Extended Abstract

Background

In January 2017, the United States (U.S.) Government reinstated and expanded the Global Gag Rule (GGR),[1] which deems non-U.S. non-governmental organizations (NGOs) ineligible for U.S. global health funding if they provide, refer, or promote access to abortion. While prior iterations of the GGR only applied to family planning (FP) assistance (~$575 million USD annually), the current iteration of the GGR applies to all global health funding (~$8.8 billion USD annually), which covers funding for FP and reproductive health, maternal and child health, HIV/AIDS, TB, malaria, infectious diseases, nutrition, and water, sanitation, and hygiene programs.[2,3]

Past research on the impact of previous iterations of the GGR on women's sexual and reproductive health (SRH) outcomes is limited. One study using survey data from 20 Sub-Saharan African countries found that women living in countries with higher exposure to the policy had an increased odds of having an induced abortion while the policy was in effect.[4] Another study in Ghana found that women living in rural areas were more likely to have unintended pregnancies when the policy was in effect, resulting in an increase in abortions and unintended births.[5] To date, no quantitative research has investigated the impact of the newly expanded GGR on women's SRH outcomes.

Despite the lack of existing research, there is reason to believe that the GGR may have a negative impact on women's SRH outcomes in Uganda. In 2016 Uganda received $229 million USD from the U.S. for global health.[6] This represents over one-tenth of all health expenditures in Uganda – across donors, domestic investments and out-of-pocket payments – for the 2015/2016 fiscal year.[7] The U.S continues to provide substantial amounts of global health assistance to Uganda; in 2018 Uganda received $219 million USD for global health programs.[6] As U.S. funding represents a considerable portion of all health expenditures in Uganda, this is an important context to investigate potential impacts of the GGR funding restrictions on women's sexual and reproductive health outcomes.

Uganda has made advances in some SRH outcomes over the past two decades, as use of contraception among all women age 15-49 more than doubled, from 13.4% in 1995 to 30.3% in 2016.[8,9] Use of modern methods among all women also increased over this time, from 7.4% in 1995 to 27.3% in 2016.[8,9] Abortion still remains highly restrictive; the legal interpretation of the Ugandan constitution only allows for induced abortions to save a woman's life, or in a few additional circumstances.[10] Despite this restrictive environment, there is evidence to suggest that induced abortions are not uncommon in Uganda. Prior research has estimated that around 314,000 women had an induced abortion in Uganda in 2013, nearly half of whom experienced abortion-related complications and required treatment.[15]

The objective of this study is to assess the early impact of the expanded GGR on women's SRH outcomes. Specifically, we use a quasi-experimental study design to examine changes over time (pre-post GGR) in contraceptive access and use, method switching, unintended births, and induced abortions in Uganda by comparing women who reside in districts that are "more" and "less" exposed to the policy.

Methods

This study uses data from the Performance Monitoring and Accountability (PMA2020) platform in Uganda, which includes a nationally representative survey of women of reproductive age. We will create a panel dataset of women interviewed at baseline (April-May 2018) and again one year later (May-June 2019). The 2018 sampling plan relied on a two-stage cluster sampling design, using urban-rural and 10 major administrative regions as the strata, resulting in a nationally representative collection of enumeration areas (EAs). Interviewers mapped and listed all households within an EA and 44 households were randomly selected. All women aged 15-49 who were current or usual members of the household were invited to participate in the female survey. A total of 4,288 women consented to be interviewed in 2018, and 95.5% of these women agreed to be re-contacted for a follow-up survey in 2019. Data collection for 2019 is currently underway and is scheduled to be completed by the end of July 2019. Our final analytical sample will include all women interviewed in both years of data collection.

Exposure to the GGR was defined at the district level. To generate this exposure variable, we gathered data in early 2018 through a series of interviews with stakeholders in Uganda's SRH funding and service provision landscape, including service providers, NGOs, Ugandan and U.S. government officials, and advocates. We collected information on providers who did and did not sign the policy, changes in service delivery and funding due to the enactment of the GGR, funding allocations by year from USAID and other donors, and qualitative information on other contextual changes impacting the service delivery environment unrelated to the GGR. Districts were defined as "more" exposed to the GGR if there was a clinic closure, program closure, partner discontinuation, or change in mobile outreach services in that district. "Less" exposed districts did not experience any of the above changes. Women's exposure was then defined based on their district of residence in 2018.

