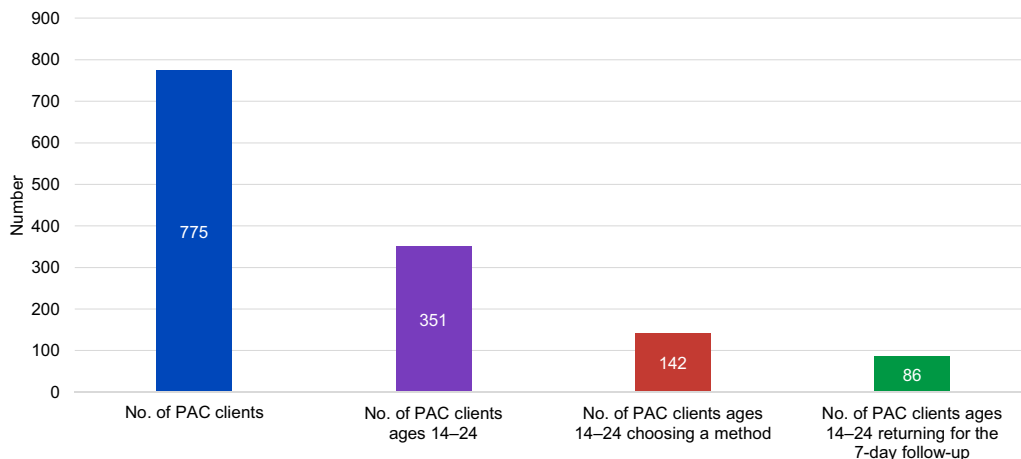
Invest in Further Capacity Building and On-Site Support for Scale-Up

DSMI/FP adopted the AFPAC Training Module in national policies, norms, and protocols but has not been able to train other providers due to capacity limitations and the unavailability of continued support from the E2A and Agir/PF projects. Sustainability and scale-up by DSMI/FP will be contingent upon further capacity building and on-site support for transfer of learning. Continued support and documentation at the 5 E2A-supported health facilities will be necessary to assess feasibility and scalability of AFPAC to inform systematic scale-up.

Explore Barriers to Youth Uptake of LARC

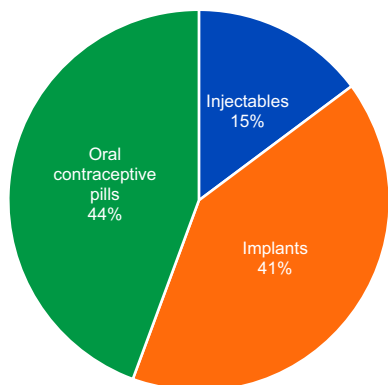
Evidence shows that sexually active adolescents and youth, regardless of marital status and parity, will use modern contraception when provided access to a wide range of contraceptive options, including LARCs. Additionally, when LARCs are chosen, continuation rates are higher than for short-acting methods and they are not subject to user error like condoms and pills.¹² Investments should be made to explore any underlying barriers to voluntary use of LARCs among adolescents and youth while ensuring a wide range of contraceptive method choices. The low cost of oral contraceptive pills is a major contributing factor to

FIGURE 2. PAC Clients Choosing a Modern Contraceptive Method in All 5 Facilities, 6 Months After AFPAC Training



Abbreviations: AFPAC, adolescent-friendly postabortion care; PAC, postabortion care.

FIGURE 3. Most Commonly Chosen Contraceptive Methods by PAC clients Ages 14-24



their choice among youth because they are the least expensive method next to condoms.

Follow Up With Supportive Supervision and Technical Support

Training alone is not sufficient to change provider attitudes and behaviors. Such shifts also require time, supportive supervision, and continued technical support. Although Agir/PF disseminated the updated policies, norms, and protocols and provided orientation on application of the youth-friendly PAC guidelines at facilities in Sokodé,

Kara, and Lomé, there was no further support for geographic scale-up to other regions due to resource limitations at DSMI/PF. To enhance sustainability and potential for scale-up, DMSI/FP requires more technical support to implement the updated policies and guidelines.

Increase Accessibility of PAC Through Linkages With Other Services

PAC can be linked with other services, such as SGBV, HIV counseling and testing, and treatment of sexually transmitted infections, as entry points for adolescent clients accessing voluntary family planning information and services. This approach will help to avoid missed opportunities and to prevent future unintended pregnancies. These services should be free or affordable.

CONCLUSIONS

During the baseline assessment prior to the AFPAC training, it became clear that providers lacked both the willingness and the skills to offer AFPAC to their young clients, although these providers had received comprehensive training on provision of quality PAC. Use of the AFPAC Training Module improved provider attitudes, reduced bias against contraceptive use among young clients, and, for the first time, enabled providers to address SGBV. The results of this intervention revealed a need for AYRH services beyond PAC. Services tailored to meet the diverse

reproductive health needs of adolescents and youth should be developed, building the competencies of providers in AYRH and ensuring the availability and use of job aids, policies and guidelines, and adequate equipment and supplies. Additionally, services need to be organized for privacy and accessibility, and they should be made free or affordable.

The training module can be used in other countries to improve PAC for adolescents and youth. However, it will be necessary to assess “youth friendliness” in provision of PAC, identify barriers to AFPAC and voluntary family planning, and design interventions that might include AFPAC training in the particular context of each country. If evidence is generated to inform design of well-planned interventions, implementation is closely documented, and learning is applied for adaptation and systematic scale-up, then AFPAC has the potential to increase voluntary contraceptive choice and uptake among adolescents and youth both regionally in West Africa, where the need is highest, and around the world.

Acknowledgments: The author thanks Gwen Morgan for her valuable feedback on the article and to Elizabeth Williams for her help in preparing the article for submission. The author is grateful to staff of the Division of Maternal Child Health and Family Planning, Ministry of Health Togo and the family planning and reproductive health service providers from the 5 health facilities included in this project.

Funding: The Evidence to Action (E2A) Project, under Award Number AID-OAA-A-11-00024, gratefully acknowledges the generous support of the U.S. Agency for International Development for the development of the Training Resource Package for Family Planning (TRP), dissemination of the TRP, and adaptation of the TRP in Tanzania and Uganda.

Disclaimer: The author’s views expressed in this publication do not necessarily reflect the views of the United States government.

Competing Interests: None declared.

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Peer Reviewed

Received: September 24, 2018; **Accepted:** February 4, 2019

Cite this article as: Mugore S. Exploring barriers: how to overcome roadblocks impeding the provision of postabortion care to young people in Togo. *Glob Health Sci Pract*. 2019;7(suppl 2):S342–S349. <https://doi.org/10.9745/GHSP-D-18-00437>

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