

# Postabortion and safe abortion care coverage, quality, and caseloads during the Global Gag Rule policy period in Ethiopia and Uganda

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## Research Article

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## Abstract

**Background:** Abortion-related complications contribute to preventable maternal mortality, accounting for 9.8% of maternal deaths globally, and 15.6% in sub-Saharan Africa. High-quality postabortion care (PAC) can mitigate the negative health outcomes associated with unsafe abortion. While the expanded Global Gag Rule policy did not prohibit the provision of PAC, other research has suggested that over-implementation of the policy has resulted in impacts on these services. The purpose of this study was to assess health facilities' capacity to provide PAC services in Uganda and PAC and safe abortion care (SAC) in Ethiopia during the time in which the policy was in effect.

**Methods:** We collected abortion care data between 2018 and 2020 from public health facilities in Ethiopia (N=282) and Uganda (N=223). We adapted a signal functions approach to create composite indicators of health facilities' capacity to provide basic and comprehensive PAC and SAC and present descriptive statistics documenting the state of service provision both before and after the GGR went into effect. We also investigate trends in caseloads over the time-period.

**Results:** In both countries, service coverage was high and improved over time, but facilities' capacity to provide basic PAC services was low in Uganda (17.8% in 2019) and Ethiopia (15.0% in 2020). The number of PAC cases increased by 15.5% over time in Uganda and decreased by 7% in Ethiopia. Basic SAC capacity increased substantially in Ethiopia from 66.7% to 82.8% overall, due in large part to an increase in the provision of medication abortion, and the number of safe abortions increased in Ethiopia by 9.7%.

**Conclusions:** The findings from this analysis suggest that public health systems in both Ethiopia and Uganda were able to maintain essential PAC/SAC services during the GGR period. In Ethiopia, there were improvements in the availability of safe abortion services and an overall improvement in the safety of abortion during this time-period. Despite loss of partnerships and potential disruptions in referral chains, lower-level facilities were able to expand their capacity to provide PAC services. However, PAC caseloads increased in Uganda which could indicate that, as hypothesized, abortion became more stigmatized, less accessible and less safe.

## Background

Safe abortion services are an essential component of sexual and reproductive healthcare.<sup>1</sup> Yet, it is estimated that 45% of abortions occurring annually around the world, and 75% of abortions in Africa, are unsafe.<sup>2</sup> Abortion-related complications contribute to preventable maternal mortality and morbidity, accounting for 9.8% of maternal deaths globally, and 15.6% of maternal deaths in sub-Saharan Africa.<sup>3</sup> Timely and high-quality postabortion care (PAC) can greatly mitigate the negative health outcomes associated with unsafe abortion. PAC refers to a set of services provided to women who present with complications from unsafe or incomplete abortions, and includes the medical treatment of complications as well as the provision of postabortion contraceptive services and counseling. All countries have committed to providing PAC to reduce the burden of abortion-related morbidity and mortality,<sup>4</sup> however, sufficient health system capacity to provide PAC is not universal.<sup>5</sup>

Abortion care was targeted as part of the Trump Administration's Protecting Life in Global Health Assistance policy, also known as the Global Gag Rule (GGR).<sup>6</sup> This iteration of the GGR prohibited non-U.S. non-government organizations (NGOs) that receive U.S. government global health assistance (as well as subgrantees of the organizations) from using their own non-U.S. funds to provide, refer to, or advocate for safe abortion care (SAC) services. Despite this seemingly narrow focus, the policy may affect other areas of sexual and reproductive health service provision given the comprehensive suite of services provided by affected NGOs and the critical role these NGOs play in supporting public sector services. There is some evidence to suggest that this is the case; previous quantitative research assessing the impacts of the GGR has documented impacts on the delivery of family planning services in both the public and private sector,<sup>7-9</sup> subsequent impacts on women's sexual and reproductive health outcomes that are likely a result of changes in family planning service delivery,<sup>8,10-12</sup> and changes in the delivery of HIV services.<sup>13</sup> Very little is known about the policy's impact on the facility-based provision of PAC or SAC itself, especially for health systems that are already at a disadvantage in being able to provide the standard care required for PAC. While the policy does not prohibit the provision of PAC, others have argued that overinterpretation of the policy – often referred to as a “chilling effect” wherein service providers avoid even permitted services due to fears of withdrawal or loss of funding – has resulted in impacts on these services.<sup>14</sup> Further, implementation has likely affected access to abortion services even in settings where abortion is widely available by disrupting health system partnerships (where affected NGOs provide training and supplies to public health facilities), referral mechanisms, access to information and safe services.

Shedding light on the policy's real-world effects on the availability, quality, and utilization of PAC and SAC services is important for informing the design of policies and programs aimed at reducing maternal morbidity and mortality. In this paper we compare health systems' capacities to provide safe abortion and/or postabortion care, as well as trends in these indicators while the GGR was in effect for two countries: Ethiopia and Uganda. These countries represent differing legal contexts for safe abortion care and the impacts of the GGR on abortion care in these countries may vary. Both countries are uniquely susceptible to changes in U.S. global health funding policies as The U.S. is the largest donor of global health funding to both Ethiopia and Uganda, and the second-largest donor for Ethiopia's family planning budget.<sup>15,16</sup> Since the expansion of the abortion law in Ethiopia in 2015, there have been significant increases in the availability and quality of abortion services. Between 2008 and 2014, use of appropriate technology for conducting first and second trimester abortions, as well as provision of postabortion family planning, has increased, while abortion-related complications have decreased.<sup>17</sup> However, regional disparities persist, and NGOs play a critical role in delivering high quality sexual and reproductive health services, including abortion, both directly and through public-private partnerships. In Uganda, abortion remains highly restricted, prohibited under all circumstances unless the woman's life is at risk.<sup>18</sup> Given the links between abortion restrictions and safety, PAC is especially critical in Uganda.<sup>2</sup> To this point, a recent study of maternal near-miss and abortion complications data from health facilities in Central and Eastern Uganda in 2016–2017 found a high burden of abortion-related morbidity and mortality.<sup>19</sup>

One way to measure health facilities' capacity to provide services is through a signal functions approach. The signal functions methodology was originally developed by the United Nations to assess the provision of emergency obstetric care, delineating several medical functions that comprise basic and comprehensive Emergency Obstetric Care (EmOC).<sup>20</sup> The methodology typically consists of a list of indicators used to assess health facilities' capability to provide the most effective or life-saving interventions for managing the most common complications. In 2006, Healy et al. adapted the signal functions approach for basic and comprehensive SAC,<sup>21</sup> and Campbell et al. further adapted signal functions to measure capacity for SAC and PAC.<sup>22</sup> This framework has since been applied to assess service provision across various geographical contexts.<sup>5,23-26</sup>

In this study, we use abortion care data collected between 2018 and 2020 from health facilities in Ethiopia and Uganda. Using a signal functions approach, this paper aims to assess the availability and capacity of facilities to provide PAC services in Uganda and PAC/SAC services in Ethiopia at two points in time. We investigate if and how these services changed during the period in which the GGR was in effect and document overall gaps in the quality of services. We hypothesize that 1) during this time-period there would have been a reduction in the availability of supplies needed for safe abortion as well as postabortion care services in facilities due to the chilling effect of the GGR; and 2) the need for postabortion care would have increased since the policy made abortions more difficult to access, potentially more stigmatized and, thus, less safe. The results of this study provide a basis for understanding abortion care service delivery in Uganda and Ethiopia, how these services were impacted during the years in which the GGR was in effect, and for identifying gaps in service provision that can be addressed to improve capacity within the health systems to prevent and treat abortion-related complications.

