Health Facility Capacity to Provide Postabortion Care in Afghanistan: A Cross-Sectional Study

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Abstract

Background: Afghanistan has one of the highest burdens of maternal mortality in the world, estimated at 638 deaths per 100,000 live births, Infections, obstetric hemorrhage, and unsafe abortion are the three leading causes. Contraceptive prevalence rate has fluctuated between 10–20% since 2006. The 2016 Afghanistan National Maternal and Newborn Health Quality of Care Assessment evaluated health facilities' capacity to provide postabortion care, and skilled birth attendants' knowledge and perceptions.

Methods: Accessible public health facilities with at least five births per day on average (n = 77), a nationally representative sample of public health facilities with fewer than five births per day (n = 149), and 20 purposively selected private health facilities were assessed. Data collection methods for provision included a facility inventory and record review tool to verify drug, supply, equipment, and facility record availability, and an interview tool to collect information on skilled birth attendants' knowledge and perceptions.

Results: Most facilities had supplies, equipment, and drugs to manage postabortion care, including family planning counseling and services provision. At public facilities, 36% of skilled birth attendants asked to name essential actions to address abortion complications mentioned manual vacuum aspiration (23% at private facilities); fewer than one-quarter mentioned counseling. When asked what information should be given to postabortion clients, 73% described family planning counseling need (70% at private facilities). Seventy percent of public facilities expected to provide basic emergency obstetric and newborn care had functional manual vacuum aspiration supplies in the delivery room. More than 80% of public health facilities had male condoms, oral contraceptive pills, intrauterine devices, and injectables.

Conclusions: This study provides evidence that there is room for improvement in postabortion care services provision in Afghanistan health facilities. Access to high-quality postabortion care needs additional investments to improve providers' knowledge and practice, and availability of supplies.

Background

Every year, an estimated 47,000 women die around the world because of unsafe abortion. Millions more face injuries, including hemorrhage, infection, chronic pain, secondary infertility, and trauma to multiple organs.[1] Abortion-related complications are a preventable cause of mortality, accounting for almost 10% of maternal deaths that occurred over the past decades.[2] Major obstetric hemorrhage, sepsis due to childbirth, and unsafe abortion are the main causes of maternal mortality globally.[3] Meeting the unmet need for family planning globally would reduce maternal deaths by nearly 30%.[4]

Afghanistan has one of the highest burdens of maternal mortality in the world, estimated at 661 deaths per 100,000 live births,[5] with infections, obstetric hemorrhage, and unsafe abortion as the three leading causes.[6] The contraceptive prevalence rate has fluctuated between 10% and 20% since 2006; as of 2018,

the total fertility rate was 5.1, and unmet need was at 25%.[6] Afghanistan's high rate of fertility limits economic productivity and investments in family planning. Birth spacing can support demographic transition and is one of the most cost-effective interventions for reducing mortality and improving women's and children's health.[7]

In Afghanistan, induced abortion is forbidden, except to save the life of a woman, according to the legal framework for safe abortion and postabortion care (PAC) in the country. Furthermore, geographical, social, and economic barriers limit women's access to PAC, including for miscarriage or spontaneous abortion and health services in general.[8]

PAC includes both curative care (management of incomplete abortion and its complications) and preventive care (contraceptive counseling and services, and community mobilization). Both components are essential to ensure that high-quality care is received by women requiring these services.[9,10] Providing high-quality PAC in all facilities is ethical and considered a humanitarian imperative.[11] When high-quality PAC is available, morbidity and mortality associated with unsafe or incomplete abortion can be greatly reduced.[10] The World Health Organization (WHO) recommends use of manual vacuum aspiration (MVA) or medical treatment of abortions utilizing misoprostol-based regimens.[12–1314]

The Ministry of Public Health (MoPH) in Afghanistan has recognized treatment of incomplete abortion using MVA as an essential component of basic emergency obstetric and newborn care (BEmONC) since 2005. National clinical guidelines to provide PAC are available and recommend use of misoprostol for treatment of miscarriage. However, data on implementation of PAC are scarce. The present status of facility readiness on provision of PAC is unknown.[15]

The country's reproductive, maternal, newborn, child, and adolescent strategy highlights the importance and scale of PAC services to be largely practiced by skilled birth attendants (SBAs; doctors and midwives) in Afghanistan.[5] The indicators for high-quality PAC services recommended by WHO are not included in Afghanistan's health information system, and there are little data on incidence of abortion and provision of PAC in the country.[16]

Studies evaluating abortion services in low- and middle-income countries have recommended making family planning services part of routine obstetrics and gynecology services to improve both postabortion and postpartum contraceptive provision. This includes ensuring supply of family planning commodities, and that service delivery points and protocols specifying family planning methods are offered at all service sites.[17,18] Evidence shows that postabortion family planning is a high-impact practice that results in higher family planning uptake when it is provided proactively at the same time and location where a woman receives facility-based PAC.[19,20]

A 2010 study to assess availability of PAC in Afghanistan showed that although designated emergency obstetric facilities in Afghanistan generally have most supplies and equipment for PAC available, capacity of health care providers to deliver PAC is limited. Training on PAC-related skills was

recommended in 2015 to all SBAs.[15] Since that time, a PAC training package was developed, and nearly 30 national trainers were trained in five regions of the country.

