Global Effects Of The Mexico City Policy

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The recent restoration of the Mexico City policy has brought the issue of U.S. federal funding for non-governmental organisations (NGOs) to the forefront of the public consciousness. The conflict lies in the policy's mandate that NGOs that receive federal funds agree to neither perform nor actively promote abortion as a method of family planning. This means that any organization that wishes to continue to receive US funding must cease to provide abortion related services such as; education, family planning, counseling, and training if they wish to keep their federal funding. This has the potential to disrupt important health care services, including maternal health care, in regions of the world where additional funding is most needed. In our research we looked at some of the current and historical levels of contraceptive use, family planning methods in specific regions, maternal mortality and induced abortion rates, and the flow of federal funds into some of the largest NGOs.

Keywords: Mexico City policy, Global Gag Rule, NGOs, family planning, maternal mortality

Introduction

The issue of abortion in the United States is one that is fiercely debated and divides large segments of the population. These divides are inherently partisan and therefore have led to legislation. In 1984 the Reagan administration signed into law the "Mexico City policy", named for the city in which it was signed. The policy requires all non governmental organizations operating abroad to refrain from performing, advising on or endorsing abortion as a method of family planning if they wish to continue to receive receive federal funding.[1] The policy has had a tumultuous history, either being reinstated or rescinded depending on the party affiliation of the current president. Starting with Bill Clinton in 1993 the policy was rescinded, then restored by George W. Bush in 2001, rescinded again by Barack Obama in 2009, and most recently restored by Donald J. Trump in 2017[2].

At its heart, the ban is propelled by the desire to limit the use of U.S. taxpayer dollars to pay for abortion or abortion-related services. The consequences of this ban include the termination of abortion related services such as; education, family planning, counseling, and training. The all or nothing nature of the ban would also cut off funds for non abortion related health services that would be offered at non governmental health providers. This presents some serious public health concerns for areas of the world where these services are essential for maternal health and prenatal care.

We hypothesized that the institution of the ban could lead to a reduction in family planning services which could then lead to an increase in induced abortions. By restricting the flow of funds into health clinics that provide services related to abortion among others, the U.S. government restricts the amount of care that can be provided to those utilizing those services. The aim of this project was to gather, analyze, and present data on the past effects of the Global Gag Rule and

[1] The policy mandates that NGOs pledge to not "perform or actively promote abortion as a method of family planning" with non-U.S. funds as a condition for receiving U.S. global family planning assistance.

[2] As of Jan. 23, 2017, the policy extends to any other U.S. global health assistance, including U.S. global HIV and maternal and child health.

create a resource that assists our audience in understanding the scope of the policy, its observable impact on women's health, and the pathways through which it influences public health policy decisions outside of the United States.

Related Work

The United Nations' Department of Economic and Social Affairs has conducted various research via nationally-representative surveys. Their dataset[3] (World Contraceptive Use 2016) contains information about prevalence and unmet family planning needs for 195 different countries/areas of the world from 1950 to 2015. This information is broken down by type of contraceptive and specific demand for family planning through different methods, which was gathered through about 15 conducted surveys across the world. These types of indicators are effective in assessing the progress of universal reproductive health-care and family planning information in a geographical area. The global gag rule has been known to threaten the funding of certain health-care organizations, which may have effects on the prevalence of contraceptive and family planning methods.

The World Health Organization (WHO) published a study[4] in partnership with the Stanford University Department of Medicine in 2011 analysing the effects of the "Mexico City Policy" on a set of sub-Saharan African countries. Specifically, this study attempted to determine whether a relationship exists between the reinstatement of the Mexico City Policy and the probability that a sub-Saharan African woman will have an induced abortion. The Stanford researchers looked at the relationship between a country's exposure to the Mexico City Policy and the odds of abortion among women of reproductive age between 1994 and 2008. In this way they were able to find a statistically significant[5] relationship between the introduction of the Mexico City Policy and an increase in induced abortions.