## Methods

### Data sources and sample

This analysis utilizes data from multiple health facility surveys in Uganda and Ethiopia. Data in Uganda come from the 2018 and 2019 round of the Performance Monitoring for Action (PMA) platform.<sup>27</sup> In 2018, the PMA platform included a nationally representative survey of women, which used a two-stage cluster sampling design to select a collection of 110 enumeration areas (EAs).<sup>28</sup> The health facility survey was designed to allow for the estimation of key indicators to monitor progress in family planning and to be representative of health facilities that provide family planning services to women in the female questionnaires. To achieve this, all public facilities that serve the population in the selected EAs, including referral facilities, were sampled, regardless of whether that facility was located within the EA. All private facilities within the EA were mapped/listed and up to three were randomly selected. In 2018, a total of 361 health facilities were interviewed. The 2019 PMA health facility survey in Uganda was designed as a panel; study staff attempted to reinterview all facilities in the 2018 sample, and 333 (92.2%) were successfully reinterviewed.

The Ethiopia 2018 health facility data also come from the PMA platform. The sampling procedure in Ethiopia was similar to in Uganda, in that a nationally representative sample of EAs was drawn (n = 221), and the sample of health facilities was selected to be representative of those that serve the population in the sampled EAs.<sup>29</sup> The 2020 health facility survey was conducted as part of a larger panel study investigating the impact of the Global Gag Rule.<sup>9</sup> In this data collection effort, all 2018 PMA facilities that were located in six study regions (Addis Ababa, Afar, Amhara, Oromia, SNNPR, Tigray) were eligible to be resurveyed (n = 425), and 410 (96.5%) were reinterviewed.

Private facilities were excluded from the analysis because the sample was small and not representative of the universe of private facilities serving the EAs. Private sector facilities also have different standards and modes of service delivery and the partnerships within the health system that would have likely been most disrupted by the GGR would be between affected NGOs and public facilities. Therefore, an assessment of the health system capacity to provide PAC and SAC is most appropriate in public facilities. In Ethiopia, Health Posts were also excluded from the analysis because they are not expected to provide either PAC or SAC services. Our final analytical sample included 223 public facilities in Uganda and 282 public facilities in Ethiopia.

Surveys were conducted face-to-face with one staff member familiar with the postabortion care and/or induced abortion services offered at each facility. Interviews were conducted by trained enumerators on Android smartphones using Open Data Kit (ODK) software. Informed consent was obtained from all respondents prior to each interview. Ethical approval was provided by the Institutional Review Boards of the Guttmacher Institute, Johns Hopkins Bloomberg School of Public Health, Makerere University, and Addis Ababa University, as well as the Uganda National Council for Science and Technology.

## Measures

### Facility characteristics

Informed by each country's national reproductive health guidelines, we categorized facilities as primary- or referral-level. In Uganda, hospitals and level IV health centers were considered referral-level facilities, and level II and III health centers as primary level.<sup>30</sup> In Ethiopia, hospitals were classified as referral-level facilities and health centers as primary-level facilities.<sup>31</sup> We also classified whether each facility is located in an urban or rural location.

### Provision of PAC/SAC services

In Uganda and Ethiopia, we asked if facilities provided postabortion care services (PAC). In Ethiopia, we additionally asked if facilities provided safe abortion services (SAC). Due to the restrictive abortion law in Uganda, SAC questions were not included in the surveys.

### Signal functions representing capacity to provide basic and comprehensive PAC/SAC services

The capacity to provide basic or comprehensive postabortion care, and basic or comprehensive safe abortion care were measured through several signal functions, including those related to the availability of specific services needed to provide PAC/SAC, staffing, the provision of postabortion contraception, and

structural capacity of facilities (detailed in Table 1). We adapted the signal functions approach used by others<sup>21,22</sup> to create composite indicators of health facilities' capacity to provide basic and comprehensive PAC (in Uganda and Ethiopia) and SAC (in Ethiopia only). Basic care is defined as the minimum service that primary (and higher) facilities should be able to provide, and comprehensive care is defined as the minimum care that would be expected at referral-level facilities. There were a few signal functions used in other studies that we were not able to incorporate due to the limitations of the data collected in the PMA surveys, namely: facilities being open 24/7; having 3 + health professionals or medical doctors *registered* to provide PAC or SAC (needed for 24/7 services); communications means or referral capacity and availability of a vehicle with fuel (for facilities without comprehensive PAC).

Table 1  
Signal functions used to classify postabortion care (PAC) and safe abortion care (SAC) capability

	PAC Capability		SAC Capability	
	Basic	Comprehensive	Basic	Comprehensive
Perform removal of retained products <sup>a</sup>	X	X		
Perform manual vacuum aspiration or electric vacuum aspiration			X	X
Provide medication abortion using mifepristone misoprostol or misoprostol alone			X	X
Administer parenteral antibiotics <sup>b</sup>	X	X		
Administer uterotonics <sup>b</sup>	X	X		
Administer intravenous fluids <sup>b</sup>	X	X		
Provide at least one short-acting contraceptive (condoms, pills or injectables) <sup>c</sup>	X	X	X	X
Provide at least one long-acting reversible contraceptive (IUDs or implants) <sup>d</sup>		X		X
Offer family planning at least once per week			X	X
Offer family planning 7 days a week	X	X		
Perform blood transfusion <sup>b</sup>		X		
Surgical/laparotomy capability <sup>b</sup>		X		
Perform dilation and evacuation				X
Has 1 + staff capable of providing PAC available <sup>e</sup>	X	X		
Has 1 + staff capable of providing SAC available <sup>f</sup>			X	X

a. Includes manual/electric vacuum aspiration (MVA/EVA), OR misoprostol alone or mifepristone + misoprostol. For MVA/EVA, must have functional equipment at the time of the survey. For mifepristone/misoprostol, medication must be in stock at the time of the survey.

b. Based on facility reporting that they provide the service.

c. Based on at least one method being in stock at the time of the survey.

d. Based on at least one method being in stock at the time of the survey and availability of trained staff.

e. In Ethiopia – Doctors, midwives, health officers, health extension workers. In Uganda – Doctors, nurse/midwives, clinical officers.

f. In Ethiopia – Doctors, nurse/midwives, or health officers.

Facilities' ability to provide manual/electric vacuum aspiration was assessed on the basis of the respondent reporting that the facility provided it, the availability of trained staff and functioning equipment. Ability to provide misoprostol, mifepristone and at least one short-acting contraceptive method was assessed on the basis of the medicine/method being in stock at the time of the survey. Ability to provide a long-acting reversible contraceptive method was assessed on the availability of the method at the time of the survey and staff trained to provide at least one method. All other criteria were assessed solely through respondent reporting.

While the definitions for basic and comprehensive PAC and SAC are similar, there is one notable difference: in order for a facility to provide either basic or comprehensive PAC, it must offer family planning services 7 days a week. This is because PAC occurs on an emergency basis, necessitating family planning services to be available on all days.<sup>22</sup> However, SAC is predominantly a scheduled service, and facilities can theoretically schedule SAC to occur on days when family planning services are available. As such, definitions for basic and comprehensive SAC are less strict and only require a facility to offer family planning one day per week.

## PAC and SAC caseloads

Facility records are generally considered underestimates for documenting the number of PAC and/or SAC cases in facilities due to incomplete reporting, regardless of the legal status of abortion.<sup>32</sup> Therefore, to more accurately understand the extent to which abortions occur or complications are treated in facilities, we included questions that have been widely used in a well-known methodology for estimating the magnitude of abortion and PAC caseloads.<sup>33</sup> We asked respondents how many postabortion care patients their facility had treated in the past month and in an average month, which we then averaged and multiplied by 12 to estimate the number of cases treated in the past year. We asked facilities how many PAC patients were treated as inpatients in the month prior to the survey, how many PAC patients were referred elsewhere after receiving treatment at their facility, and how many PAC patients had been referred from a different facility. Those that reported at least one for each question were included in the measure of facilities that provided inpatient services, referred patients elsewhere or accepted referral patients in the past month, respectively. We also asked if facilities had treated any severe complications in the past month, including perforated uterus or gut requiring laparotomy, intensive care unit admission, or organ failure.

In Ethiopia, we asked how many induced abortions the facility had provided in the past month and in an average month. We calculated the number of abortions in the past year using the same calculation as described for PAC above. We asked how many of the abortions had been done in the second trimester. Any facilities that reported at least one were included in the proportion of facilities providing later abortions.

