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# ABSTRACT

## US Presidential Party Switches Are Mirrored in Global Maternal Mortality*

The Global Gag Rule is a pro-life policy that prohibits aid to overseas non-governmental organisations offering abortion-related information or services. 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 It was tightened under President Trump and rescinded under President Biden. 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 an aid-receiving 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, abortion, maternal mortality, Global Gag Rule, Mexico City Policy

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## Introduction

The US provides 38% of all Overseas Development Aid (ODA) for health, with bilateral disbursements of over 8.4 billion USD in 2018, of which around 6% is earmarked for family planning (Institute for Health Metrics and Evaluation, 2018). In this paper we leverage the fact that US aid for family planning has varied systematically with US Presidential Party to investigate impacts of aid cuts on maternal mortality. In particular, we estimate impacts of the switching on and off of the Mexico City Policy, also known as the Global Gag Rule (henceforth, GGR). The GGR is a policy that prohibits aid to overseas non-governmental organisations offering abortion-related information or services. It was first implemented by President Reagan in 1984. Being a Presidential Policy, it has since been enacted under every Republican and revoked under every Democrat. GGR-related cuts in US aid have had a significant impact on health service resources in developing countries (Iverson, 2017) even when other donors having stepped in to plug some of the gap (Pugh et al., 2017). Several case studies establish that the GGR has led to staff retrenchment, clinic downsizing or closure, and contraceptive shortages (USAID, 2001). Since delivery of reproductive health services is often bundled with other health services, 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 (Mavodza et al., 2019).

The implementation of GGR under Republican Presidents has been presented as part of their pro-life agenda, aimed at limiting access to abortion. Previous research demonstrates that the GGR has failed in its stated purpose because closure of clinics providing abortion services has resulted in reduced access to contraception, an increase in (often unwanted) pregnancies and thus an *increase* in the demand for abortion (van der Meulen Rodgers, 2018; Brooks et al., 2019; Jones, 2015; Miller and Valente, 2016). We make a new contribution in identifying impacts of the GGR on maternal mortality. Increased demand for abortions at a time when already sparse services are being peeled back leads 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 (Mavodza et al., 2019; Ceschia and Horton, 2016), 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. Even if politics and religion divide views on abortion

and contraception, most policymakers would agree that increases in maternal mortality represent a failure of policy.

**Data**

We construct individual records of maternal mortality across country and over time using data from all publicly available Demographic and Health Surveys (DHS) in which a maternal mortality module has been implemented. This includes 138 surveys conducted in 49 countries in Africa, Asia and Latin America 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), who are at risk of death during 1985-2019. 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. 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 (Institute for Health Metrics and Evaluation, 2018). All receipts are expressed in current US dollars in 2019, thus accounting for inflation. 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). We merged the aid data with the maternal mortality data by country and year.

The GGR was switched on in Republican Presidential periods starting with the original policy announcement by Reagan in 1984, and repealed in each Democratic presidency, generally on the President's first full day in office in late January. Thus, the GGR is defined as switched on during Republican Presidential regimes after the 1984 announcement (1985–1992; 2001–2008; 2017–2019) and switched off during all Democratic Presidential regimes (1993–1999; 2009–2016).

**Methods**

We first estimate impacts of GGR implementation on aid flows, and then on maternal mortality. To do this, we leverage switching of US Presidential Party through the last three decades, as this was systematically mirrored in repeal and reinstatement of the GGR. We regressed individual records of maternal mortality 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. This design rests on the premise 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 (Brooks et al., 2019; Bleakley, 2007; Acemoglu and Johnson, 2007). The estimated equation is:

$$Maternal\,Mortality_{ict} = \alpha + \beta GGR_t \times High_c + \delta_c + \lambda_t + \varepsilon_{ict} \quad (1)$$

Maternal mortality is an indicator for survival status of woman $i$ from country $c$ in year $t$, GGR is an indicator for a Republican President coming to power, which equates to the GGR being "switched on" in year $t$ and this is interacted with whether the country had above-median baseline exposed to the GGR ($High_c$). Country-specific time-invariant factors are captured in country-specific fixed effects ($\delta_c$), and secular changes are captured in year fixed effects $\lambda_t$. $\varepsilon_{ict}$ is a mean-zero unobserved stochastic error term. The identifying assumptions are 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, and that baseline exposure to aid is not capturing other baseline differences that might have generated divergent trends in maternal mortality.

Similar to Brooks et al. (2019) we define exposure to GGR as $High_c = 1$ 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 les than the median amount $High_c = 0$. Again similar to Brooks et al. (2019) we use 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:

$$Maternal\ Mortality_{ict} = \alpha + \gamma GGR_t \times Aid_c + \delta_c + \lambda_t + \varepsilon_{ict} \quad (2)$$

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.

**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).

**Conclusions**

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 (World Health Organization, 2020). 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.

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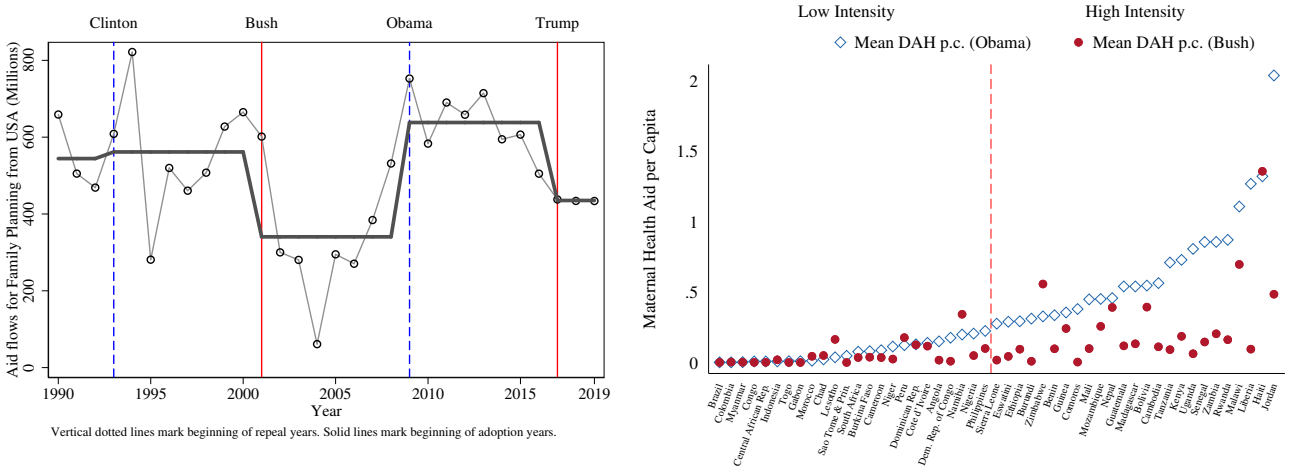
# Exhibits

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. * $p< 0.10$; ** $p< 0.05$; *** $p< 0.01$.