The U.S. Administration of International Development (USAID), as the major government agency managing international aid, is responsible for reporting all official U.S. foreign aid to Congress. USAID maintains an extensively detailed database for reporting this data known as the Greenbook, which keeps records of foreign aid obligations and disbursements dating back to 1946. In addition to storing and reporting this data, USAID provides numerous open data development projects in order to encourage public collaboration on research and data analysis. The Foreign Aid Explorer[6] provides a dashboard for querying and downloading this dataset, but also includes its own visualizations and maps that provide informative breakdowns of global financial aid. This project was valuable for obtaining and becoming familiar with the USAID Greenbook dataset. To provide additional context for our analysis we referenced official statements from many of the NGOs that we identified as prominent in the reproductive health and family planning sector that clarify their activities in abortion counselling and their stances on the Mexico City Policy.

[3]World Contraceptive Use 2016, includes country-specific estimates of these and other indicators, based on survey data available as of April 2016 dataset link

[4]United States aid policy and induced abortion in sub-Saharan Africa study, dataset

[5]Women living in highly exposed countries had 2.73 (95% CI: 1.95–3.82) times the odds of having an induced abortion after the policy's reinstatement than during the period from 1994 to 2000 or than women living in less exposed countries. summary

[6]USAID is responsible for reporting official U.S. Government foreign aid to Congress and the Organization for Economic Cooperation and Development (OECD) Foreign Aid Explorer website

Methods

While the World Contraceptive Use 2016 dataset included levels of contraceptive and family planning methods for an extensive number of countries across the world, we chose to analyze a certain subset of this data. After the raw excel data was downloaded from the United Nations' website, it required a substantial amount of cleaning because of the format of the column headers. Once the columns were renamed, records for countries in sub-Saharan Africa were aggregated over time using dplyr. Reproductive health metrics for married/in-union women of reproductive age were examined across the time periods where the Mexico City Policy was active and inactive in the United States. Our hypothesis was that during periods where the policy was actively blocking funding, contraceptive prevalence would decrease, and unmet needs for family planning would increase. This would make sense because the policy blocks the entirety of funding for an organization if it provides any abortion counseling, so many NGOs would not be able to operate.

In approaching this analysis we needed to use some unconventional methods of data sourcing. For the data on induced abortions and exposure to the "Global Gag Rule" (GGR) we scraped a `.html` table that the WHO made available through the Stanford paper published on their website. Unfortunately for us, the hierarchy of the table did not easily lend itself to reshaping in R so a considerable amount of work was done to convert it into a long form `.csv` file. We were curious about some of the potential public health effects that the ban could have had historically on an area such as maternal mortality. The hypothesis that maternal mortality would be higher after the ban was instituted was based on our intuition. We used a dataset from the World Health Organization covering maternal mortality rates from 1990 to 2015 for every country. From there we broke the data into subsets to focus on the 20 sub-Saharan countries that we had exposure data on and added those rates onto our dataset. After we had a complete dataset we performed a linear regression to gauge whether our hypothesis was correct. In the model we used the variation in policy exposure compared against variation in the rates of maternal mortality while subsetting for abortion rates in the targeted countries.

While the Foreign Aid Explorer dashboard presents a lot of useful visualizations, the underlying USAID dataset captures a lot more specific detail for each funding activity that we wanted to leverage to ask more specific questions. The approach that we took to investigate patterns related to the impact of the Mexico City Policy on NGO funding involved exporting a subset of this dataset for use with our own custom visualizations. We chose to limit our data to the fiscal years 2001-2016, focusing on aid disbursements to NGOs with a designated 'sector' value of 'Health and Population'. This allowed us to easily work with and categorize funding that is the most likely to be impacted by the reinstatement of the policy. There were a few major questions we had about this data. Primarily, we wanted to understand the historical trends of USAID funding for NGOs that provide the specific services targeted by the Mexico City Policy. Our goal was to attempt to provide both an estimate of how much funding is 'at stake' and which NGOs in particular might be the most vulnerable to the implementation of the policy. While the USAID funding data does not provide enough information to determine whether a particular NGO provides abortion related counselling, education, or medical services, it allows us to target data for funding of activities with a specific 'purpose'. By looking at funding activity with a stated purpose of 'family planning' our intuition was that we would be likely to find numerous disbursements to NGOs that are actively pro-choice and provide many of the specific services outlined in the policy. Our first visualization of NGO aid disbursements provides a plot summarizing the year-by-year funding of the top 10 recipients of US foreign aid for 'family planning', along with a comparison of each of these NGOs to the total amount of funding for family planning. While investigating this data, we observed that many of the NGOs which account for a majority of this type of aid are also highly active in

other sectors related to global health and population health efforts. Our second visualization allows for exploration of the related efforts of some of the most-funded NGOs for family planning activities, and attempts to provide insight into the extent to which the global gag rule may impact funding for programs that do not fall directly under the umbrella of abortion counselling and medical services.

