Expanding roles of providers in safe abortion care: A programmatic approach to meeting women's needs

Introduction

Background

Unsafe abortion remains one of the major causes of maternal death in developing countries. Approximately 21.6 million unsafe abortions are performed worldwide every year, leading to an estimated 47,000 deaths due to unsafe abortion; more than 99 percent of these deaths occur in developing countries [1, 2]. Furthermore, a substantial proportion of women who survive unsafe abortion experience complications in the form of infertility, chronic pelvic pain or reproductive tract infections.

A key factor contributing to the burden of unsafe abortion is the global shortage of skilled health-care providers. The World Health Organization (WHO) estimates that by 2035 the skilled health-care provider shortage will increase to 12.9 million globally, with an inequitable share of shortages in resource-poor countries and rural areas [3]. For abortion care—a service burdened with legal and policy limitations, stigma and other social barriers—these shortages can be particularly pronounced. Despite this fact, midwives, nurses and other midlevel health workers outnumber physicians and are underutilized in most countries [4].

One way to increase access to safe abortion in high-need settings is to expand the role of health professionals to provide safe abortion care, including postabortion care (PAC). WHO guidelines on safe abortion provision indicate that trained nurses, midwives, and, in certain circumstances, auxiliary nurses can safely and effectively provide first-trimester abortion services with vacuum aspiration. In addition, the use of medical abortion allows for the provision of abortion by an even broader range of trained providers, including auxiliary nurses, and, in certain circumstances, lay health workers [5]. In all countries, even where laws are restrictive, midlevel health workers can provide comprehensive treatment of postabortion complications. Recognizing the growing evidence of the capacity of midlevel cadres[1] to prevent and clinically manage unsafe abortion, many countries have over the past two decades reformed their abortion laws and regulatory guidelines to expand health worker roles in the provision of abortion services.

Ipas, a global nonprofit organization, works with governments to train a wide variety of provider cadres to offer safe, woman-centered abortion care. Expanding the provider base provides more women and girls with access to the full range of high-quality abortion services and postabortion contraception, which can contribute to reducing maternal mortality and morbidity from unsafe procedures. This expansion has the greatest impact on historically underserved populations such as poor, rural or less-educated women by increasing the provision of services at primary level facilities that are more accessible to women. This brief examines the key results from expanding abortion service provision to midlevel providers in 10 Ipas country programs throughout Asia and Africa, including a global analysis of programmatic data from all 10 countries and two case studies (Ethiopia and Bangladesh).

Methodology

Global

We analyzed monitoring data from July 2011 to June 2015 from 10 Ipas country programs, including Pakistan, Bangladesh, Nepal, Nigeria, Sierra Leone, Ghana, Zambia, Kenya, Ethiopia and Uganda using:

- Facility logbook data on all abortion services provided at Ipas intervention facilities (N=401,729 uterine evacuations)
- Training data for 6,886 health workers trained on abortion service provision[2]

We calculated the likelihood of service provision post-training, average monthly provider caseloads, and service provision and quality indicators by provider cadre. Finally, we used MSI's Impact 2 calculator [6] to estimate each provider cadre's contribution to couple years of protection (CYP)[3].

Bangladesh case study

Location data for 335 Ipas intervention facilities in Bangladesh were used to generate a map geocoded by district and categorized by the presence of an Ipas-

1 In the "WHO Safe abortion technical and policy guidance for health systems" , WHO defines "midlevel providers" as "a range of non-physician clinicians (e.g. midwives, nurse practitioners, clinical officers, physician assistants, family welfare visitors, and others) who are trained to provide basic clinical procedures related to reproductive health, [including… and]… who can be trained to provide safe abortion care." (p. 65) http://apps.who.int/rhl/guidelines/9789241548434/en/

2 Monitoring data from Ethiopia is limited to training data, and therefore all service indicators exclude Ethiopia.

3 Marie Stopes International defines couple years of protection (CYP) as "a measure that estimates the protection from pregnancy provided by contraceptive methods during a one-year period." https://mariestopes.org/sites/default/files/MSI-CYP-Infographic.pdf

trained provider and poverty rates. We also conducted logistic regression analysis of this binary variable and district poverty rate in order to understand the reach of Ipas services to poor, underserved populations [7].