## Analysis

First, we describe the proportion of facilities that provide PAC and/or SAC, according to facility type and urban or rural location for both rounds of surveys.

For the PAC signal functions and all subsequent PAC analyses, our analytical sample included only facilities that reported providing PAC. Among them, we calculated the proportion of facilities that met each set of signal functions in the composite indicators to measure the proportion of primary-level and referral-level facilities capable of providing basic PAC, and the proportion of referral-level facilities capable of providing comprehensive PAC services (see Table 1). We do this separately for each survey round in each country. Comprehensive capability was only calculated among referral-level facilities because primary-level facilities would not be expected to provide those services. We also calculated the proportion of facilities that provided/had each individual signal function in order to identify specific gaps in service capability and provision. In Ethiopia, the same approach was taken to calculate basic and comprehensive safe abortion care, and all analyses only included facilities that provided SAC in either round.

We also investigate trends in caseloads while the GGR was in effect. In both countries, we present the number of PAC patients facilities served in the past year, as well as the average number of cases per facility across both years of surveys. We describe the proportion of facilities that provided inpatient services in the past month, the proportion that either received referrals or referred patients elsewhere, and the proportion that treated severe complications, separately by PAC capability (less than basic/basic/comprehensive), and overall. In Ethiopia, we also present the caseloads for safe abortion, the proportion of facilities that provided second trimester abortion in the past month, and the proportion that had accepted abortion referrals. Consistent with the PAC data, we present these proportions overall and by capability across the two rounds of surveys.

For all measures, we calculated the proportions for the first and second survey rounds separately, the percent difference between the two rounds, and we tested the statistical significance of the differences in the two proportions. All analyses were conducted using Stata 16.0. Given the facility sample was not structured to be nationally representative, we conduct all analyses on unweighted data.

## Results

### Availability of postabortion and safe abortion care services in facilities

#### Ethiopia

In Ethiopia, 95.4% of public facilities reported providing either postabortion care or safe abortion services in 2020 (Table 2). All hospitals and 92.9% of health centers provided either service. PAC provision remained consistently high across facility types and locations between 2018 and 2020, while safe abortion provision increased from 76.6–84.4% ( $p < 0.02$ ) over the two years. Safe abortion services increased most notably among health centers and facilities in rural areas (9.8 and 12.2 percentage point increases, respectively;  $p < 0.03$ ).

Table 2  
Postabortion care and induced abortion service provision among public facilities, Ethiopia 2018 & 2020 and Uganda 2018 & 2019

Ethiopia																			
	2018						2020						% Change 2018–2020						
	Facilities in the sample		Offer postabortion care		Offer induced abortion		Offer either postabortion care or induced abortion		Facilities in the sample		Offer postabortion care		Offer induced abortion		Offer either postabortion care or induced abortion		Offer PAC	Offer SAC	Offer either PAC or SAC
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	%	%	%	%	
All Public facilities	282		259	91.8	216	76.6	262	92.9	282		267	94.7	238	84.4	269	95.4	2.8	7.8*	2.5
Facility type																			
Public Hospital	98		98	100.0	91	92.9	98	100.0	98		98	100.0	95	96.9	98	100.0	0.0	4.1	0.0
Public Health center	184		161	87.5	125	67.9	164	89.1	184		169	91.8	143	77.7	171	92.9	4.3	9.8*	3.8
Location																			
Urban	150		144	96.0	132	88.0	146	97.3	150		146	97.3	138	92.0	148	98.7	1.3	4.0	1.3
Rural	132		115	87.1	84	63.6	116	87.9	132		121	91.7	100	75.8	121	91.7	4.5	12.1	3.8
Uganda																			
	2018						2019						% Change 2018–2019						
	Facilities in the sample		Offer postabortion care		Offer induced abortion		Offer either postabortion care or induced abortion		Facilities in the sample		Offer postabortion care		Offer induced abortion		Offer either postabortion care or induced abortion		Offer PAC	Offer SAC	Offer either PAC or SAC
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	%	%	%	%	
All Public facilities	223		166	74.4	-	-	-	-	223		174	78.0	-	-	-	-	3.6	-	-
Facility type																			
Public Hospital	34		34	100.0	-	-	-	-	34		34	100.0	-	-	-	-	0.0	-	-
Public Health center IV	54		54	100.0	-	-	-	-	54		54	100.0	-	-	-	-	0.0	-	-
Public Health center III	73		59	80.8	-	-	-	-	73		68	93.2	-	-	-	-	12.3*	-	-
Public Health center II	62		19	30.6	-	-	-	-	62		18	29.0	-	-	-	-	-1.6	-	-
Location																			
Urban	30		21	70.0	-	-	-	-	30		24	80.0	-	-	-	-	10.0	-	-
Rural	192		145	75.5	-	-	-	-	192		149	77.6	-	-	-	-	2.1	-	-
a. One facility in Uganda is missing an Urban/Rural designation																			
* p < 0.05																			

In Uganda, 78% of all public facilities surveyed reported providing PAC in 2019, compared with 74.4% in 2018 (Table 2), but this change was not statistically significant. All Hospitals and Health Center IVs provided PAC in both rounds, and there was a significant increase in provision among Health Center IIIs between 2018 and 2019 from 80.8–93.2% ( $p < 0.03$ ), while provision among Health Center IIs remained low (29–31%). PAC provision increased in urban facilities to 80% in 2019, from 70% the year before ( $p = 0.37$ ).

## **Capacity to provide basic and comprehensive postabortion care services**

In Ethiopia, only 15.0% of facilities that reported providing postabortion care in 2020 had the capacity to provide all basic PAC services – 16.0% of primary-level facilities and 13.3% of referral-level facilities (Fig. 1). The proportion was lower among referral-level compared to primary-level facilities because fewer referral-level facilities met the criteria of offering family planning services 7 days per week. Among referral-level facilities, 11.2% met the requirements for providing comprehensive PAC services.

Although facilities' capability to provide basic and comprehensive PAC was low, it improved between 2018 and 2020: overall there was an increase of 5.7 percentage points for basic PAC ( $p < 0.02$ ) and 4.1 points among referral-level facilities for comprehensive PAC, but that change was not significant (Table 3). Improvements in PAC capability across the two surveys was largely due to the significant increase in medication abortion, which is one component in the removal of retained products (16.2 percent increase overall;  $p < 0.00$ ). Looking at each signal function separately, between 79% and 100% of facilities provided each individual function in 2020, apart from the provision of family planning 7 days per week (16.0%), which is why PAC capability was so low.

Table 3  
Proportion of public facilities performing individual PAC & SAC signal functions, Ethiopia 2018 & 2020