The purpose of this study was to assess the capacity of health facilities in Afghanistan to provide PAC services. This information is essential to frame policy discussions and strengthen evidence-based interventions to address gaps in provision of PAC services in the country.

Methods

Study design

The 2016 National Maternal and Newborn Health Quality of Care Assessment was a cross-sectional health facility assessment assessing readiness to provide routine care and address major obstetric and newborn complications at 286 health facilities across all 34 provinces of Afghanistan.[21] This paper presents a subset of findings related to health system capacity to provide PAC.

Sample

Facilities included all accessible public facilities with an average of five or more births per day between April 2015–March 2016, as well as a representative sample of public facilities providing fewer than five births per day that were accessible at the time of the survey and a purposively selected snapshot of private health facilities. Facility caseloads were determined based on data reported in the national health management information system: 79 public health facilities (HFs) reported an average of at least five births per day, 386 reported an average of one to four births per day, and 1,351 did not report any births in the year before the assessment. To obtain a nationally representative sample of public facilities with fewer than five births per day, the research team used probability proportional to size methods of cluster sampling to estimate results by facility type. Using a design effect of 1.5% to account for clustering of providers within facilities, the team estimated that a total of 147 public HFs would need to be assessed to estimate results with 10% precision, 95% confidence: four district hospitals (DHs), 30 comprehensive health centers (CHCs), 61 basic health centers (BHCs), 43 sub-health centers (SHCs), and 11 family health houses (FHHs). Twenty private-sector facilities (10 hospitals with at least five deliveries per day and 10 health centers with fewer than five deliveries per day) were purposively sampled to provide a snapshot of private facilities in all regions of the country. This sample is not statistically representative for all private-sector facilities.

Data collection

Two data collection methods were used to assess capacity for PAC service provision: a facility inventory and record review tool to verify availability of drugs, supplies, and equipment, plus human resources, infrastructure, and facility records, and an interview tool to collect information on SBAs' knowledge, practices and perceptions, and constraints faced in the provision of routine and emergency care services. Tool content was adapted from the Demographic and Health Survey Service Provision Assessment,[22,23]

and from emergency obstetric and newborn care (EmONC) assessments supported by the Averting Maternal Death and Disability program All tools were developed in English and translated into Dari and Pashto.

Data collection at HFs with an average of at least five deliveries per day (including facility inventory/record review, SBA interviews, and direct observations of clinical care) was completed between May 14, and August 3, 2016. Data collection at HFs that averaged fewer than five deliveries per day (facility inventory/record review and SBA interviews only) was completed from November 5, 2016, to January 5, 2017. Data collection teams visited 77 of the 79 public HFs with an average of at least five deliveries per day. Data collectors were not able to visit two HFs due to insecurity surrounding them. Each team consisted of three data collectors (female midwives and doctors) and aimed to complete data collection within 2 to 3 days per facility. Due to insecurity or geographical and climatic constraints, 39% of randomly selected public HFs with zero to four deliveries per day were inaccessible; therefore, these facilities were replaced by alternative facilities of the same type, following standardized replacement sampling protocols. Interviews were conducted with 333 health providers at specialized hospitals (SHs), regional hospitals (RHs), and provincial hospitals (PHs); 228 at high-volume DHs with more than five deliveries per day; 69 at low-volume DHs and CHCs; 104 at BHCs, SHCs, and FHHs; and 64 at private HFs.

Facility readiness for PAC was defined as availability of equipment, supplies, and documentation at the point of care. Readiness assessment activities conducted at all facilities through included documentation of the availability of human resources, equipment, drugs, and supplies, as well as interviews with SBAs serving at the time of the study. A maximum of five SBAs were invited to participate in the study at each facility, except for specialty hospitals, where five SBAs on the day shift and five SBAs on the night shift were invited to participate.

Data collection was carried out using CommCare software installed on Android tablets, allowing for logic and consistency checks, quality control, and online submission of the data to the central database.

Analysis

For analysis purposes, facility types were defined as follows: 1) SH, RH, and PH; 2) DHs with an average of five or more deliveries per day; 3) DHs and CHCs with an average of fewer than five deliveries per day; and 4) BHCs, SHCs, FHHs, and other primary health care facilities.

Descriptive statistics were used for analysis. A chi-squared test was used to test for differences in facility readiness and routine care practices by public facility type. All statistical analyses were conducted using Stata. Data from private facilities are based on purposive sampling and are not intended for direct comparison compared with the public HFs.

Results

Health facility characteristics (Table 1)

In 144 of 226 public HFs (64%), facility management reported providing 24-hour health services. Availability of 24-hour care was more common in SHs/RHs/PHs and high-volume DHs (100%), and less common in low-volume DHs/CHCs (57%) and in BHCs/SHCs/FHHs (41%). There was a significant difference among facility types (p <0.001).

In 63 of 226 public HFs (28%), facility management reported using misoprostol for treatment of incomplete abortion. A higher proportion of SHs/RHs/PHs (76%) and high-volume DHs (75%) reported use of misoprostol than low-volume DHs/CHCs (3%) and BHCs/SHCs/FHHs (4%). There was a significant difference among facility types (p <0.001).