We will investigate a number of SRH outcomes that measure women's access to and use of contraception, pregnancy intention, and abortion. Contraceptive-related measures will include whether women are using any form of modern contraceptives, using specific modern contraceptives (i.e. IUDs, injectables, implants, etc.), and switching from more to less effective methods over time (i.e. modern to traditional methods). We will also investigate outcomes related to access, including the number of visits needed to receive a contraceptive method, wait times, and facility type where the method was obtained. We anticipate that private health clinics and centers, and mobile outreach programs, will be more impacted by the GGR than public facilities, as they rely heavily on grants to fund their operations. Pregnancy intention will be assessed by whether a woman has experienced an recent unintended pregnancy and, among women who are currently pregnant, whether the pregnancy was wanted then, later, or not at all. Finally, we will assess changes in induced abortion through women's self-reported abortions in the last year as well as abortions among the respondent's closest confidantes residing in the same district.

In order to determine whether our "more" and "less" exposed groups were equivalent at baseline, we conducted bivariate t-tests and chi-squared tests to assess if any initial differences in women's demographic characteristics or the study outcomes are statistically significant. Variables with statistically significant differences will be controlled for in our final multivariable regression model.

The impact of the GGR will be isolated using a difference-in-differences (DID) approach. Multivariable regression models for each outcome variable will be estimated using the following formula:

$$Y_{ij} = E_i + T_j + (E_i * T_j) + I_i + C_{ij} + \mathcal{E}_{ij}$$

where Y_{ij} represents the SRH measure for woman i in survey round j, E_i represents exposure to GGR (0/1) for woman i, T_j represents the survey round (2018/2019), $E_i * T_j$ represents the interaction of woman i's exposure to the GGR in survey round j, I_i represents a vector of individual-level controls for woman i, and C_{ij} represents the vectors of community-level controls for woman i in survey round j. The DID estimator of impact will be determined by calculating predicted probabilities for each exposure group and survey round using the interaction term. Analyses will be performed using Stata version 15.0 (StataCorp LP, College Station, TX).

Results

Table 1 displays descriptive statistics for select demographic variables and SRH outcomes among the full, unmatched baseline sample. There were statistically significant differences by exposure status at baseline in region, marital status and educational attainment. However, there were no significant differences in the selected SRH outcomes at baseline.

The final paper will limit this analysis to women surveyed in both 2018 and 2019. We will analyze the SRH outcomes presented in Table 1, as well as additional SRH outcomes, in the final paper. We will also present the results of our DID estimates for the impact of the GGR on women's SRH outcomes.

Discussion

We will discuss the results of this study and provide insights regarding the implications of the findings for policy makers, both in Uganda as well as in the United States.

References

1. The White House. Presidential Memorandum Regarding the Mexico City Policy. January 2017. https://www.whitehouse.gov/presidential-actions/presidential-memorandum-regarding-mexico-city-policy/. Accessed February 11, 2019.

2. Sherwood J, Sharp A, Honermann B, et al. Mapping the impact of the expanded Mexico City Policy for HIV/ family planning service integration in PEPFAR-supported countries: a risk index. *BMC Public Health*. 2018;18(1):1116. doi:10.1186/s12889-018-6008-2

3. U.S. Department of State. Background Briefing: Senior Administration Officials on Protecting Life in Global Health Assistance. May 2017. https://www.state.gov/r/pa/prs/ps/2017/05/270879.htm. Accessed February 11, 2019.

4. Bendavid E, Avila P, Miller G. United States aid policy and induced abortion in sub-Saharan Africa. *Bull World Health Organ*. 2011;89:873-880c. doi:10.1590/S0042-96862011001200010

5. Jones KM. Contraceptive Supply and Fertility Outcomes: Evidence from Ghana. *Econ Dev Cult Change*. 2015;64(1):31-69. doi:10.1086/682981

6. foreignassistance.gov. Uganda | ForeignAssistance.gov. foreignassistance.gov. https://foreignassistance.gov/explore/country/Uganda. Published 2019. Accessed June 21, 2019.

7. Ministry of Health, The Republic of Uganda. *Uganda Health Accounts: National Health Expenditure*. Kampala, Uganda; 2016. https://apps.who.int/nha/database/DocumentationCentre/Index/en. Accessed June 21, 2019.

8. Statistics Department [Uganda], Macro International Inc. *Uganda Demographic and Health Survey, 1995*. Calverton, Maryland, USA: Statistics Department [Uganda] and Macro International Inc.; 1996.

9. Uganda Bureau of Statistics (UBOS), ICF. *Uganda Demographic and Health Survey 2016*. Kampala, Uganda and Rockville, Maryland, USA: UBOS and ICF; 2018.