	Overall		Primary-level health facility <sup>b</sup>		Referral-level health facility <sup>c</sup>		Overall	Primary-level health facility	Referral-level health facility
	2018	2020	2018	2020	2018	2020	% change	% change	% change
Total number of facilities that provide PAC and/or SAC	262	269	164	171	98	98	-	-	-
<b>Capability to provide basic postabortion and safe abortion care signal functions</b>									
Perform removal of retained products	90.5	94.4	84.8	91.2	100.0	100.0	<b>4.0***</b>	<b>6.5***</b>	0.0
Perform manual/electric vacuum aspiration	85.5	91.1	78.7	86.0	96.9	100.0	<b>5.6***</b>	<b>7.3***</b>	<b>3.1***</b>
Provide medication abortion	63.7	79.9	53.0	70.2	81.6	96.9	<b>16.2*</b>	<b>17.1*</b>	<b>15.3*</b>
Administer parenteral antibiotics	98.9	97.8	98.2	97.1	100.0	99.0	-1.1	-1.1	-1.0
Administer uterotonics	87.4	90.3	80.5	84.8	99.0	100.0	2.9	4.3	1.0
Administer intravenous fluids	93.9	93.7	90.9	91.8	99.0	96.9	-0.2	1.0	-2.0
Provide at least one short-acting contraceptive (condoms, pills or injectables)	99.2	99.6	99.4	99.4	99.0	100.0	0.4	0.0	1.0
Facility offers family planning at least once a week	100.0	99.6	100.0	100.0	100.0	99.0	-0.4	0.0	-1.0
Facility offers family planning 7 days a week	12.2	16.0	15.2	17.5	7.1	13.3	3.8	2.3	6.1
Has 1 + staff capable of providing PAC available	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0
Has 1 + staff capable of providing abortion available	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0
Proportion of facilities with basic PAC capability	9.3	15.0	10.6	16.0	7.1	13.3	<b>5.7**</b>	5.4	6.1
Proportion of facilities with basic SAC capability	66.7	82.8	58.4	74.1	78.0	95.8	<b>16.1*</b>	<b>15.7*</b>	<b>17.8*</b>
<b>Capability to provide comprehensive postabortion and safe abortion care signal functions<sup>a</sup></b>									
Provide dilation and evacuation	29.3	16.7	16.1	6.0	51.0	34.7	<b>-12.7*</b>	<b>-10.1*</b>	<b>-16.3**</b>
Provide at least one long-acting reversible contraceptive (IUDs or implants)	99.2	98.5	98.8	98.2	100.0	99.0	-0.7	-0.5	-1.0
Perform blood transfusion	39.3	37.9	6.7	5.8	93.9	93.9	-1.4	-0.9	0.0

a. Comprehensive PAC facilities must have all of the basic signal functions plus at least one long-acting reversible contraceptive method (IUDs or implants), blood transfusion and surgical capability. For comprehensive SAC, facility must also provide dilation and evacuation. Primary-level facilities are not included in the denominator for comprehensive signal functions.

b. Primary-level includes Health Centers

c. Referral-level includes Hospitals.

\* p < 0.001

\*\* p < 0.05

\*\*\* p < 0.1

	Overall		Primary-level health facility <sup>b</sup>		Referral-level health facility <sup>c</sup>		Overall	Primary-level health facility	Referral-level health facility
Surgical/laparotomy capability	30.5	30.9	3.0	2.3	76.5	80.6	0.3	-0.7	4.1
Proportion of referral-level facilities with comprehensive PAC capability	-	-	-	-	7.1	11.2	-	-	4.1
Proportion of referral-level facilities with comprehensive SAC capability	-	-	-	-	38.5	32.6	-	-	-5.8
a. Comprehensive PAC facilities must have all of the basic signal functions plus at least one long-acting reversible contraceptive method (IUDs or implants), blood transfusion and surgical capability. For comprehensive SAC, facility must also provide dilation and evacuation. Primary-level facilities are not included in the denominator for comprehensive signal functions.									
b. Primary-level includes Health Centers									
c. Referral-level includes Hospitals.									
* p < 0.001									
** p < 0.05									
*** p < 0.1									

In Uganda, fewer than one in five (17.8%) facilities that reported providing PAC in 2019 had the capacity to provide all basic services – 11.6% of primary-level facilities and 23.9% of referral-level facilities. Among referral-level facilities, 10.2% met the requirements for providing comprehensive PAC services. Facilities' capability to provide basic and comprehensive PAC improved between 2018 and 2019 in Uganda: an increase of 2.6 percentage points among primary-level facilities and 4.6 percentage points among referral-level facilities for basic PAC, and 2.2 points among referral-level facilities for comprehensive PAC (Table 4). These changes were not statistically significant. However, since this is a study of health facilities, these changes do represent real and important increases in these specific facilities. Individual services improved particularly among primary-level facilities during the time-period: the ability to remove retained products of conception increased from 21.8% in 2018 to 38.4% in 2019 ( $p < 0.02$ ); administration of uterotonics increased from 76.9–90.7% ( $p < 0.02$ ); provision of long-acting reversible contraceptive methods increased from 67.9–81.4% ( $p < 0.05$ ). Blood transfusion services and capacity to provide surgery/laparotomy increased from 62.5–69.3% and from 63.6–71.6%, respectively, among referral-level facilities, but these changes were not significant. As in Ethiopia, the provision of family planning 7 days per week was low across survey rounds.

Table 4  
Proportion of public facilities performing individual PAC signal functions, Uganda 2018 & 2019

	Overall		Primary-level health facility <sup>b</sup>		Referral-level health facility <sup>c</sup>		Overall	Primary-level health facility	Referral-level health facility
	2018	2019	2018	2019	2018	2019	% change	% change	% change
Total number of facilities that provide PAC	166	174	78	86	88	88	-	-	-
<b>Capability to provide basic postabortion care signal functions</b>									
Perform removal of retained products	52.4	59.8	21.8	38.4	79.5	80.7	7.4	<b>16.6*</b>	1.1
Administer parenteral antibiotics	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0
Administer uterotonics	88.6	95.4	76.9	90.7	98.9	100.0	<b>6.8*</b>	<b>13.8*</b>	1.1
Administer intravenous fluids	91.6	94.8	83.3	89.5	98.9	100.0	3.3	6.2	1.1
Provide at least one short-acting contraceptive (condoms, pills or injectables)	97.6	98.3	96.2	96.5	98.9	100.0	0.7	0.4	1.1
Facility offers family planning 7 days a week	25.9	30.5	28.2	32.6	23.9	28.4	4.6	4.4	4.5
Has 1 + staff capable of providing PAC available	100.0	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0
Proportion of facilities with basic PAC capability	14.5	17.8	9.0	11.6	19.3	23.9	3.4	2.7	4.5
<b>Capability to provide comprehensive postabortion care signal functions<sup>a</sup></b>									
Provide at least one long-acting reversible contraceptive (IUDs or implants)	83.1	89.1	67.9	81.4	96.6	96.6	5.9	<b>13.4*</b>	0.0
Perform blood transfusion	34.3	35.6	2.6	1.2	62.5	69.3	1.3	-1.4	6.8
Surgical/laparotomy capability	33.7	37.4	0.0	2.3	63.6	71.6	3.6	2.3	8.0
Proportion of referral-level facilities with comprehensive PAC capability	-	-	-	-	8.0	10.2	-	-	2.3
a. Comprehensive PAC facilities must have all of the basic signal functions plus at least one long-acting reversible contraceptive method (IUDs or implants), blood transfusion and surgical capability. Primary-level facilities are not included in the denominator for comprehensive signal functions.									
b. Primary-level includes Health Centre III and Health Centre II									
c. Referral-level includes Health Centre IV and Hospitals									
* p < 0.05									

## Capacity to provide basic and comprehensive safe abortion care services

Overall, facilities in Ethiopia were better equipped to provide basic and comprehensive SAC services than they were to provide PAC in both rounds of surveys (Fig. 2). However, this difference is attributable to the different requirements for SAC and PAC capability – as mentioned previously, while SAC requires that family planning be offered once per week, facilities must offer family planning seven days per week to meet the requirements for basic or comprehensive PAC. Using these definitions, the capacity to provide all basic safe abortion services in 2020 was 82.8% overall – 74.1% of primary-level and 95.8% of referral-level facilities. Among referral-level facilities, 32.6% met the requirements for providing comprehensive abortion services.

Basic SAC increased substantially during the time-period from 66.7–82.8% overall ( $p < 0.00$ ), due in large part to an increase in the provision of medication abortion (from 53.0–70.2%;  $p < 0.00$  among primary-level facilities; 81.6–96.0%;  $p < 0.00$  among referral-level). There was also an increase in MVA provision to a lesser extent and mostly among primary-level facilities (almost all referral-level facilities already provided MVA in 2018). However, comprehensive SAC services among referral-level facilities decreased over the two years, mostly due to a decrease in the proportion of facilities that provided dilation and evacuation (from 51.0–34.7%;  $p < 0.02$ ).