In 64 of 226 public HFs (28%), facility management reported performing MVA for removal of retained product of conception in the last 3 months. A higher proportion of SHs/RHs/PHs (76%) and high-volume DHs (78%) performed MVA than low-volume DHs/CHCs (0%) and BHCs/SHCs/FHHs (5%). There was a significant difference among facility types (p <0.001).

In 69 of 226 public HFs (31%), facility management reported performing sharp curettage to remove retained product of conception in the last 3 months, but a higher percentage of SHs/RHs/PHs (97%) and high-volume DHs (80%) performed sharp curettage than the low-volume DHs/CHCs (3%) and BHCs/SHCs/FHHs (0%). There was a significant difference among facility types (p <0.001).

Of 226 public HFs, 107 (47%) reported having a register to record abortion-related complications. A higher proportion of SHs/RHs/PHs (73%) and high-volume DHs (73%) had a register to record abortion-related complications than low-volume DHs/CHCs (8%) and BHCs/SHCs/FHHs (19%). There was a significant difference among facility types (p <0.001). Around 92 (41%) public HFs reported having a register to track postabortion women discharged with a method of contraception from HFs. Facility logbooks recorded an average of 29 cases of postabortion complications per month and an average of only one woman discharged with contraception method at SHs, RHS, and PHs; the reported number of postabortion women discharged with contraceptives was smaller at other facility types.

Availability of supplies, equipment, drugs, and guidelines (Table 2)

Of 226 public HFs, 158 (70%) had functional MVA and cannula in the delivery room. A dilation and curettage (D&C) kit was available in 157 (70%) of 226 public HFs. More than two-thirds (70%) of public facilities expected to provide BEmONC had functional MVA supplies available in the delivery room. However, a similar proportion also had D&C supplies available in the delivery room. A higher proportion of PHs/RHs/SHs (53%) and high-volume DHs (53%) had misoprostol in the delivery room than the low-volume DHs/CHCs (14%) and BHCs/SHCs/FHHs (10%). There was a significant difference in availability of misoprostol across the HFs (p<0.001). Fewer than half of the public HFs (102 of 226; 45%) had EmONC guidelines and protocols available in the delivery rooms.

Skilled birth attendant knowledge on postabortion care (Table 3)

In public facilities, of 734 SBAs, 173 (24%) had received training in BEmONC at public HFs in the last 3 years. Of 721 SBAs, 258 (36%) asked to name essential actions to address complications of abortion mentioned MVA, 520 (72%) indicated IV fluid, and more than half of SBAs mentioned checking vital signs (390, or 54%) and assessing for vaginal bleeding (409, or 57%). Counseling was listed by fewer than one-quarter (24%) of SBAs interviewed. When asked what information should be given to PAC clients, 533 SBAs (74%) described the need for counseling on family planning, while fewer than one-third mentioned information on social support, consequences of unsafe abortion, and infection prevention. There was a significant difference by facility type ($p<0.001$). More than two-thirds of SBAs (74%) interviewed believed that a woman should not choose a family planning method until she consults with her husband, and fewer than half of SBAs (43%) interviewed believed that a woman who has not had a boy child should not be encouraged to use family planning.

Snapshot of private HF capacity

In 18 of 20 private HFs (90%), facility management reported providing 24-hour health services. Eight of 20 facilities (40%) reported using misoprostol for treatment of incomplete abortions, and two facilities (10%) reported using MVA for treatment of incomplete abortions in the last 3 months. Thirteen of 20 facilities (65%) reported SBAs ever performed sharp curettage in the last 3 months. Private facilities recorded an average of four postabortion complications in a month, while six of 20 (30%) facilities had registers to record postabortion women when discharged from facility with a contraceptive method. Twelve of 20 HFs (60%) had misoprostol in the delivery rooms. Of the 20 HFs assessed, 15 (75%) and 17 (85%) had functional MVA and a D&C kit, respectively. More than 50% of facilities had male condoms, oral contraceptive pills, intrauterine devices, and injectables, and implants were available in 15% of private facilities. Seven of 20 HFs (35%) had EmONC guidelines and protocols available in the delivery rooms. Sixteen of 69 SBAs (23%) had received training in EmONC in the last 3 years. Only 16 of 69 SBAs (23%) asked to name essential actions to address complications of abortion mentioned MVA. When asked what information should be given to PAC clients, 48 of 69 SBAs (70%) described the need for counseling on family planning, while fewer than one-third listed information on social support, consequences of unsafe abortion, and infection prevention. More than two-thirds of SBAs interviewed (80%) reported believing that a woman should not choose a family planning method until she consults with her husband, and nearly half of SBAs interviewed (48%) reported believing that a woman who has not had a boy child should not use family planning methods.