Ethiopia case study

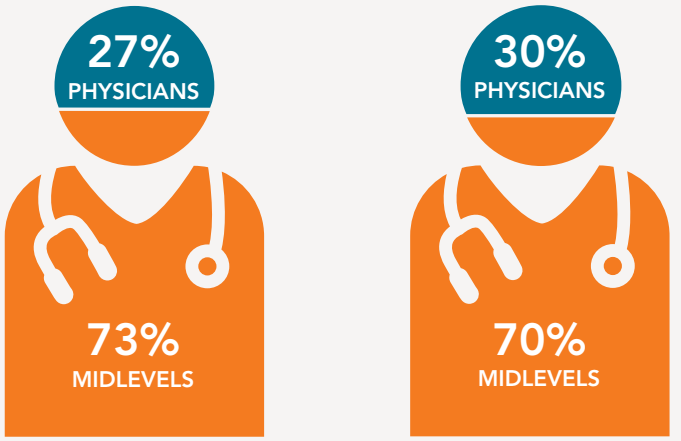
We conducted a secondary analysis of two national Ethiopian abortion magnitude studies from 2008 and 2014. Data include prospective abortion-related morbidity and legal abortion data on symptoms and treatment of 5,604 women seeking care in 439 public and private facilities, combined with monitoring data from 106,180 women from 74 NGO facilities in 2014. Information from 2008 was from 8,908 women from 344 facilities. The full study methodologies are described by Gebrehiwot and colleagues (forthcoming) [8]. We present a descriptive comparison of service delivery between midlevel providers and physicians in the public and private sectors.

Results

Global

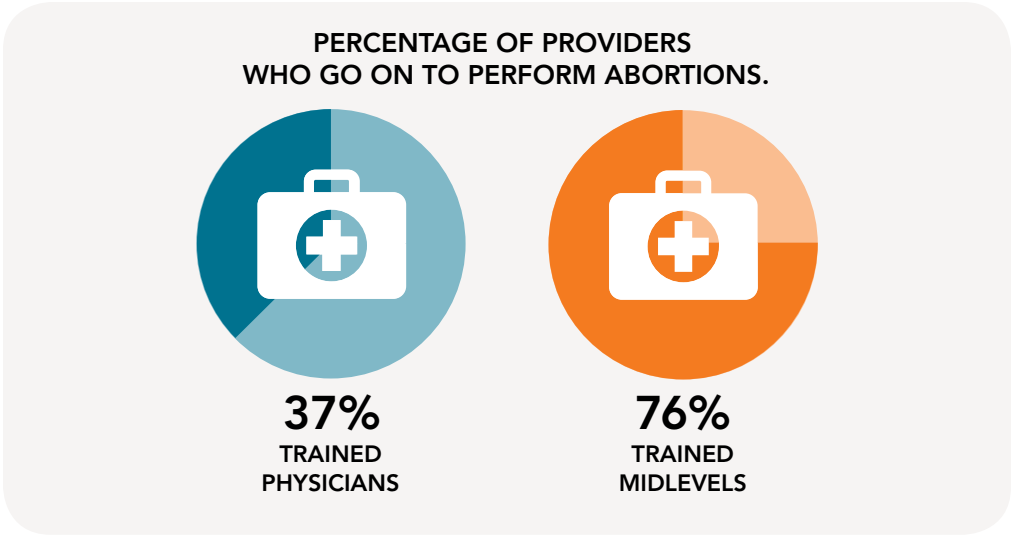
In countries that permit midlevel provision, Ipas has strategically trained predominantly midlevel providers (Figure 1). Out of a total 6,886 providers trained in CAC during the four-year period, 73 percent (n=5,020) were midlevel providers. Not surprisingly, these midlevel providers performed 70 percent (n=281,688) of abortions during the same time period (Figure 1). Mean monthly abortion caseload is slightly lower for midlevel providers (4.8) than for physicians (6.5), as they are more likely to be posted at primary level facilities which serve fewer people.

Figure 1. CAC training and abortion service provision at Ipas-supported facilities in 10 countries*



** From July 2011 to June 2015. Abortion procedures exclude Ethiopia.*

Newly-trained midlevel providers were more than twice as likely as newly-trained physicians to provide at least one abortion service after participating in an Ipas training (76 percent vs. 37 percent). This provides strong evidence that training midlevel providers represents a wise investment of resources, as they are more likely to become active abortion providers following training.