## Postabortion and safe abortion caseloads

In Uganda, the number of PAC cases treated in facilities increased by 15.5% from 23,268 in 2018 to 26,874 in 2019 (Fig. 3). The vast majority of PAC patients were treated in facilities that were classified as having less than basic capacity for PAC (81%,  $n = 18,846$  in 2018 and 84%,  $n = 22,482$  in 2019). While cases also increased slightly in facilities with basic-only capability, the number of cases treated in facilities that had the capacity to provide comprehensive services decreased.

In Ethiopia, PAC cases decreased over time while SAC cases increased. There were an estimated 56,898 PAC cases treated in surveyed facilities in 2018 and 52,914 in 2020 (a 7% decrease). The majority of PAC cases were treated at facilities that were classified as having less than basic PAC capacity in both rounds, but decreased over time from 93.3% (n = 53,136) to 86.3% (n = 45,660). Cases increased slightly (from 1,146 to 2,232) in facilities with basic-only capability and increased (from 2,616 to 5,022) in facilities with comprehensive PAC.

There was a 9.7% increase in the estimated number of annual safe abortions in all surveyed facilities in Ethiopia, from 29,202 in 2018 to 32,022 in 2020. Among facilities that were classified as having basic-only capacity to provide abortion, the number of cases increased: from 11,430 in 2018 to 19,224 in 2020. The total number of abortions decreased over the time-period in facilities that were classified as having less than basic capability to provide SAC (from 7,962 to 4,458), and to a lesser extent in facilities with comprehensive capability (9,810 to 8,340).

## **Details of postabortion care and safe abortion service provision**

There were no statistically significant changes over time in either country for the proportion of facilities providing inpatient PAC services, receiving or referring PAC patients from or to other facilities, and treating PAC patients with severe complications. Nonetheless, we present these indicators across the two rounds of surveys because they represent a real increase in PAC service provision in the facilities included in our study. All facilities with at least basic PAC capacity in Uganda reported providing inpatient care in 2018, but in 2019 this was somewhat lower at 95% among basic-only and 90% among comprehensive facilities (Table 5). The proportion that received PAC patients referred from other places was also lower in 2019 compared with 2018, especially among facilities with only basic capability (33.3% vs. 57.1%). The proportion referring PAC cases elsewhere was relatively constant, but among facilities with comprehensive PAC 14.3% referred in 2018 and none were referring patients one year later. Severe complications were slightly lower in 2019 overall (10.3% compared to 8.2%).

Table 5  
Postabortion care caseloads by PAC capability in public facilities, Ethiopia 2018 and 2020 and Uganda 2018 and 2019

Ethiopia												
	2018				2020				% change 2018–2020			
	Overall	PAC Capability			Overall	PAC Capability			Overall	PAC Capability		
		Less than basic	Basic	Comprehensive		Less than basic	Basic	Comprehensive		Less than basic	Basic	Comprehensive
Total number of facilities that provided PAC	259	235	16	8	267	227	29	11	-	-	-	-
Total number of PAC patients treated in the past 12 months <sup>a</sup>	56898	53136	1146	2616	52914	45660	2232	5022	-	-	-	-
Average number of PAC patients treated in the last 12 months per facility <sup>a</sup>	220.5	227.1	71.6	327	198.2	201.1	77.0	457	-	-	-	-
	%	%	%	%	%	%	%	%	%	%	%	%
Facilities that treated any PAC cases as inpatients in the past month	78.3	77.7	75.0	100.0	71.3	71.8	55.6	100.0	<b>-6.9*</b>	-5.9	-19.4	0.0
Facilities that treated PAC cases referred from elsewhere in the past month	35.6	37.0	7.1	50.0	37.0	37.2	21.7	63.6	1.4	0.2	14.6	13.6
Facilities that referred PAC cases elsewhere in the past month	21.0	20.8	21.4	25.0	15.0	14.5	17.4	18.2	<b>-6.0*</b>	<b>-6.3*</b>	-4.0	-6.8
Facilities that treated PAC patients with severe complications <sup>c</sup> in the past month	11.1	11.3	0.0	25.0	8.1	8.0	0.0	27.3	-3.0	-3.3	0.0	2.3
Uganda												
	2018				2019				% change 2018–2019			
	Overall	PAC Capability			Overall	PAC Capability			Overall	PAC Capability		
		Less than basic	Basic	Comprehensive		Less than basic	Basic	Comprehensive		Less than basic	Basic	Comprehensive
Total number of facilities that provided PAC	166	142	17	7	174	143	21	10	-	-	-	-
Total number of PAC patients treated in the past 12 months <sup>a</sup>	23268	18846	1752	2670	26874	22482	2304	2088	-	-	-	-

a. Among all facilities that reported providing PAC in either round.

b. Only among the facilities that reported providing PAC in both rounds (n = 259 in Ethiopia; n = 166 in Uganda).

c. Complications that included a perforated uterus or gut requiring laparotomy, intensive care unit admission, or organ failure.

\* p < 0.1

Ethiopia												
Average number of PAC patients treated in the last 12 months per facility <sup>a</sup>	147.3	139.6	109.5	381.4	155.3	158.3	109.7	208.8	-	-	-	-
	%	%	%	%	%	%	%	%	%	%	%	%
Facilities that treated any PAC cases as inpatients in the past month	89.0	87.1	100.0	100.0	86.3	84.8	95.0	90.0	-2.7	-2.3	-5.0	-10.0
Facilities that treated PAC cases referred from elsewhere in the past month	48.9	47.4	57.1	57.1	39.9	40.0	33.3	60.0	-9.0	-7.4	-23.8	2.9
Facilities that referred PAC cases elsewhere in the past month	29.4	29.3	38.5	14.3	27.3	27.4	36.8	0.0	-2.1	-1.9	-1.6	-14.3
Facilities that treated PAC patients with severe complications <sup>c</sup> in the past month	10.3	8.7	14.3	28.6	8.2	5.8	15.8	28.6	-2.1	-2.9	1.5	0.0
a. Among all facilities that reported providing PAC in either round.												
b. Only among the facilities that reported providing PAC in both rounds (n = 259 in Ethiopia; n = 166 in Uganda).												
c. Complications that included a perforated uterus or gut requiring laparotomy, intensive care unit admission, or organ failure.												
* p < 0.1												

In Ethiopia, compared to in 2018, fewer facilities overall reported treating inpatients in 2020 (71.3%, compared to 78.3%). All facilities with comprehensive PAC capability treated inpatients in both survey rounds, but only 55.6% of facilities with basic-only capability treated inpatients in 2020 compared with 75% in 2018. More facilities with basic and comprehensive PAC capacity received PAC patients referred from elsewhere in 2020 compared with 2018: 21.7% vs. 7.1% for basic PAC facilities and 63.6% vs. 50.0% with comprehensive PAC. Referrals of PAC patients to a different facility was not reported as commonly as it was in 2018 among facilities with all levels of capacity. Similar to in Uganda, severe complications were slightly lower in 2020 overall (11.1% compared to 8.1%).

There were significant decreases in the proportion of facilities in Ethiopia that reported receiving any abortion clients referred from elsewhere between 2018 and 2020: from 30.5–19.7% (p < 0.00; Table 6).

Table 6  
Safe abortion care in public facilities, Ethiopia 2018 and 2020

	All Facilities		
	2018	2020	% change 2018–2020
Total number of facilities that provided abortions	216	238	-
Total number of induced abortion clients in the past 12 months <sup>a</sup>	29202	32022	-
Average number of induced abortion clients in the past 12 months per facility <sup>a</sup>	135.2	134.5	-
Total number of induced abortion clients in the past 12 months <sup>b</sup>	28338	28296	-
Average number of induced abortion clients in the past 12 months per facility <sup>b</sup>	138.9	138.7	-
	%	%	%
Facilities that provided second trimester abortions in the past month	36.4	38.1	1.7
Facilities receiving any abortion clients referred from elsewhere	30.5	19.7	<b>-10.8*</b>
a. Among all facilities that reported providing safe abortion care in either round.			
b. Only among the 216 facilities that reported providing safe abortion care in both rounds.			
* p < 0.001			

## Discussion

Despite previous concerns that facilities' capacity to provide PAC, and especially to provide SAC, may be negatively affected by the GGR, the findings from this analysis suggest that PAC service provision in both countries, and SAC provision in Ethiopia, either remained consistent or even improved during the time-period when the GGR was in effect. The public health systems in both Ethiopia and Uganda were able to not only maintain but also expand these essential services during this period. However, we did find evidence that PAC caseloads increased in public health facilities in Uganda during the period in which the GGR was in effect.