Discussion

This study reveals gaps in SBAs' knowledge and capacity to deliver high-quality PAC services at both public and private HFs. On average, SBAs at SHs, regional and provincial hospitals demonstrated greater knowledge of tasks required for high quality PAC than staff at other facility types. All SBAs should know the essential actions in management of complications of incomplete abortions, that includes recognizing the complication, checking vital signs and stabilizing the woman, providing IV fluids, assessing vaginal bleeding, and uterine evacuation using both MVA and misoprostol.[16]

Fewer than half of SBAs across all public and private HFs mentioned using MVA and providing family planning counseling to women; almost more than half of them named starting IV fluids, checking vital signs, and assessing for bleeding. The gaps documented in providers' knowledge are consistent with the results of the 2010 EmONC assessment findings in Afghanistan.[15] The 2010 recommendations were critical but not implemented enough to obtain substantial results, and they need more investment and innovative approaches to be implemented holistically. SBAs' knowledge and capacity should be improved through evidence-based and cost-effective capacity-building approaches, such as short, periodic, additional "skills and drills" sessions or "fire drills," that have the potential to help ensure knowledge and skills are retained over time. After training, health care providers retain knowledge and skills only for up to 12 months.[25]

Although most facilities had supplies, equipment, and drugs needed for PAC, there were gaps in availability of supplies, equipment, and drugs in different HFs. More than two-thirds of HFs, both public and private, had a D&C kit, indicating that this procedure is still widely practiced in Afghanistan. Routine D&C is riskier and more painful for removal of retained products of conception; it is no longer recommended by WHO and should be phased out gradually.[16]

More than half of public and private HFs included in this study had misoprostol. On average, availability of misoprostol was higher at SHs, RHs, and PHs than other HFs. In Afghanistan, the PAC national standards and training package were updated in 2017. They authorized both MVA and misoprostol for managing complications of abortion, but misoprostol is not included on the Essential Medicines List for PAC. Recent evidence emphasizes that misoprostol should be available in a functioning and human rights-based health system as a core essential medicine.[26] Studies show substantial promise to extend the option for treating incomplete abortion and miscarriage with misoprostol at the district and lower levels in remote, rural, and impoverished areas, where access to PAC and surgery is mostly restricted.[11,13] Misoprostol is heat stable, relatively inexpensive, and easy to administer, and has yet to be demonstrated and effectively operationalized at mid- and lower-level facilities.[27] Furthermore, there are many gaps in the literature on service delivery aspects of misoprostol, particularly for PAC, hindering efforts to institutionalize its more widespread safe, acceptable, and effective use, which needs rigorous advocacy and support at various levels.[11] Programs should ensure that both MVA and misoprostol are available at HFs, and women should be informed of appropriate treatment options, staff should be trained, and communities should be informed.[19]

EmONC guidelines were available at fewer than half of public and private HFs. These guidelines indicate managing incomplete abortions and miscarriage using MVA as a signal function but lack the medical treatment of incomplete abortion and family planning component of PAC. It is important for health managers to ensure that the updated national standards and training package for PAC are available at HFs and describe revised practices that are important instruments for ensuring quality.[9,19]

Most of the facilities visited had a mix of short- and long-term contraceptive commodities available at the time of the assessment. Implants, which were only recently added to the MoPH Essential Medicines List, were not available in most of the HFs. Contraception and safe abortion care go hand in hand in the strategy to reduce unwanted pregnancies, unsafe abortions, and maternal deaths. Increasing access to modern contraception and timely provision of family planning services are essential components to reducing unmet need, unintended or unwanted pregnancies, and the abortions or unplanned births that often follow. Spacing between pregnancies is considered important for women's and children's health. After a miscarriage or an induced abortion, women should wait at least 6 months before becoming pregnant again.[16,28]

More than two-thirds of SBAs expressed the need for counseling on family planning for postabortion clients, while fewer than one-third expressed the need for information on social support, consequences of unsafe abortion, and infection prevention. Social norms and health care providers' personal beliefs could be factors in the low levels of family planning counseling and method acceptance. Some factors that challenge the effective implementation of PAC programs include provider bias and/or resistance to provide family planning to postabortion clients due to abortion-related stigma and cultural barriers, and women who are disempowered to make decisions regarding contraceptive use.[28] Studies show that women lacked the authority to make family planning decisions without involvement of men in some settings.[29] In many societies, extreme pressure is placed on woman to bear sons, including in Afghanistan; they may encounter violence, abandonment, or stigma for birthing girls instead of boys. Therefore, engaging men and boys in the process of transforming attitudes around inequality in gender norms is critical.[30]

A study in Haiti denoted the importance of timely education on PAC and postabortion contraception, and involving women, men, and health care providers.[31] There is also evidence that abortion clients are interested in receiving a modern method of contraception after their abortion if offered.[17] Provision of counseling to women should be voluntary, confidential, and nondirective.[9] Providers' knowledge and counseling skills could be improved through evidence-based, short, repeated learning sessions.[25,32] Respectful care is a key component of quality of care within a rights-based framework and should be considered while providing family planning counseling and services.[33] It is paramount to consider values clarification exercises while developing the capacity of health care providers to ensure that women are treated with respect and to prevent negligence.[28] Evidence suggests that high-quality counseling and availability of follow-up care can reduce rates of method discontinuation.[33]

This study also shows major gaps in documentation of postabortion cases at public and private HFs. Fewer than half of HFs had registers to track women with postabortion complications and those who were discharged with a contraception method. Documentation for PAC services could be further improved to capture information on postabortion clients receiving contraceptives by method before leaving the facility and at return visits,[19] and the signs and symptoms of postabortion complications that would need medical attention.