The analysis also demonstrated that midlevel providers perform abortion services at an equally high level of quality[4] as physicians. This holds true across several key elements of quality of care (Table 1) including use of appropriate technology, providing pain management and providing postabortion family planning. Despite their lower mean monthly caseload, midlevel providers created nearly as many couple-years of protection per performing provider as physicians: an average of 71.7 vs. 80.3 CYPs per performing provider respectively. This was due to differences in the method mix provided between cadres.

Table 1. Abortion service indicators by provider cadre at Ipas facilities in nine countries, July 2011–June 2015*

Provider Cadre	First-trimester appropriate technology		Provided pain management		Provided PAFP method		Couple-years of protection (CYPs)		Mean monthly abortion caseload
	N	%	n	%	n	%	Total	Per active provider**	Mean (SD)
Midlevel (N=281,688)	262,535	99	276,278	98	214,112	76	172,981	71.7	4.8 (12.0)
Physician (N=120,081)	107,773	99	118,610	99	91,161	76	63,551	80.3	6.5 (16.3)

*Excludes Ethiopia
**Active provider defined as providing any abortion services during the time period.

Finally, the data show that training midlevel providers increases the reach of abortion services. Midlevel providers are far more likely to provide services at primary level sites, with 70 percent of abortion services provided by midlevel providers being at primary level sites, compared to 46 percent of services provided by physicians being at primary sites. Midlevel providers also provide a higher proportion of services to young women; 12 percent of clients served by midlevel providers were under 19 years of age, as compared to 9 percent for physicians.

4 Ipas quality indicators are first-trimester appropriate technology, provided pain management, provided PAFP method, couple years of protection, mean monthly abortion caseload.

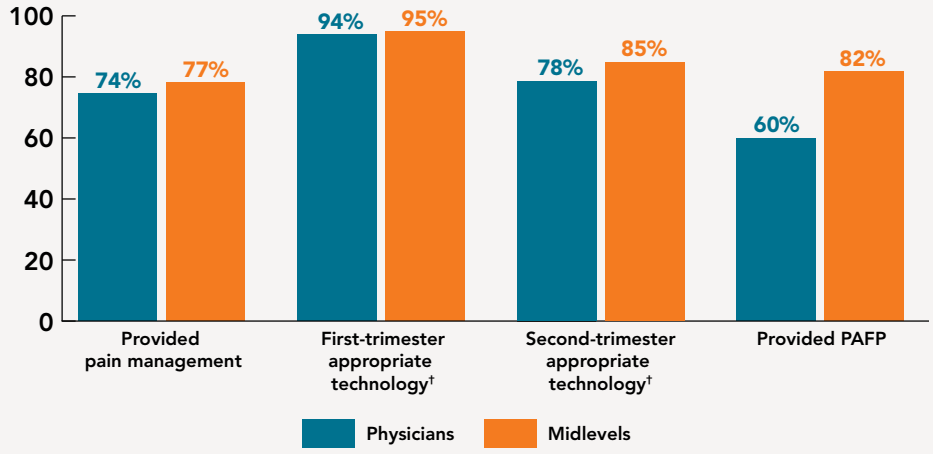
Ethiopia – A model for broadening service access following legal reform

To reduce deaths and disabilities from unsafe abortion, Ethiopia liberalized its abortion law in 2005. The revised law permits abortion for a broad range of indications[5] and allows providers to use their judgment when determining if a woman meets the requirements. The Federal Ministry of Health (FMOH) issued technical and procedural guidelines for safe abortion care in 2006 recognizing the importance of MA and authorizing nurses and midwives to provide abortion services in the first trimester. In 2014, the guidelines were updated to reflect new evidence on topics including medical abortion, second-trimester abortion and postabortion contraception.

The FMOH immediately began to train health professionals at all levels of the health system, with a particular focus on authorizing and training midlevel providers, including midwives, nurses, health officers and integrated emergency surgical officers. To roll out abortion services following legal reform, the FMOH partnered with international donors and NGOs, including Ipas, which began training midlevel providers almost exclusively. Between July 2011 and June 2015, Ipas Ethiopia trained 2,391 providers on abortion service provision, 99 percent of whom were midlevel providers. Midlevel providers are now providing the majority of abortion services in the country, increasing from 49 percent of all private and public facility-based abortions in 2008 to 82 percent in 2014.