Results

An analysis of the United Nations' data revealed several key insights. Throughout the period of 1984 to 2014, among all Sub-Saharan African countries,[7] Zimbabwe and Cabo Verde had the highest prevalence of contraceptives, especially modern ones, which include sterilization, intra-uterine device (IUD), implant, injectables, pills, condoms, barrier methods, LAM, emergency contraception and others. This indicates a strong presence of sexual education in the population. Zimbabwe, which has a "low" exposure to the Mexico City Policy, as found in the WHO analysis, appears to have a contraceptive prevalence level that is largely unaffected by the activity and inactivity of the policy, as there is an upward increase for every year except 2011. In 2014, 66.9% of heterosexual couples in Zimbabwe used modern or traditional contraception. On the other hand, one year after, only 5.7% of the same grouping in Chad used any form of modern or traditional contraception, which was extremely low. Mali, a country that is known to have a "high" exposure to the policy, did not rise and fall in contraceptive prevalence as we anticipated in correlation with changes in the legislation. Instead, it exhibited a slower but fairly steady upward trend, just as Zimbabwe did (Figure 1.). The proportion of family planning demand satisfied by modern methods grew every year, however, the percent with unmet needs for family planning rose until around 2001 when it began to fall. As with these, and most of the other countries, there are not many obvious trends during the time periods when the Mexico City Policy was in effect.

In exploring the differences in the trends of induced abortion rates for the two main subsets of our data, we looked at the countries that were rated with a low exposure to the policy and countries rated with a high exposure. Though we saw an increase in abortion rates in countries that are considered highly exposed to the policy, the statistical significance was negligible.(Figure 2.) The two curves were calculated from "observational data" using a locally weighted smoothing (lowess) method. The linear regression model that we performed used the variation in policy exposure evaluated against variation in the rates of maternal mortality to determine of a connection could be made between the variables. The model that we performed did not show that there was a meaningful relationship.

Visualizing the flow of US foreign aid to NGOs provides significant insight that helps to contextualize the impact of the global gag rule. Observing the historical trends of family planning funding disbursed to NGOs showed a significant increase in government aid following the repeal of the Mexico City Policy by President Obama in 2009. While we can't make definite claims that this increase is directly related to the policy change, it illustrates that there has been significant growth in efforts to fund and implement family planning services since that time.

By narrowing our visualization to only the top 10 recipients of funding for family planning activity, we were not only able to present a clearer picture of the major organizations potentially affected by the policy, but were also able to observe that the majority of this type of aid funding passes through only a few large organizations. In particular, we noted that John Snow International (JSI), a public health research firm, accepts a large amount of USAID funding for family planning. These findings extend to our breakdown of each NGO's total funding by purpose,

[7] This group of Sub-Saharan includes 21 countries fully or partially located south of the Sahara.