10. Center for Health, Human Rights and Development (CEHURD), Center for Reproductive Rights. *Facing Uganda's Law on Abortion, Experiences from Women and Service Providers*. Kampala, Uganda: CEHURD; 2016. https://www.reproductiverights.org/sites/crr.civicactions.net/files/documents/Uganda-Abortion-Law-Experiences.pdf. Accessed June 21, 2019.

Table 1. Baseline differences between women in EAs more and less exposed to the GGR, 2018

	Total		More Exposed		Less Exposed		p-value
	(N = 4288)		(N = 2335)		(N = 1953)		
Background characteristics							
Region, n(%)							0.00 **
Central 1	250	(6%)	184	(8%)	66	(3%)	
Central 2	350	(8%)	251	(11%)	99	(5%)	
East Central	572	(13%)	128	(5%)	444	(23%)	
Eastern	469	(11%)	179	(8%)	290	(15%)	
Kampala	643	(15%)	643	(28%)	0	(0%)	
Karamoja	245	(6%)	200	(9%)	45	(2%)	
North	511	(12%)	185	(8%)	326	(17%)	
South West	554	(13%)	358	(15%)	196	(10%)	
West Nile	308	(7%)	125	(5%)	183	(9%)	
Western	386	(9%)	82	(4%)	304	(16%)	
Age, n(%)							0.05
15-19	934	(22%)	488	(21%)	446	(23%)	
20-24	908	(21%)	532	(23%)	376	(19%)	
25-29	754	(18%)	423	(18%)	331	(17%)	
30-34	587	(14%)	305	(13%)	282	(14%)	
35-39	494	(12%)	271	(12%)	223	(11%)	
40-45	326	(8%)	167	(7%)	159	(8%)	
45-49	285	(7%)	149	(6%)	136	(7%)	
Marital status, n(%)							0.00 **
Currently married	1,357	(32%)	685	(29%)	672	(34%)	
Currently living with man	1,356	(32%)	708	(30%)	648	(33%)	
Divorced	441	(10%)	244	(10%)	197	(10%)	
Widow	99	(2%)	61	(3%)	38	(2%)	
Never married	1,034	(24%)	636	(27%)	398	(20%)	
Education, n(%)							0.00 **
Never attended	524	(12%)	283	(12%)	241	(12%)	
Primary	2289	(53%)	1086	(47%)	1203	(62%)	
'O' level	1071	(25%)	637	(27%)	434	(22%)	
'A' level	136	(3%)	108	(5%)	28	(1%)	
Tertiary	133	(3%)	99	(4%)	34	(2%)	
University	133	(3%)	120	(5%)	13	(1%)	
Women's outcomes							
Current contraceptive method user, n(%)	1378	(36%)	774	(37%)	604	(35%)	0.14
Modern method user, n(%)	1205	(88%)	670	(87%)	535	(89%)	0.25
LARC user, n(%)	851	(62%)	448	(58%)	403	(67%)	0.00 **
Current method, n(%)†							0.00 **
Condoms (male and female)	146	(11%)	83	(11%)	63	(10%)	
Pills	81	(6%)	59	(8%)	22	(4%)	
Injectables	523	(38%)	289	(37%)	234	(39%)	
Implant	282	(20%)	133	(17%)	149	(25%)	
Female sterilization	83	(6%)	43	(6%)	40	(7%)	
Number of visits to receive current method,	1	(1-1)	1	(1-1)	1	(1-1)	0.36
Wait time at last visit, in minutes, median(IQR)	30	(5-120)	30	(5-120)	30	(5-130)	0.08
Ever unintended pregnancy, n(%)‡	1109	(29%)	626	(31%)	483	(28%)	0.08
Current pregnancy intention, n(%)	253	(56%)	144	(60%)	109	(52%)	0.19
Wanted now	130	(29%)	66	(27%)	64	(30%)	
Wanted later	70	(15%)	32	(13%)	38	(18%)	
Not wanted at all							
Ever had abortion, self-reported, n(%)	233	(21%)	138	(22%)	95	(20%)	0.62
Self-reported abortion in the last 12 months, n(%)	38	(1%)	24	(1%)	14	(1%)	0.28

† Only modern contraceptive methods used by 5%+ of women in one or both exposure groups are shown. The total number of contraceptive users overall is the denominator

‡ Calculated only based on responses to GGR_801 in the Self Report section, and not adjusted based on responses to pregnancy intention for the most recent birth (note that of the 473 women who reported that their last birth was "not at all wanted", 205 responded that they have never had an unintended pregnancy in GGR_801).