## Coverage of PAC/SAC services

In both countries, service coverage was high and did not decrease during the GGR period, indicating that there was no chilling effect associated with the policy. In Ethiopia, approximately 95% of public facilities reported that they provided any postabortion care services, which is consistent with what we know about the region.<sup>34</sup> Further, this proportion stayed fairly constant between 2018 and 2020. Postabortion care service provision in facilities in Uganda was not as widespread as it was in Ethiopia, but still most facilities provided PAC, and this proportion increased slightly between 2018 and 2019 from 74–78%. However, this overall increase obscures trends by facility level, with PAC provision in the lowest level facilities (Health Center II) decreasing marginally, and increasing from 81–93% in Health Center IIIs.

In line with previous trends in Ethiopia,<sup>17</sup> the proportion of facilities providing safe abortion services in our sample significantly increased from 76.6–84.4%, with the biggest increases found among lower-level facilities (health centers) and those in rural areas.

## Quality of care

While a majority of facilities provided PAC (and SAC in Ethiopia), the findings suggest that the quality of these services was relatively low. However, there is no evidence that the quality of care declined while the GGR was in effect. Despite the overall low capacity to provide basic and comprehensive PAC, the provision of most individual services was relatively high, and actually improved over time, in Ethiopia and Uganda. In Ethiopia, the proportion fulfilling the requirements to meet the standards for basic postabortion care increased slightly across survey rounds but was very low. Capacity to provide safe abortion services was higher and increased during the time-period; however comprehensive SAC capability at referral-level facilities decreased due to a decrease in D&E service availability. Improvements in safe abortion services over time were largely attributable to a widespread increase in the availability of medication abortion, and to some extent MVA, in facilities. In Uganda, the capacity to provide basic and comprehensive PAC was slightly higher than was observed in Ethiopia, and also improved over the time-period among both primary-level and referral-level facilities that provided PAC. Individual services provided by primary-level facilities in particular improved over time, most notably in their ability to remove retained products, administer uterotonics and to provide long-acting reversible contraceptive methods.

However, the availability of family planning services 7 days per week – one of the signal functions that must be met for basic and comprehensive PAC (but not SAC) capability – was lacking in both countries. As mentioned previously, the overall low quality of PAC services, as well as the stark difference in capabilities for SAC vs PAC in Ethiopia was also due to this much stricter family planning provision requirement. The negative impacts of the GGR on the provision of family planning overall is well documented, so this finding was expected.<sup>7,9</sup> Despite improvements from 2018, few facilities in Ethiopia provided these services every day in 2020 (17.5% of primary-level and 13.3% of referral level facilities; Table 3), which brought down the overall proportion of facilities classified as providing basic and comprehensive PAC. A similar pattern was observed in Uganda: the availability of family planning services was higher than in 2018 but still not commonly available every day in 2019 (32.6% of primary-level and 28.4% of referral level facilities reported providing family planning 7

days per week; Table 4). If we measured PAC capability using a somewhat less strict criteria – requiring family planning services only 5 days per week instead of 7 – the proportion capable of providing basic PAC in Ethiopia would increase from 15.0–82.8% overall (75.7% among primary-level and 94.9% among referral level) and the proportion providing comprehensive PAC services would increase from 11.2–73.5% among referral-level facilities (Fig. 4). In Uganda, the proportion capable of providing basic PAC would increase from 17.8–54.6% overall (27.9% among primary-level and 80.7% among referral level) and the proportion providing comprehensive PAC services would increase from 10.2% using the strictest criteria to 47.7% among referral-level facilities.

## Caseloads

Overall, we observed a 9.7% increase in safe abortions in surveyed facilities in Ethiopia; the population of women aged 15–49 was also estimated to have increased by 6.7% during that time period, which could account for some of the increase.<sup>35</sup> While more facility-based abortions were reported in 2020 compared with 2018, fewer women were treated for postabortion complications in facilities. Increasing facility abortions should decrease overall complications and therefore decrease the need for PAC in the population, so this trend is consistent. Further, the increase in the proportion of facilities capable of providing basic and comprehensive SAC services in conjunction with the increase in the annual number of safe abortions reported over this time-period suggests that access to abortion care in facilities has not gotten worse, so it seems unlikely that PAC has gone down because women cannot access these services. The reduction in facilities treating PAC inpatients was likely due to the decrease in patients presenting with severe complications, rather than to a lack of capacity among facilities. These findings suggest there were improvements in the safety of abortion during this time-period.

There was also a shift in care seeking for postabortion complications from less equipped facilities in 2018 to those with basic or comprehensive capacity for PAC in 2020, indicating that more women are getting better quality PAC services. Further, the decrease in the proportion of facilities that referred PAC patients to other facilities could indicate that referral systems were disrupted; it is more likely, however, especially since we observed an increase in the proportion treating PAC patients referred from elsewhere, that lower-level facilities expanded their capacity to provide services and thus did not have to refer patients elsewhere as often.

Facilities in Uganda also experienced a 15.5% increase in the number of PAC cases treated from 2018 to 2019. While we would expect cases to increase over time with population growth, the population of women aged 15–49 was only estimated to have increased by 8%.<sup>35</sup> Some of this increase in public-sector cases may also represent a shift in where women are accessing care within the health system rather than an increase in the number of complications occurring, since private facilities were more likely to be directly impacted by the GGR policy. Nevertheless, it is plausible that some proportion of the increase is a true increase in the need for PAC and could be an indication that abortion indeed became less accessible, potentially more stigmatized, and therefore less safe during the period in which the GGR was in effect. In contrast to Ethiopia where most women with complications were treated in better equipped facilities, and despite improvements in facilities' capacity to provide basic and comprehensive services in Uganda, the majority of PAC cases were treated in facilities with lesser quality services (less than basic capability), and the number receiving treatment at facilities equipped to provide comprehensive services decreased over time. This change could be because women experienced less severe complications and did not need care at the highest level facilities; or it could be indicative of disruptions in referral mechanisms resulting in a lack of access to care at the most equipped facilities. In Uganda, the proportion of facilities that treated PAC patients referred from elsewhere decreased over time, especially in facilities with basic-only capability (57.1% in 2018 to 33.3% in 2019). Moreover, referrals of PAC patients *out* to other providers decreased over time among all facility types surveyed, especially those with comprehensive PAC capacity (from 14.3–0.0%). Given that we know the GGR prohibits NGOs from either serving or referring for abortion services, these decreases could be indicative of a chilling effect and overinterpretation of the policy.

## Limitations

There are several limitations of our study. This analysis looked at changes during the period in which the GGR was in effect, but it is possible that other, unmeasured, factors affecting supply and demand of services were occurring over this period as well. Therefore, we cannot make causal inferences related to the impact of the GGR but rather present a descriptive account of what happened in these countries during the period in which this policy was in effect. Another limitation of this study is its lack of generalizability. First, only public facilities were included in this paper. Since private facilities were likely differentially impacted by the GGR, we cannot present the full picture of the policy's impact on services. However, research on the GGR policy in these two countries has shown that the public sector was affected by this policy.<sup>7,9</sup> In addition, the samples were not nationally representative of all public facilities in each country, further limiting generalizability. The findings are probably a close approximation in Uganda, but the sample is missing key regions in Ethiopia (although it did capture the most populous areas).

It is also possible that population increases may be driving some increases in abortion caseloads. While we tried to remedy this by looking at the estimated percent increase in the populations of women of reproductive age in each country over the study period, we cannot fully disentangle what increases are due to changing patterns in abortions, population growth, or an increase in pregnancies.