Health management information systems should include and report the quality indicators for PAC services as an essential measure of program and provider performance and accountability.[19] Constraints to accurately measure abortion levels have become more prevalent over the years where medical abortions, private-sector abortions, and the stigmatization of abortion have become more common, as these factors would increase the level of underreporting.[10] Measures to reduce the incidence of unintended pregnancy and unsafe abortion, including improving access to family planning services and the effectiveness of contraceptive use, and ensuring access to safe abortion services and PAC, are crucial steps toward achieving the Sustainable Development Goals.[34]

Although this study was not designed to provide a representative picture of private-sector HFs or directly compare public versus private HFs, a snapshot suggests that the private sector's capacity to provide PAC services might be similar to the public sector's.

This study had certain limitations. It was designed to assess the quality of broader maternal and newborn health services, so some critical aspects of PAC, such as providers' actual performance on the job, particularly how well they counsel and interact with patients, were not captured. The information on community mobilization and awareness, an important component of PAC, was not in the scope of this assessment. Although the assessment was national in scope, security concerns and seasonal conditions prevented data collection teams from visiting two high-volume HFs that met inclusion criteria and 39% of randomly selected low-volume facilities. Alternative facilities of the same type were randomly selected following approved replacement sampling procedures, but findings can only be generalized to accessible HFs, not all HFs, in Afghanistan. Data collection on health services was based on verbal information of facility managers, not documentation of services or actual triangulation of available data sources at various levels. The private-sector snapshot did not represent the overall picture of PAC in private HFs in Afghanistan and cannot be compared with nationally representative data from public HFs. There is a need for accurate, informative, and generalizable data on the capacity of private HFs that deliver high-quality PAC.

Despite these limitations, this study provides important information on the current capacity of the public and private health system in Afghanistan to deliver PAC, and offers insights to improve services to save women's lives.

Conclusions

High-quality PAC can lead to reductions in the levels of abortion-related morbidity and mortality. Access to high-quality curative services, particularly at the lower level of services, where BEmONC is expected to be in place, still needs additional investment to improve skills, support performance of providers, and ensure availability of supplies and medicine. Misoprostol provides great promise for improving access to safe PAC services, specially where provision of surgical means is not feasible, and it is critical that the government should legitimize the availability of misoprostol in the Essential Medicines List for medical treatment purposes.

This study also noted certain gaps on preventive aspects of PAC, particularly access to counseling and contraception, and it is imperative to provide high-quality postabortion family planning counseling universally. Policymakers and other stakeholders should address the underlying gaps in implementation of a comprehensive PAC program and improve the documentation and reporting of data to drive accountability for progress. Achieving further progress requires rigorous commitment for reproductive and sexual rights, sound public health programming, and a multisectoral approach with regards to achieving Sustainable Development Goals in Afghanistan.

Declarations

Ethics approval and consent to participate

The 2016 National Maternal and Newborn Health Quality of Care Assessment protocol was approved by the ethical review boards of the Afghanistan MoPH (IRB# 361533) and John Hopkins Bloomberg School of Public Health in Baltimore, Maryland (IRB# 6799). Written permission for data collection was obtained from facility directors, and oral informed consent was obtained from all participating health care providers and women (or women's next of kin if they were too ill to provide informed consent themselves).

Consent for publication

Not applicable

Availability of data and materials

Data are available from the MoPH upon request. Requests should be directed to the MoPH's Evaluation and Health Information Systems Department (ehis.moph@gmail.com).

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

FM served as co-trainer for the 2016 Afghanistan National Maternal and Newborn Health Quality of Care Assessment, contributed to the analysis, and led and contributed to the interpretation of the study findings and to the writing and revision of the manuscript. TH contributed to the writing and revision of the manuscript. RL and GYS contributed to the review and revision of the manuscript. JS served as a

study advisory board member and contributed to the review and revision of the manuscript. HT served as principal investigator, led the data analysis, and contributed to the interpretation of study findings and revision of the manuscript. All authors read and approved the final manuscript.

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Abbreviations

BEmONC: basic emergency obstetric and newborn care; BHC: basic health center; CHC: comprehensive health center; D&C: dilation and curettage; DH: district hospital; EmONC: emergency obstetric and newborn care; FHH: family health house; HF: health facility; MoPH: Ministry of Public Health; MVA: manual vacuum aspiration; PAC: postabortion care; PH: provincial hospital; RH: regional hospital; SBA: skilled birth attendant; SH: specialized hospital; SHC: sub-health center; WHO: World Health Organization.

References

1. **Postabortion Care (PAC) Consortium: Imagining a World Free from Postabortion Care Stigma.** [http://www.september28.org/2017/]
2. Say L, Chou D, Gemmill A, Tuncalp O, Moller AB, Daniels J, Gulmezoglu AM, Temmerman M, Alkema L: **Global causes of maternal death: a WHO systematic analysis.***Lancet Glob Health* 2014, 2(6):e323-33.
3. Department of Reproductive Health and Research, World Health Organization (WHO): *Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008*. Geneva: WHO; 2011.
4. Starbird E, Norton M, Marcus R: **Investing in Family Planning: Key to Achieving the Sustainable Development Goals.** *Glob Health Sci Pract* 2016, 4(2):191–210.

