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ISSN: 2365-9793

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ABSTRACT

US Presidential Party Switches Are Mirrored in Global Maternal Mortality*

We provide estimates of impacts on maternal mortality of swings in US aid for family planning and maternal health driven by switches in implementation of the Global Gag Rule (GGR) with US Presidential Party. The GGR is a pro-life policy that prohibits aid to overseas non-governmental organisations (NGOs) if they offer abortion-related information or services (1). Since first implemented by President Reagan in 1984, it has been enacted under every Republican and revoked under every Democrat. It was tightened under President Trump and will very likely be rescinded under President Biden on January 21, 2021. Using data for 1985-2019, we demonstrate that aid for family planning has been 48% higher under Democratic presidential regimes. We estimate that a switch from Democratic to Republican party, for a country with above-median reliance on US family planning aid, is associated with an additional 0.6 deaths per 1,000 women, an increase of 8%. This erodes a fifth of the average worldwide decline in maternal mortality achieved since 1990.

JEL Classification: I18, J13

Keywords: US Presidential Party, overseas aid, maternal mortality, global gag rule, abortion

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* Bhalotra, Clarke, Mühlrad and Sierrra jointly conceptualized the project and edited the paper, Bhalotra and Clarke wrote the report, and Clarke did the data analysis. We have no competing interests.

Introduction

The US provides 38% of all Overseas Development Aid (ODA) for health, with bilateral disbursements of over 8.4 billion USD in 2018 (2). As a result, access to reproductive health in developing countries has been tied to swings in US presidential politics. Cuts in US aid have had a significant impact on health service resources in developing countries even when other donors having stepped in to plug some of the gap (3). There is widespread evidence that the GGR (also called the Mexico City Policy) has led to staff retrenchment, clinics downsizing or closing, and contraceptive shortages (4). As reproductive and other health services are often bundled in delivery, the GGR has resulted not only in reduced access to safe abortion and contraception, but also to reduced capacity for broader maternal health services including HIV prevention and treatment (5).

The implementation of GGR under Republican Presidents has been part of their pro-life agenda. The GGR has failed in its stated purpose- previous research shows that by virtue of reducing access to contraception, it has led to an increase in (often unwanted) pregnancies and an *increase* in the induced abortion rate (6,7,8,9). Our contribution is to identify impacts of GGR on maternal mortality, a marker of unsafe abortion and of reduced access to other health services. An increased demand for abortions at a time when already sparse services are being peeled back will have led to largely *unsafe* abortions. Unsafe abortion is hard to accurately track as it is often clandestine, but it is estimated to account for between 4.7 and 13.2% of maternal deaths (5,10), and it seems plausible that increases in unsafe abortion will show up as increases in maternal mortality. The total impact of the GGR on maternal mortality will be larger on account of its direct impact on other health services.

Results

Aid for family planning is, on average, 48% higher under Democratic presidential regimes (Figure 1a). As we may expect, the oscillation in aid flows with Presidential party is larger in countries with higher baseline reliance on aid for family planning (Figure 1b). Under Obama, relative to Bush, aid increased by 270% in countries with above-median baseline aid receipts, compared with only 39% in below-median countries.

A switch from Democratic to Republican party, for a country with above-median reliance on US family planning aid, is associated with an 8% increase in maternal deaths, or 0.6 more deaths per 1,000 women (Table 1, panel A, column 1). Significant impacts are observed in Africa, Latin America and Asia. These results are robust to varying the definition of baseline aid (panels A to C). Using continuous variation, we estimate that a 1 USD p.c. higher reliance on US ODA for family planning (mean 0.38 USD p.c.) is associated with 1.2 additional deaths per 1,000 women under the GGR (panel B, column 1).

Discussion

The GGR has generated intense public policy debate and media coverage, attracting the support of Right to Life campaigners, while alienating supporters of development aid and women's rights. The recent tightening of the GGR under President Trump (Kates and Moss, 2017) has been referred to as a "war on women". Our findings are relevant to the UN Sustainable Development Goals for Health and Gender Equality. These are the first large-scale estimates of the maternal death toll of the GGR. These impacts suggest that US policy decisions can have noteworthy impacts on global health measures over the relatively short time-frame of presidential administrations. An increase in maternal deaths of 8% erodes one fifth of the average world-wide decline in maternal mortality achieved during 1990-2017. Maternal death is only the tip of the iceberg of maternal complications including hemorrhage, sepsis, abdominal and reproductive tract infections, uterine perforation, cervical tears, chronic pain, infertility, and elevated risks in subsequent pregnancies (13). Access to safe abortion is a fundamental right of women. Our work underlines the significant and systematic loss of life and life quality among millions of women that emerges from the lottery of American election outcomes.