## Conclusions

This is the first study to use signal functions to document changes to the quality of services provided in facilities across two points in time. This is a useful approach that could be adapted by others to assess facility capacity to provide PAC and/or SAC, or other sexual and reproductive health services, over time. The findings from this analysis suggest that the quality of PAC services in Uganda and PAC and SAC services in Ethiopia did not significantly change during the Global Gag Rule time-period. We had hypothesized that there would have been a reduction in the availability of supplies needed for safe abortion as well as postabortion care services in facilities due to the chilling effect of the GGR, but it appears individual services within facilities actually improved over time. The increase in PAC cases observed only in Uganda could be an indication of several underlying trends, including an increase in the total number of abortions, an increase in the proportion of abortions that are unsafe, or a combination of the two. The extent to which this is the case, and whether any trends are associated with the GGR, requires further investigation.

This analysis does, however, highlight a need for improving the availability of family planning services and integrating them into both PAC and SAC services at all levels of facilities. Since most people having an abortion or receiving postabortion care do not want to become pregnant in the near future, postabortion family planning is an essential part of this constellation of care. We found that family planning services were very rarely offered seven days per week. For SAC, which is usually a scheduled service, offering family planning five days per week (as was the case in most facilities) may be adequate, but since PAC is sometimes an emergency service and must be available any day of the week, ensuring the availability of family planning services on a daily basis is necessary.

## Abbreviations

EA – Enumeration area

EmOC – Emergency obstetric care

EVA – Electric Vacuum Aspiration

GGR – Global Gag Rule

IUD – Intra-uterine device

MVA – Manual Vacuum Aspiration

ODK – Open Data Kit

PAC – Postabortion care

PMA – Performance Monitoring for Action

SAC – Safe abortion care

## Declarations

### *Ethics approval and consent to participate*

Ethical approval was provided by the Institutional Review Boards of the Guttmacher Institute, Johns Hopkins Bloomberg School of Public Health, Makerere University, and Addis Ababa University, as well as the Uganda National Council for Science and Technology. Informed consent was obtained from all participants. Participation was voluntary and no reimbursement was provided. All methods were performed in accordance with the guidelines and regulations of the relevant institutions.

### *Consent for Publication*

Not applicable

### *Availability of data and materials*

The datasets generated and/or analyzed during the current study (in 2018 and 2019) are public and available by request here: <https://www.pmadata.org/data/available-datasets>. The Ethiopia data from 2020 is available from the corresponding author on reasonable request.

### *Competing interests*

The authors declare that they have no competing interests.

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### *Authors' contributions*

The corresponding author (MS) is responsible for the overall content and attests that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted. ES & MG conceptualized the project, designed the survey questions, and conducted the stakeholder meetings. MS led the analysis and the writing of the manuscript. MG, ES and LH contributed to writing the manuscript. AS, SS, FM and SK led the sample design and selection, led the data collection effort, provided insights into survey design, contributed to data interpretation, analysis, and writing of the manuscript. LH assisted with literature searches, data analysis, and manuscript preparation. MS, LH, ES and MG have verified the underlying data. All authors reviewed the manuscript.