While the global analysis suggests that midlevel providers perform abortion services at an equally high level of quality as physicians, midlevel providers in Ethiopia in fact evince a higher level of quality than physicians. This is evident in the same quality of care indicators used in the global analysis (Figure 2). Midlevel providers used appropriate technology, provided pain management and provided a postabortion family planning method more often than did physicians.

Figure 2. Abortion service provision by provider cadre in Ethiopia, 2014*



*Data limited to public and private sectors. Percentages weighted to be nationally representative.

†WHO recommendations for appropriate technology are vacuum aspiration and medical abortion in the first trimester and dilatation and evacuation and medical abortion in the second trimester.

In 2014, midlevel providers in Ethiopia consistently provided a larger proportion of services to vulnerable populations when compared to physicians, including young women under the age of 25 (55 percent vs 39 percent), unmarried women (47 percent vs 34 percent) and less educated women (31 percent vs. 24 percent).

5 Abortion is permissible in case of rape, incest, and threat to the woman's life and/or health, fetal abnormality, for minors, or for women with physical or mental disabilities.

Expanding roles, expanding reach

Women receiving abortion services from midlevel providers at public and private facilities in Ethiopia in 2014 are:

- **Less educated.** *31 percent had no education, compared to 21 percent of women served by physicians.*
- **Younger.** *57 percent were 24 years or younger, compared to 39 percent of women served by physicians.*
- **More often unmarried.** *49 percent were not married, compared to 33 percent of women served by physicians.*

Law reform, coupled with the proactive dissemination of the technical and procedural guidelines and the rapid initiation of training midlevel providers, greatly expanded girls' and women's access to abortion services in Ethiopia. Countries considering, undergoing or having recently approved legal reform can achieve similar success by replicating this level of commitment to midlevel providers in the scale-up of safe abortion services.

Bangladesh

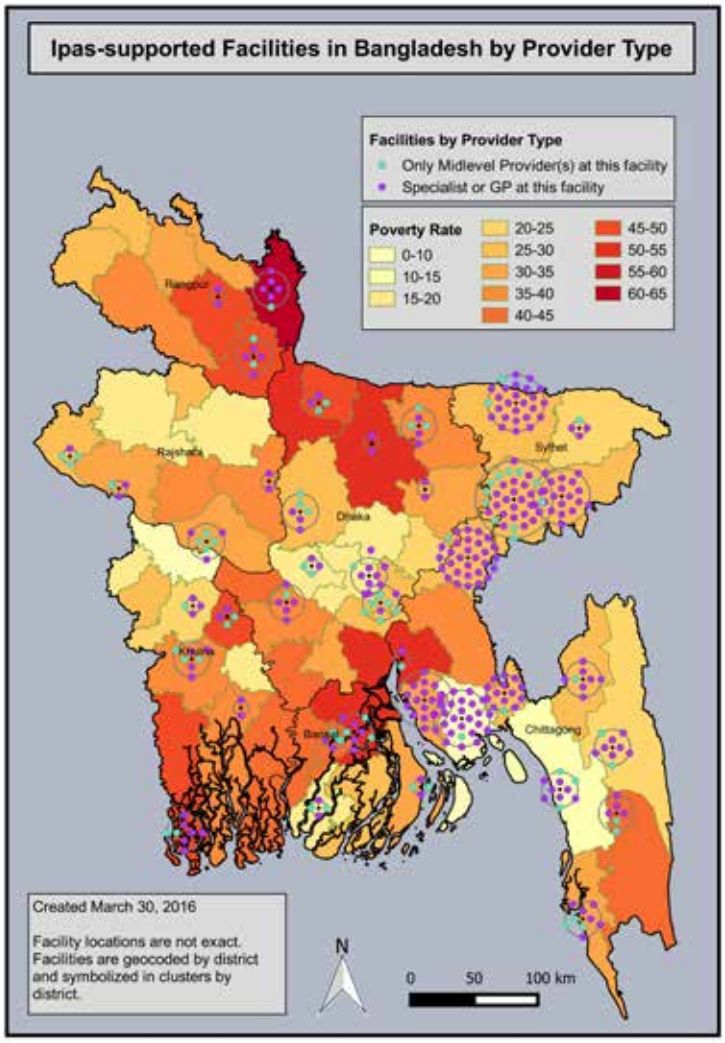
In Bangladesh, although abortion is legally permitted only to save a woman's life, menstrual regulation[6] (MR) is legally permitted and widely available. When Ipas began working in Bangladesh in 2012, the provision of MR, postabortion care services, and contraception provision was siloed among two departments, the Directorate General of Health Services (DGHS) and the Directorate General of Family Planning (DGFP). MR services and contraception were provided by DGFP female welfare visitors (a community-based cadre) and physicians using MVA. PAC services were provided only by physicians (under DGHS) using dilation and curettage and rarely included integrated postabortion contraception provision.