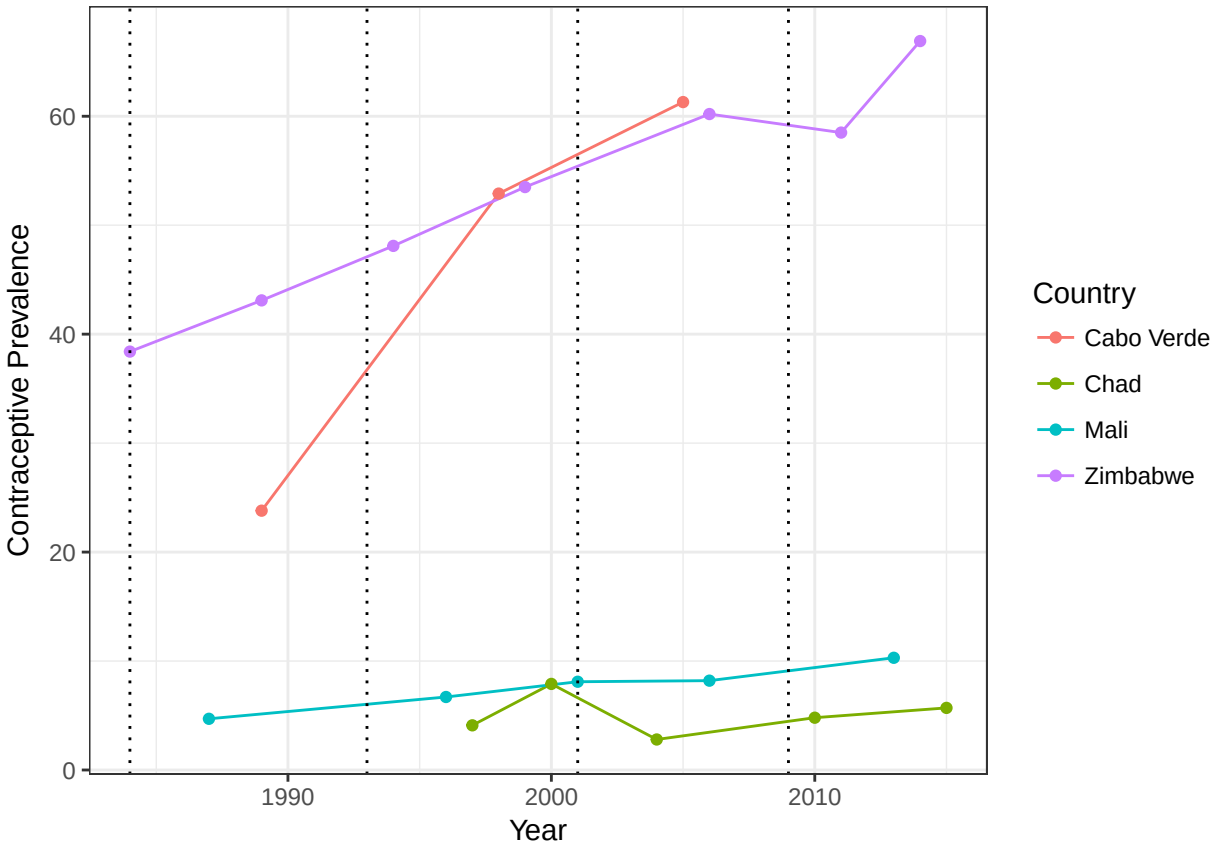

Figure 1: Married / In-Union Women

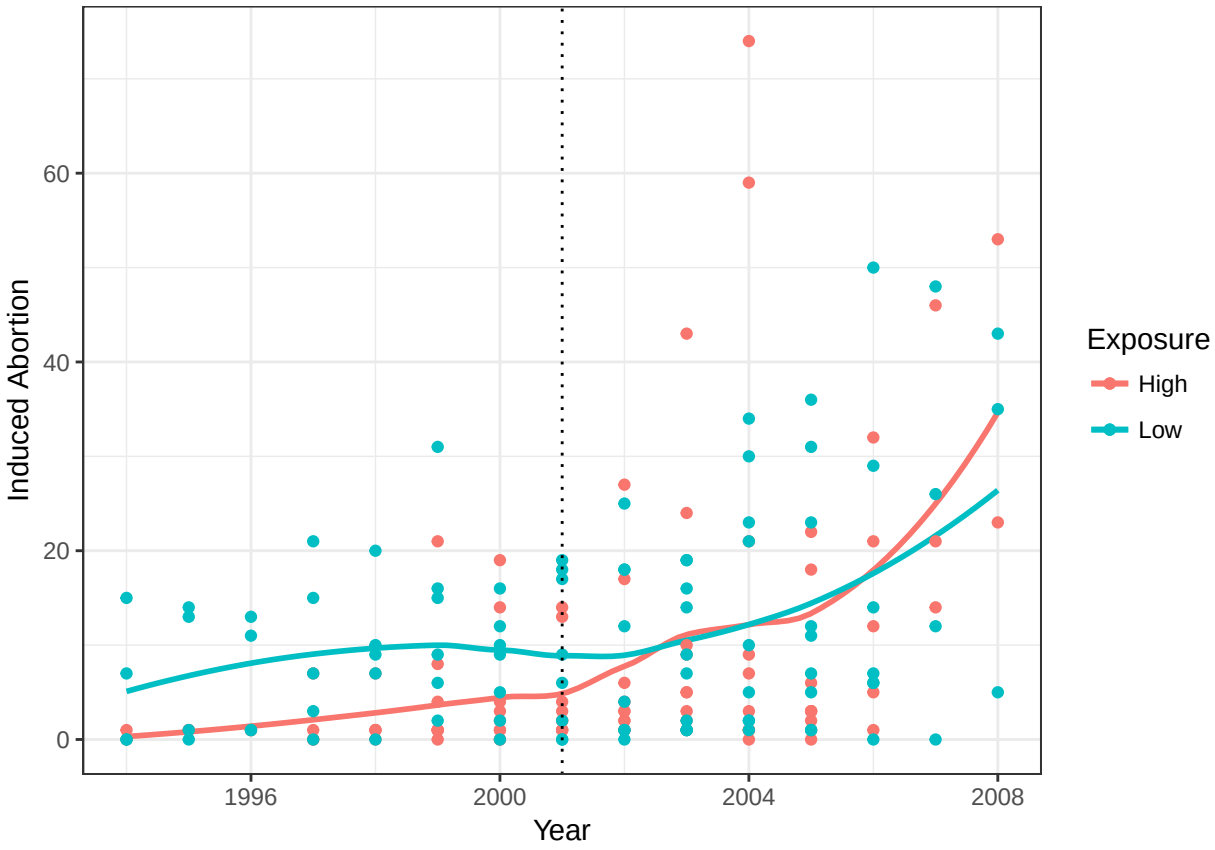

Figure 2: Abortion Rates With High Vs. Low Exposure

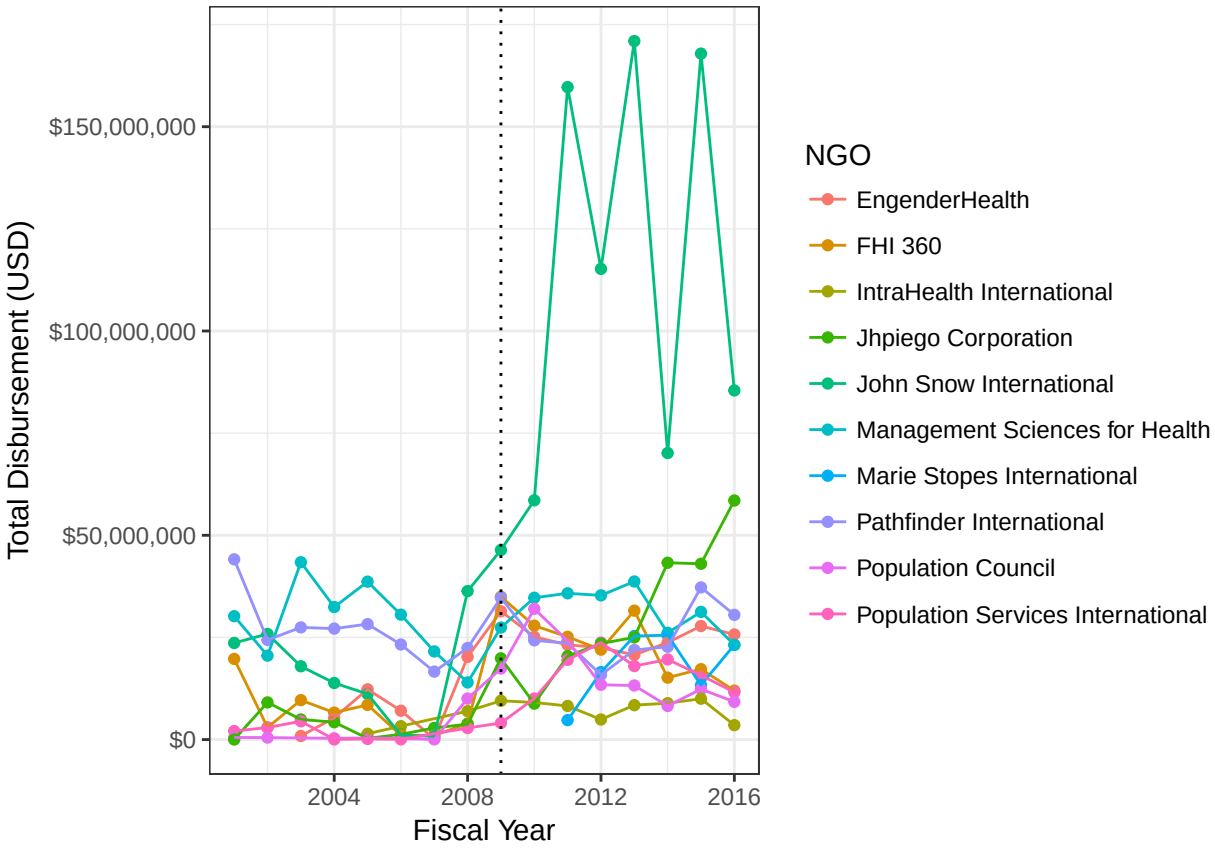

Figure 3: U.S. Aid to NGOs for Family Planning

which indicates that JSI has received billions of additional dollars of funding for work in other fields including Malaria control, STD control including HIV/AIDS, and a wide variety of basic health concerns. For each of the NGO's we examined, we found a wide variety of projects in health and population sectors. These findings underscore the notion that the global gag rule has the potential to disrupt advancement of aid funding for highly important work in improving population health on a much broader scale than maternal health alone.

Discussion

Analysis of the United Nations' data showed some interesting differences between sub-Saharan African countries with respect to contraceptive prevalence and needs for family planning. It is clear that countries like Zimbabwe have a more progressive use of contraceptives and family planning methods, and ones like Mali exhibit much less. However, our research sparks the question, why exactly is this the case? Economic and social changes in these countries must be largely driving these changes, in conjunction with the Global Gag Rule. While our initial intent was to analyze the