5. Afghanistan Ministry of Public Health (MoPH): *Afghanistan Reproductive, Maternal, Newborn, Child and Adolescent Health Strategy: 2017-2021*. Kabul, Afghanistan: MoPH; 2017.
6. KIT Royal Tropical Institute, Afghanistan National Statistics and Information Authority: *Afghanistan Health Survey 2018*. Amsterdam: KIT Royal Tropical Institute; 2019.
7. World Bank Group, MoPH: Options for strengthening family planning in Basic Package of Health Services in Afghanistan; 2019.
8. **The World's Abortion Laws.** [https://reproductiverights.org/worldabortionlaws?country=AFG]
9. **Safe Abortion: Technical and Policy Guidance for Health Systems Second Edition Technical and Policy Guidance for Health Systems.** [https://www.who.int/reproductivehealth/en/]
10. Owolabi OO, Biddlecom A, Whitehead HS: **Health systems' capacity to provide post-abortion care: a multicountry analysis using signal functions.***Lancet Glob Health* 2019, 7(1):e110-e118.
11. Kulczycki A: **The Imperative to Expand Provision, Access and Use of Misoprostol for Post-Abortion Care in sub-Saharan Africa.***Afr J Reprod Health* 2016, 20(3):22-25.
12. WHO: *Health worker roles in providing safe abortion care and post-abortion contraception*. Geneva: WHO, 2015.
13. Edelman A, Mark A: *Medical Abortion Reference Guide: Induced Abortion and Postabortion Care at or After 13 Weeks Gestation ('Second Trimester').* Chapel Hill, North Carolina, USA: Ipas; 2017.
14. WHO: *WHO Model List of Essential Medicines: 17th List.* Geneva: WHO, 2011.
15. Ansari N, Zainullah P, Kim YM, Tappis H, Kols A, Currie S, Haver J, van Roosmalen J, Broerse JE, Stekelenburg J: **Assessing post-abortion care in health facilities in Afghanistan: A cross-sectional study.***BMC Pregnancy Childbirth* 2015, 15(1):1-9.
16. *Ministry of Public Health Deputy Minister Office for Health Care Services Provision Reproductive, Maternal, Newborn, Child and Adolescent Health Directorate Post Abortion Care National Clinical Service Guideline*.
17. Biswas KK, Pearson E, Shahidullah SM, Sultana S, Chowdhury R, Andersen KL: **Integrating postabortion care, menstrual regulation and family planning services in Bangladesh: A pre-post evaluation.***Reprod Health* 2017, 14(1):1-10.
18. Huntington D, Hassan EO, Attallah N, Toubia N, Naguib M, Nawar L: **Improving the medical care and counseling of postabortion patients in Egypt.***Stud Fam Plann* 1995, 26(6):350-362.
19. Huber D, Curtis C, Irani L, Pappa S, Arrington L: **Postabortion Care: 20 Years of Strong Evidence on Emergency Treatment, Family Planning, and Other Programming Components.***Glob Heal Sci Pract* 2016, 4(3):481-494.
20. High Impact Practices in Family Planning: *Family planning high impact practices list.* Washington, DC: US Agency for International Development (USAID), 2019.

21. Jhpiego: *Afghanistan National Maternal and Newborn Health Quality of Care Assessment 2016: Key Findings Report*. Baltimore, Maryland, USA: Jhpiego, 2017.
22. Bartlett L, Cantor D, Lynam P, Kaur G, Rawlins B, Ricca J, Tripathi V, Rosen HE, Quality of Maternal and Newborn Care Study Group of the Maternal and Child Health Integrated Program: **Facility-based active management of the third stage of labour: Assessment of quality in six countries in sub-Saharan Africa.***Bull World Health Organ* 2015, 93(11):759-767.
23. **The DHS Program: Service Provsion Assessments (SPA).** [https://dhsprogram.com/What-We-Do/Survey-Types/SPA.cfm]
24. **Averting Maternal Death and Disability (AMDD).** [https://www.mailman.columbia.edu/research/averting-maternal-death-and-disability-amdd0
25. Ameh CA, White S, Dickinson F, Mdegela M, Madaj B, van den Broek N: **Retention of knowledge and skills after Emergency Obstetric Care training: A multicountry longitudinal study.***PLoS One* 2018, 13(10):4-15.
26. Perehudoff K, Pizzarossa LB, Stekelenburg J: **Realising the right to sexual and reproductive health: Access to essential medicines for medical abortion as a core obligation.** *BMC Int Health Hum Rights* 2018, 18:8.
27. Tang J, Kapp N, Dragoman M, De Souza JP: **WHO recommendations for misoprostol use for obstetric and gynecologic indications.***Int J Gynaecol Obstet* 2013, 121(2):186-189.
28. High Impact Practices in Family Planning. *Postabortion family planning: a critical component of postabortion care.* Washington, DC: USAID, 2019.
29. Mosha I, Ruben R, Kakoko D: **Family planning decisions, perceptions and gender dynamics among couples in Mwanza, Tanzania: A qualitative study.***BMC Public Health* 2013, 13(1).
30. United Nations Population Fund (UNFPA): *Unfinished Business: The Pursuit of Rights and Choices for All*. New York City: UNFPA, 2019.
31. Berry-Bibee EN, St Jean CJ, Nickerson NM, Haddad LB, Alcime MM, Lathrop EH: **Self-managed abortion in urban Haiti: A mixed-methods study.***BMJ Sex Reprod Health* 2018, 44(3):193-199.
32. Gomez PP, Nelson AR, Asiedu A, Addo E, Agbodza D, Allen C, Appiagyei M, Bannerman C, Darko P, Duodu J, Effah F, Tappis H: **Accelerating newborn survival in Ghana through a low-dose, high-frequency health worker training approach: a cluster randomized trial.***BMC Pregnancy Childbirth* 2018, 18(1):72.
33. Jain A, Aruldas K, Mozumdar A, Tobey E, Acharya R: **Validation of Two Quality of Care Measures: Results from a Longitudinal Study of Reversible Contraceptive Users in India.***Stud Fam Plann* 2019, 50(2):179-193.
34. Sedgh G, Singh S, Shah IH, Ahman E, Henshaw SK, Bankole A: **Induced abortion: incidence and trends worldwide from 1995 to 2008.***Lancet* 2012, 379(9816):625-632.