Methods and Data

We wanted to test the hypothesis that implementing GGR results in a reduction in aid for maternal health and, as a result, an increase in maternal mortality. To do this, we leveraged switching of US Presidential Party through the last three decades, as this was systematically mirrored in repeal and reinstatement of the GGR. We regressed micro-level records of maternal death in a given country and year against an indicator for change in US Presidential party, scaled by a measure of baseline reliance of the receiving country on US aid in a difference-in-differences framework. The intuition is that the GGR will have had larger effects on countries that, prior to the switching on of GGR, were more reliant on US aid. This method purges impacts of common trends, and controls for slowly moving country-specific factors that, otherwise, might confound the relationship of interest (11,12; also see Brief Supplementary Methods).

To obtain consistent measures of maternal mortality by country over time, we compiled women's survival histories from repeated cross-sections of the Demographic and Health Surveys for 49 countries in Africa, Asia and Latin America, through 1986-2019. The resulting data contain 50 million women*years. The average maternal mortality rate in these data, defined as deaths per 1,000 women is 7.074. We obtained data on US aid for maternal health, and for the sub-category of family planning, from the Institute for Health Metrics and Evaluation's Development Assistance for Health Database. We merged these data by country and year. Over the study period, average US aid for maternal health and family planning was 1.03 billion USD and 508 million USD (respectively), but it varied considerably over time (ranging between 61 million to 821 million in the case of aid for family planning).

All original data and code created for the study will be available in a persistent OSF repository upon publication.

Acknowledgements. We acknowledge funding from ESRC grant ESM010236-1, awarded to the Human Rights, Big Data and Technology project at the Human Rights Centre in Essex. Clarke additionally acknowledges funding from FONDECYT grant number 1200634.

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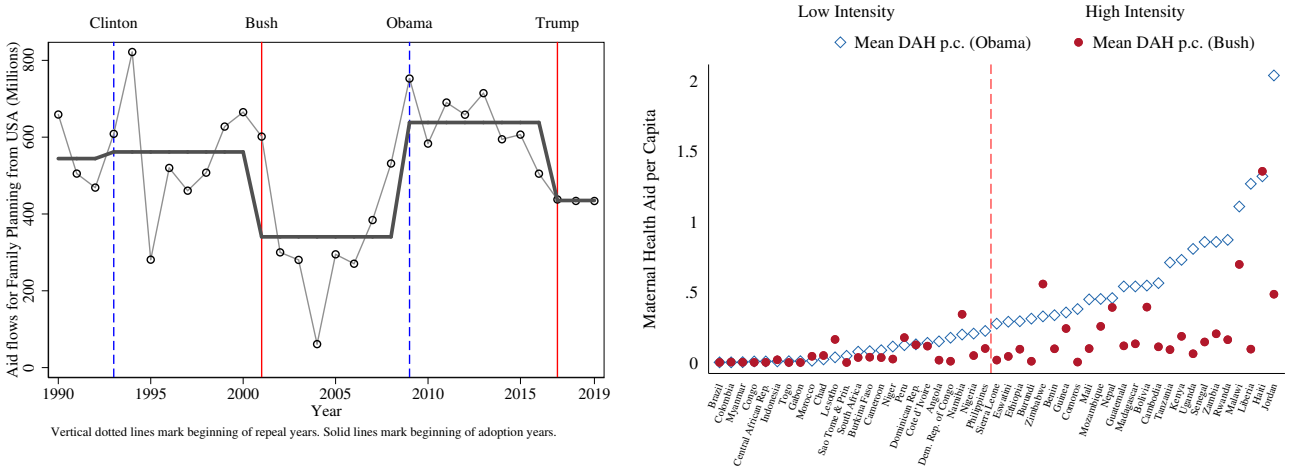
Exhibits

Figure 1: Aid Flows from US for Family Planning (Current USD, 2019)



(a) Total US Aid Flows for Family Planning

(b) Changes in US Aid Flows for Family Planning

Notes: Panel (a) displays total aid flows from the United States as Overseas Development Assistance for health directed to family planning spending, in USD 2019 prices. The line connecting circles captures yearly aid, while the solid line reflects President-specific averages. The GGR was switched on in all Republican presidential administrations and switched off in all Democratic administrations, with the exception of a short period during the Clinton administration. Panel (b) displays average per-capita aid flows directed to family planning during the Bush period (GGR on) and the Obama period (GGR off). The median level of aid used in Table 1 panel A is indicated as a vertical red dashed line.

Table 1: Impact of the Global Gag Rule on Maternal Mortality, 1985-2019

	Full	Continent		
	Sample	Lat. Am.	Africa	Asia
Panel A: Exposure defined as above-median baseline aid for family planning				
High Exposure × GGR	0.583***	0.838***	0.395*	0.594***
	(0.176)	(0.288)	(0.220)	(0.202)
Observations	50,675,947	10,858,470	31,622,939	8,194,538
Mean of Dep. Var.	7.074	2.674	9.608	3.123
Panel B: Exposure defined as baseline family planning aid in dollars				
Baseline Family Planning Aid p.c.×GGR	1.189***	1.872***	1.025***	0.126
	(0.268)	(0.238)	(0.326)	(0.442)
Observations	50,675,947	10,858,470	31,622,939	8,194,538
Mean of Dep. Var.	7.074	2.674	9.608	3.123
Panel C: Exposure defined as baseline maternal health aid in dollars				
Baseline Maternal Health Aid p.c.×GGR	0.383***	0.626***	0.260***	0.210
	(0.072)	(0.076)	(0.092)	(0.148)
Observations	50,675,947	10,858,470	31,622,939	8,194,538
Mean of Dep. Var.	7.074	2.674	9.608	3.123