As a result of Ipas advocacy and partnership with the Obstetrical and Gynecological Society of Bangladesh (OGSB), the Bangladesh Nursing Council and the Directorate of Nursing Services, between 2012 and 2015 the MOHFW began integrating services across DGHS and DGFP and began expanding service provision across provider cadres. In 2013, DGHS nurses and physicians were trained and authorized to provide MR with MVA, PAC with MVA, and family planning. DGFP female welfare visitors were also trained and permitted to begin providing PAC. In November 2013, MR with medication (MRM) was approved for all providers through the National Technical Committee of the DGFP. As these reforms were put into place, training of midlevel providers increased. Between July 2011 and June 2015, Ipas trained 557 providers on CAC, 59 percent of whom were midlevel providers.

As a result of reforms, the majority of abortion services performed at Ipas-supported government facilities during this time period were performed by midlevel providers (66 percent). Service initiation and quality of care indicators from Ipas-supported government facilities in Bangladesh mirror the global analysis results. Data show that midlevel providers in Bangladesh are more likely to initiate services after training than physicians (97 percent vs. 65 percent). Midlevel providers also offered similar quality of care as physicians on selected indicators, providing pain management 100 percent of the time, using appropriate technology for 99 percent of first-trimester abortions, and providing nearly as much PAFP as physicians (88 percent vs. 90 percent, respectively).

6 The Bangladesh Institute of Law and International Affairs defines MR as an "interim method of establishing non-pregnancy in a woman who is at risk of being pregnant, whether or not she actually is pregnant."

In addition to these service indicators, Bangladesh focused on the contribution of these cadres to delivering services to underserved populations. Of 335 Ipas-supported facilities in 2015 in Bangladesh, 76 have at least one Ipas-trained midlevel provider on site, and no Ipas-trained physicians on site. The map in Figure 3 shows the approximate location (geocoded by district) of Ipas-supported sites in Bangladesh, classified by sites with an Ipas-trained doctor at the facility, sites where only midlevel providers are providing abortion care and poverty rates by district. The map shows that in areas with lower site density, a higher proportion of facilities have only midlevel providers. These areas with fewer facilities, where more of the facilities have only midlevel providers, also tend to be districts with higher poverty rates. The logistic regression model further demonstrates this statistical relationship. For example, a facility in a district with at least 60 percent poverty is roughly twice as likely to have only midlevel providers as a facility in a district with at least 20 percent poverty.



This case study shows the important role that midlevel providers played in expanding the reach of safe abortion throughout Bangladesh.

Conclusion

Experiences from 10 Ipas countries demonstrate the effectiveness of training midlevel providers to expand safe abortion access, while maintaining the quality of abortion care. This capacity-building strategy focused on various provider cadres underscores the following important lessons:

MIDLEVEL PROVIDERS PROVIDE HIGH-QUALITY SERVICES: Midlevel providers are providing high-quality, safe abortion and lifesaving postabortion care, including adequate pain management, use of appropriate technology and provision of postabortion contraception.

MIDLEVEL PROVIDERS ARE A GOOD RETURN ON INVESTMENT: Midlevel providers represent a wise investment of resources as they are more likely than physicians to become active abortion providers following training. In addition, they are less likely to transfer away from the facilities where they are posted in comparison to highly mobile physicians, ensuring more sustainable provider coverage in health facilities.

MIDLEVEL PROVIDERS ARE EXPANDING REACH AND ACCESS: Midlevel providers expand access to safe abortion and postabortion care by reaching more traditionally underserved women, including younger, unmarried, single and less-educated women. Midlevel providers are more often posted at primary level sites, thereby increasing the reach of life-saving abortion care to more women, especially in remote, rural areas.

Training midlevel providers to offer safe abortion care and critical post-abortion services can bring the promise of accessible, high-quality reproductive health care to even the most vulnerable, at-risk women across the world.

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