Tables

Table 1: Characteristics of health facilities

Characteristics of health facilities	Facility type						
	Provincial, regional, and specialty hospitals (n=37)	District hospitals with 5 or more deliveries per day (n=40)	District hospitals and comprehensive health centers with 0–4 deliveries per day (n=37)	Basic health centers, sub-health centers, and family health houses (n=112)	p-value	All public sector (n=226)	Private hospitals (n=20)
Facilities that provide 24-hour coverage for delivery of services	100.0% (37)	100.0% (40)	56.8% (21)	41.1% (46)	**<0.001**	63.7% (144)	90.0% (18)
Facility manager reports that misoprostol is used for treatment of incomplete abortion	75.7% (28)	75.0% (30)	2.7% (1)	3.6% (4)	**<0.001**	27.9% (63)	40.0% (8)
Facility manager reports that manual vacuum aspiration has been used for removal of retained products of conception in the past 3 months	75.7% (28)	77.5% (31)	0.0% (0)	4.5% (5)	**<0.001**	28.3% (64)	10.0% (2)
Facility manager reports dilation and curettage or evacuation and curettage have been used for removal of retained products of conception in the past 3 months	97.3% (36)	80.0% (32)	2.7% (1)	0.0% (0)	**<0.001**	30.5% (69)	65% (13)
Recordkeeping							
Abortion complications (hemorrhage and/or sepsis							
Percentage of facilities with register available for review	72.5%	73.0%	8.0%	18.6%		47.3%	45.0%
Average number of months with data recorded	9	7	3	4		5	4
Average number of cases recorded per month	29	8	0	1	**<0.001**	10	4
Postabortion women discharged with a contraceptive method							
Percentage of facilities with register available for review	64.9%	57.5%	21.6%	33.0%		40.7%	30.0%
Average number of months with data recorded	7	6	3	4		5	4
Average number of cases recorded per month	1	1	0	0	0.136	1	0

Table 2: Availability of supplies, equipment, drugs, and guidelines for provision of postabortion care services

Available items [percentage (number)]	Facility Type						
	Provincial, regional, and specialty hospitals (n=37)	District hospitals with 5 or more deliveries per day (n=40)	District hospitals and comprehensive health centers with 0–4 deliveries per day (n=37)	Basic health centers, sub-health centers, and family health houses (n=112)*	p-value	All public sector (n=226)	Private facilities (n=20)
Functional manual vacuum aspirator and cannula	75.7% (28)	82.5% (33)	67.6% (25)	64.3% (72)	0.267	69.9% (158)	75.0% (15)
Dilation and curettage kit	89.2% (33)	85.0% (34)	59.5% (22)	60.7% (68)	**0.004**	69.5% (157)	85.0% (17)
Misoprostol	56.8% (21)	52.5% (21)	13.5% (5)	8.9% (10)	**<0.001**	25.2% (57)	60.0% (12)
Guidelines or national treatment protocol for emergency obstetric and newborn care	43.2% (16)	47.5% (19)	54.1% (20)	42.0% (47)	0.214	45.1% (102)	35.0% (7)
Guidelines for the pre-referral management of major obstetric and newborn complications	32.4% (12)	32.5% (13)	54.1% (20)	40.2% (45)	0.350	39.8% (90)	50.0% (10)
Family planning commodities:							
Male condoms	81.1% (30)	90.0% (36)	86.5% (32)	85.7% (96)	0.737	85.8% (194)	65.0% (13)
Female condoms	8.1% (3)	0.0% (0)	5.4% (2)	7.1% (8)	0.087	5.8% (13)	5.0% (1)
Oral contraceptive pills	91.9% (34)	95.0% (38)	91.9% (34)	87.5% (98)	0.916	90.3% (204)	65.0% (13)
Intrauterine devices	86.5% (32)	92.5% (37)	89.2% (33)	86.6% (97)	0.859	88.1% (199)	75.0% (15)
Implants	16.2% (6)	7.5% (3)	8.1% (3)	2.7% (3)	**0.002**	6.6% (15)	15.0% (3)
Injectable hormones (e.g., Depo-Provera)	86.5% (32)	92.5% (37)	78.4% (29)	74.1% (83)	0.286	80.1% (181)	55.0% (11)
Emergency contraception pill packets	54.1% (20)	37.5% (15)	37.8% (14)	35.7% (40)	0.586	39.4% (89)	25.0% (5)