pure effects of the policy, it is clear that this is difficult as there are many complex factors at play. Each country is often undergoing radical changes that affect women's reproductive health and family life, only one of which is the mentioned Mexico City Policy.

While we did find a small correlation between sub-Saharan countries where exposure to the policy was high, it was not substantial enough to be conclusive. It should also be noted that the abortion rate estimates are lower on average than those reported in other countries. These abortion rates have been adjusted to correct for underreporting. We were also unable to find a statistically significant relationship between the variables of maternal mortality rates and the presence of the policy. This does not mean that there is no correlation between these variables, it simply means that the datasets available to us lacked sufficient amount of features to control for. Because of this we can only conclude that more research should be done in this area. With datasets that contain a wider range of variables we could control for a host of external factors that may be influencing the outcome of the data.

Our results suggest that there is a significant degree of complexity to the flow of US aid funding through NGOs, and that a non-negligible amount of established funding is potentially at risk. Family planning efforts are often interwoven into other activities and projects which NGOs implement and focus on, such as STD prevention and general reproductive health. The results of our categorical breakdown of NGO funding motivates more formal research into the estimated effects of the global gag rule on NGOs in the population and health sector.

Future Work

Going forward, it is clear that the Mexico City policy has the potential for sweeping negative public health effects particularly for maternal health. Throughout our research the common theme has been the need for more data points and features. In order to truly understand the global implications of the policy, additional research must be conducted. Perhaps with more time, funding, and manpower a better analysis could be produced and an insight into the true effects of the policy reached. With respect to USAID funding, there are more relationships that are worth exploring in the Greenbook data. With a stronger background in finance and more data on the budgets of specific NGOs, it may be worthwhile to investigate which NGOs are the most "at risk" in terms of the proportion of their budget that is provided by US foreign aid. This analysis could be extended further to understand which populations and regions would face the most significant loss

of services and assistance from NGOs that provide family planning services and other vital health resources.