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## Figures

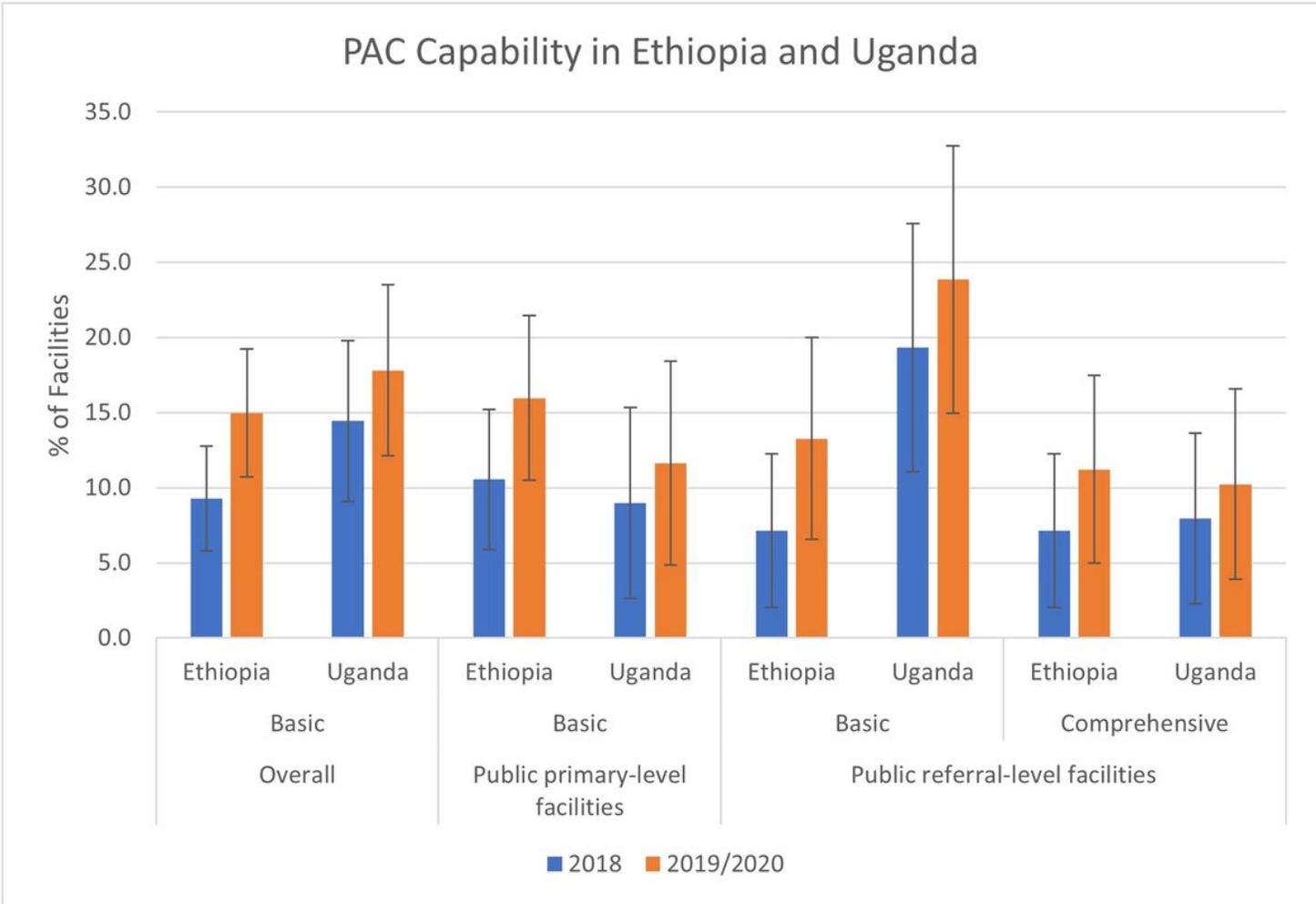
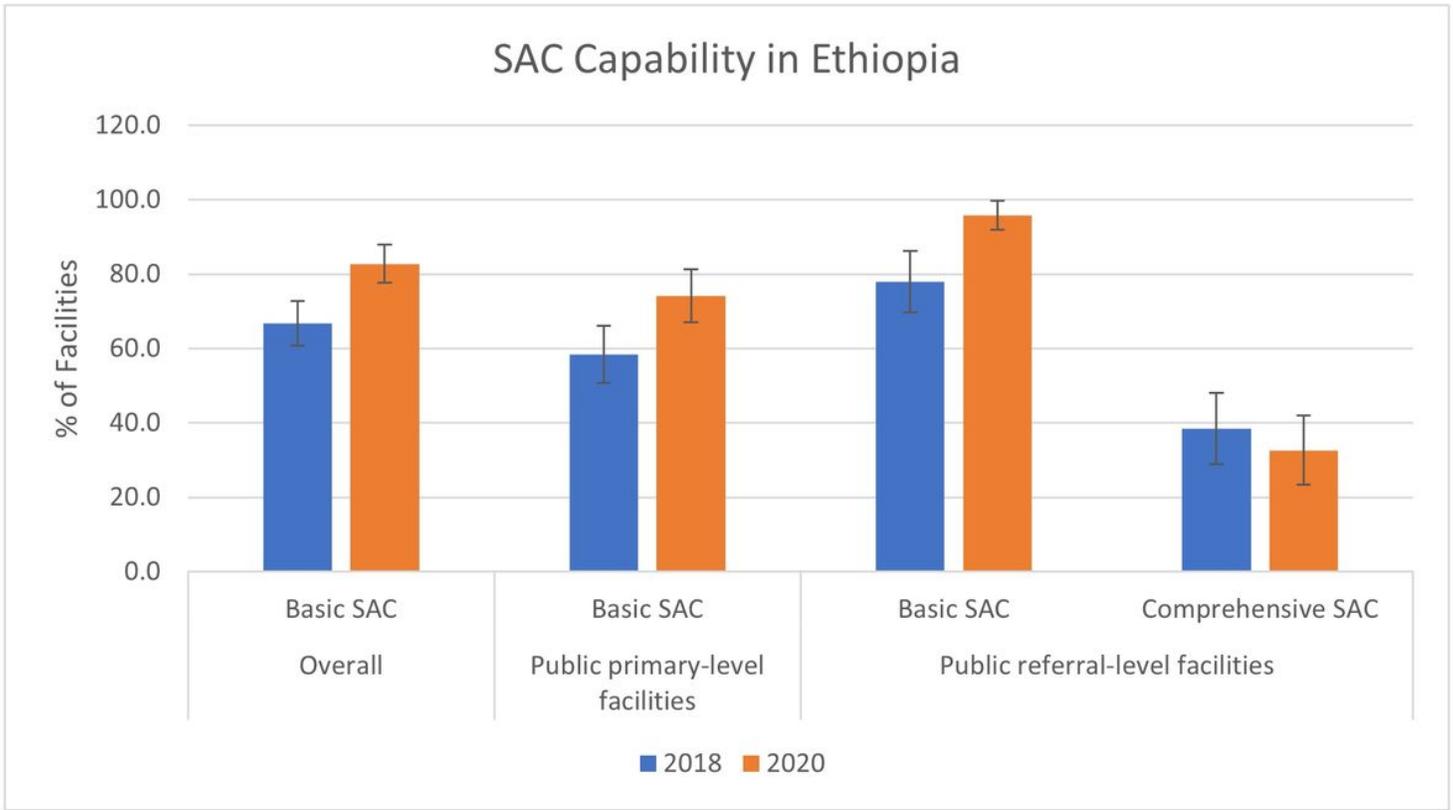
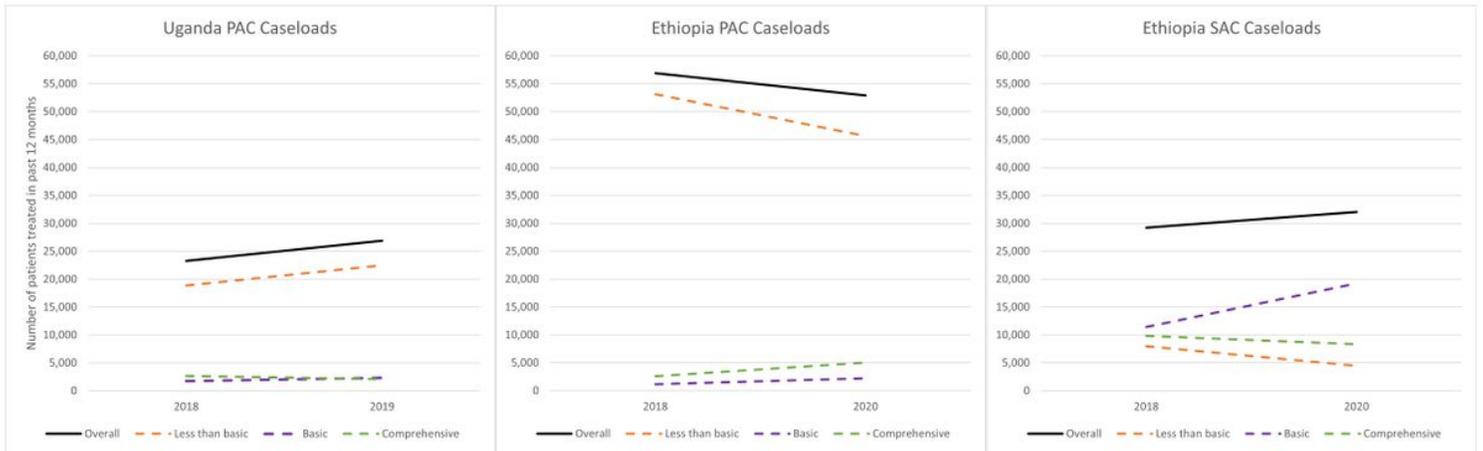


Figure 1

Capability of facilities to provide basic and comprehensive postabortion care services, Ethiopia 2018 & 2020 and Uganda 2018 & 2019



**Figure 2**  
**Capability of facilities to provide basic and comprehensive safe abortion care services in Ethiopia, 2018 & 2020**



**Figure 3**  
**Postabortion and safe abortion care caseloads by capability in public facilities, Ethiopia 2018 & 2020 and Uganda 2018 & 2019**

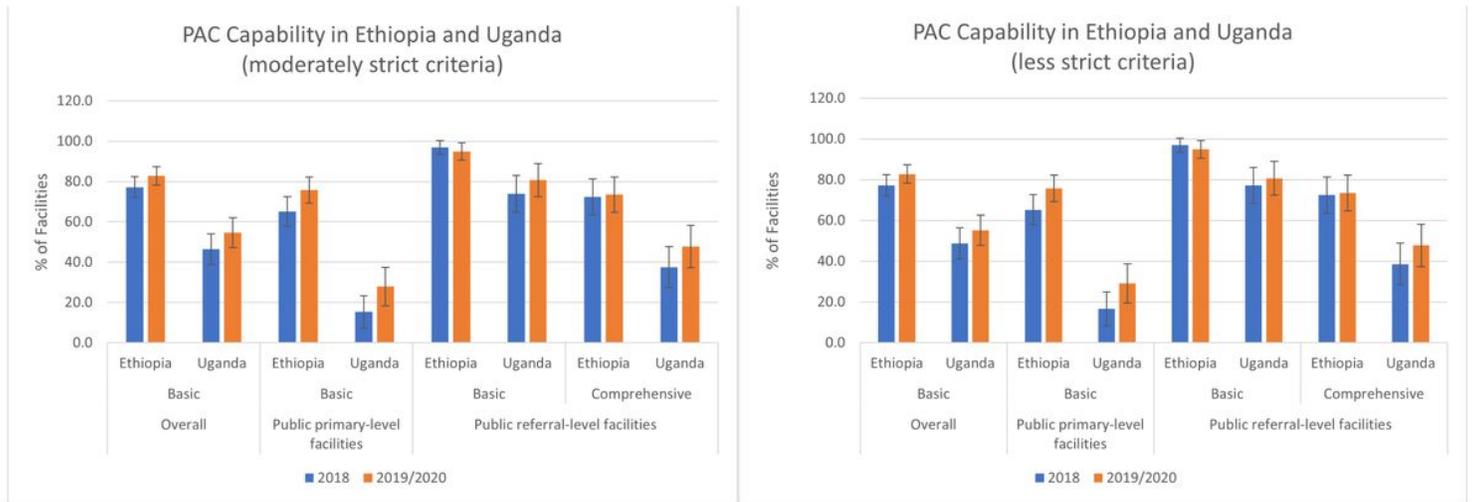


Figure 4

Capability of facilities to provide basic and comprehensive PAC services using a moderately strict and less strict criteria, Ethiopia 2018 & 2020 and Uganda 2018 & 2019