Table 3: Skilled birth attendant knowledge on postabortion care

[Percentage (number)]	Facility Type						
	Provincial, regional, and specialty hospitals (n=315)	District hospitals with 5 or more deliveries per day (n=233)	District hospitals and comprehensive health centers with 0–4 deliveries per day (n=69)	Basic health centers, sub-health centers, and family health houses (n=104)	p-value	All public sector (n=721)	Private facilities (n=69)
Reported having received any training on basic emergency obstetric and newborn care in the past 3 years	27.0% (90)	18.0% (42)	21.7% (15)	25.0% (26)	**0.129**	24.0% (173)	23.2% (16)
Knowledge of actions to take when presented with a woman with complications from incomplete abortion							
Assess vaginal bleeding	59.0% (186)	54.1% (126)	56.5% (39)	55.8% (58)	**<0.001**	56.7% (409)	66.7% (46)
Assess vital signs	54.9% (173)	52.4% (122)	50.7% (35)	57.7% (60)	**<0.001**	54.1% (390)	62.3% (43)
Begin IV fluids	74.3% (234)	70.8% (165)	73.9% (51)	67.3% (70)	**<0.001**	72.1% (520)	78.3% (54)
Begin antibiotics	38.4% (121)	40.8% (95)	36.2% (25)	31.7% (33)	**<0.001**	38.0% (274)	36.2% (25)
Do (manual/electric) vacuum aspiration	31.7% (100)	39.1% (91)	42.0% (29)	36.5% (38)	**<0.001**	35.8% (258)	23.2% (16)
Provide counseling	22.5% (71)	30.5% (71)	15.9% (11)	22.1% (23)	**<0.001**	24.4% (176)	15.9% (11)
Refer	11.4% (36)	18.0% (42)	26.1% (18)	32.7% (34)	**<0.001**	18.0% (130)	8.7% (6)
Knowledge of counseling to provide a woman being treated for an incomplete abortion:							
Information on how to prevent reproductive tract infection/HIV	30.5% (96)	33.0% (77)	34.8% (24)	36.5% (38)	**<0.001**	32.6% (235)	31.9% (22)
Information about when a woman can conceive again	43.8% (138)	48.1% (112)	27.5% (19)	45.2% (47)	**<0.001**	43.8% (316)	44.9% (31)
Counseling on family planning and services	73.3% (231)	70.0% (163)	84.1% (58)	77.9% (81)	**<0.001**	73.9% (533)	69.6% (48)
Refer for family planning methods	54.0% (170)	56.2% (131)	49.3% (34)	59.6% (62)	**<0.001**	55.1% (397)	52.2% (36)
Information on social support	27.0% (85)	29.2% (68)	27.5% (19)	22.1% (23)	**<0.001**	27.0% (195)	15.9% (11)
Information about the consequences of an unsafe abortion	34.9% (110)	37.3% (87)	20.3% (14)	21.2% (22)	**<0.001**	32.3% (233)	33.3% (23)
Does a woman have the right to choose a family planning method? (Level of agreement with the statement: A woman should not choose a family planning method until she consults with her husband.)							
Strongly agree	35.6% (112)	42.9% (100)	27.5% (19)	17.3% (18)	**<0.001**	34.5%	26.1%

						(249)	(18)
Agree	34.9% (110)	30.5% (71)	60.9% (42)	57.7% (60)		39.3% (283)	53.6% (37)
Neither agree nor disagree (neutral)	7.0% (22)	4.7% (11)	4.3% (3)	3.8% (4)		5.5% (40)	5.8% (4)
Disagree	7.0% (22)	6.4% (15)	7.2% (5)	16.3% (17)		8.2% (59)	5.8% (4)
Strongly disagree	0.0% (0)	0.4% (1)	0.0% (0)	1.9% (2)		0.4% (3)	8.7% (6)
Level of agreement with the statement: A woman who has not had a boy child should not be encouraged to use family planning.							
Strongly agree	23.8% (75)	25.8% (60)	14.5% (10)	11.5% (12)	**<0.001**	21.8% (157)	10.1% (7)
Agree	19.0% (60)	21.5% (50)	20.3% (14)	30.8% (32)		21.6% (156)	37.7% (26)
Neither agree nor disagree (neutral)	11.1% (35)	14.6% (34)	4.3% (3)	6.7% (7)		11.0% (79)	11.6% (8)
Disagree	25.4% (80)	20.2% (47)	59.4% (41)	44.2% (46)		29.7% (214)	29.0% (20)
Strongly disagree	4.1% (13)	2.1% (5)	1.4% (1)	3.8% (4)		3.2% (23)	4.3% (3)