Notes: Each column presents a regression of rates of maternal death per 1,000 women on a country's degree of exposure to the GGR interacted with whether the GGR is enacted. Every regression includes country and year fixed effects (not shown) to capture country-level heterogeneity and common trends. In panel A, high exposure refers to having family planning aid receipts above the sample median when the GGR is switched off. In panel B, exposure is measured as continuous aid receipts for family planning when the GGR is switched off. In panel C, exposure is measured as continuous aid receipts for maternal health when the GGR is switched off. Cluster robust standard errors are presented below point estimates. Additional details of the estimation strategy are provided in the Brief Online Supplementary Material. * p< 0.10; **p< 0.05; ***p< 0.01.

Brief Online Supplementary Material

"US Presidential Party Switches Are Mirrored in Global Maternal Mortality"

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Supplementary Methods Details

We collate data from all publicly available Demographic and Health Surveys (DHS) in which a maternal mortality module has been implemented. This is 138 surveys conducted in 49 countries between 1990–2019. The DHS follow the sisterhood method for measuring maternal mortality, asking every woman to list all her sisters, their survival status, and in case of death, when the death occurred and from which causes. This allows us to form a retrospective panel covering all sisters of surveyed women between the ages of 15–49 (or up to their age at the time of survey or death). In this panel, for each woman and year we generate a binary variable indicating whether or not the woman died of causes relating to child birth. We generate this panel for all years between 1985–2019, the period posterior to the first implementation of the GGR.

These data are merged with full details of each country's aid receipts for health, including the channel to which the aid is directed (including maternal health or the sub-channel of maternal health specifically directed to family planning), as well as the source of these receipts (Institute for Health Metrics and Evaluation, 2018). All receipts are expressed in current US dollars in 2019, thus accounting for inflation. The GGR was switched on in Republican Presidential periods starting with the original policy announcement by Reagan in 1984, and switched off (repealed) in each Democratic presidency, generally on the President's first full day in office in late January. Thus, the GGR is considered to be switched on during Republican Presidential regimes after the 1984 announcement (1985–1992; 2001–2008; 2017–2019) and switched off during Democratic Presidential regimes (1993–1999; 2009–2016).

Estimates presented in Table 1 of the Brief Report are based on a "difference-in-differences" style model where changes in countries which are highly exposed to the Global Gag Rule (GGR) policy are compared to changes in less-exposed areas when the policy is enacted. We follow a statistical approach used for example by Acemoglu and Johnson (2007), Bleakley (2007) and, importantly, by

Brooks et al. (2019) who examine the impact of the GGR on contraception and abortion:

$$\text{Maternal Death}_{ict} = \alpha + \beta \text{GGR}_t \times \text{High}_c + \delta_c + \lambda_t + \varepsilon_{ict}. \quad (1)$$

Here the survival status of woman i from country c in year t is regressed on a measure of whether the Global Gag Rule was "switched on" in year t (GGR_t) interacted with whether the country was highly exposed to the GGR (High_c). Thus, β captures how much higher rates of maternal death are in countries which are highly exposed to the GGR versus countries which are not highly exposed to the GGR in periods in which the policy is enacted, compared to the same difference when the policy is switched off. Country-specific time-invariant factors are captured in country-specific fixed effects (δ_c), and secular changes in rates of maternal death are captured in year fixed effects λ_t. ε_{ict} is a mean-zero unobserved stochastic error term. Our identifying assumption is that voting behaviour in the US (which determines when the policy is switched on) is uncorrelated with factors determining maternal mortality in aid-receiving countries. To purge impacts of common trends and control for cross-sectional heterogeneity, we interact the switching on of the policy with the country-specific baseline receipt of US aid.

The specification in Panel A follows Brooks et al. (2019) in defining exposure to GGR as $\text{High}_c = 1$ for all countries which received per capita transfers for family planning aid from the US greater than or equal to the median amount during the Obama administration (2009-2016), as this captures the magnitude of potential losses when the global gag rule is implemented. For countries receiving less than the median amount $\text{High}_c = 0$. We follow Brooks et al. (2019) in using aid during the Obama period as a measure of potential loss of aid due to the GGR because the aid data are most complete in this period. In Panel B we replace the binary measure with a continuous measure that exploits variation in the magnitude of per capita aid, allowing "dose response" effects. The specification is:

$$\text{Maternal Death}_{ict} = \alpha + \gamma \text{GGR}_t \times \text{Aid}_c + \delta_c + \lambda_t + \varepsilon_{ict}. \quad (2)$$

All definitions are as in the previous equation, but now exposure is Aid_c. In Panel C we replace aid for family planning with aid for maternal health, a broader category. Both variables are aid per capita.

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