Update to M-CARES Project Pre-Analysis Plan for the Domain of "Financial Security"

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Data

This document provides an updated pre-analysis plan for the analysis of credit report data for the M-CARES project, years 1-5. The description of the data and analysis in this document supersedes the analysis plan for credit report data in the initial M-CARES pre-analysis plan document (Bailey et al. 2017). Elements of the analysis not specified here can be assumed to follow Bailey et al. (2017).

Experian Credit Reporting Agency Data

We plan to link to data from Experian, one of the three major credit reporting agencies (Bailey et al. (2017) initially proposed to look at Equifax and Transunion data). As consented to by participants, we will send Experian study participants' names, social security numbers (SSNs), and addresses. Experian will link the data, remove identifying information, and send the M-CARES team the de-identified file.

Archive Selection

Experian is able to provide essentially "real time" data on credit reports as well as historical data available from at least 2001. We plan to purchase four archives per year per participant. If we are not able to secure sufficient funding, we will reduce the draws accordingly to two or three archives per year per participant. Future study of effects in the longer term will draw upon additional archives, and this analysis plan will be updated with plans for these archives and variables.

Sample and Selection into Sample

Having a delinquency or bill in collection may itself lead to the creation of a record in the credit reporting agency data. We will therefore conduct the following analysis to determine our primary sample:

We will evaluate whether match rates differed over time across the treatment arms. If we find no differential change in match rates over time (suggesting that, e.g., those who received vouchers were not more or less likely to match in later archives), we will conduct the analysis on all participants, including those who do not have a pre-intervention credit report match. In a robustness check, we will limit the sample to only those with a pre-intervention credit report match.

If we find significant differences in match rates over time across treatment arms, we will instead conduct our primary analysis using those who had at least one pre-intervention credit report match.

Outcomes

The original analysis plan specified analysis of outcomes in the domain of "Financial security." We specified in hypothesis 5 that M-CARES vouchers will increase financial security in five dimensions. We update these dimensions to reflect changes in data availability and increased familiarity with the data. In choosing these outcomes, we followed previous work by Miller, Wherry, and Foster (2020).

In this version of the analysis plan, we have also added additional exploratory analyses to examine whether there are changes among other individuals who live at the participant's address.

Our analysis of financial security groups outcomes into a domain and adjust for multiple comparisons using the Westfall and Young algorithm within this domain. We will also examine secondary outcomes described below.

Primary Outcomes: Household Financial Distress:

a. Household financial distress index which consists of the items in 1b-1e (below) standardized as described in Bailey et al. (2017).
b. Third party collections (overall and by medical/non-medical): Collection records contain information on unpaid bills that have been sent to third parties for collection efforts. These bills include utility, retail, medical, and credit card bills that are severely past due (typically more than 120 days). Because unplanned pregnancies could result in medical bills in particular, we will consider medical and non-medical collections separately in a secondary analysis. **We will include the number of bills sent to collection and the amount owed to collections**
c. Debt 30 days past due or more: Credit accounts, such as credit cards or loans, report to credit agencies if they hold debt 30 days past due or more. We will examine whether improved access to effective contraceptives affects **the number of debts that are delinquent debt in a consumer's name as well as the amount of delinquent debt in dollars.**
d. Credit score (reverse coded): Credit score is a metric that summarizes a consumer's default probability, as estimated by the credit reporting agency. A consumer's credit score depends on many factors, including the length of her credit history, her delinquency behavior, and the amount of credit being used as a function of total credit. We will examine whether improved access to effective contraceptives affects the consumer's credit score.

Secondary Outcomes for Study Participants:

1. Total debt
2. Number of evictions
3. Student loan debt
4. Credit card debt
5. Auto debt
6. Available credit remaining on credit cards
7. Total credit limit across all revolving accounts
8. Mortgage debt
9. Bankruptcies
10. Foreclosures

We will also conduct exploratory analysis that examines whether the consumer has any such debt or delinquency, and if they have debt or delinquency above the 25th percentile, 50th percentile, or 75th percentile of the control group distribution. For credit score, we will examine whether or not the credit score falls into the "prime," "near prime," "subprime," or "deep subprime" ranges, as defined by Experian (see, https://www.experian.com/assets/consumer-information/product-sheets/vantagescore-3.pdf). We will consider these results exploratory and not include them in our multiple comparison adjustments.

<u>Secondary Outcomes for Members of Study Participant Households</u>:

In an exploratory analysis, we will also examine how the intervention affected others living at the study participant's address. In this analysis, we will examine all primary and secondary outcomes listed for the participants above. Because data from Experian provides only information on address, not household, we may decide to trim addresses that appear to be capturing multi-family buildings.

Model Specification

Our model specification will follow that outlined in the M-CARES Year 1 PAP (Bailey et al. 2017). In addition, we will include the pre-intervention value of the outcome variable as a candidate control variable X_i following procedures outlined in Section 3.2 of that document to improve precision.

References

Bailey, M.J. et al. (2017). Pre-Analysis Plan for Year 1 of the Michigan Contraceptive Access, Research, and Evaluation Study (M-CARES). Updated February 26, 2020. Accessed here: https://osf.io/gc9m6/?view_only=20728b9c95a3466c8e8f0d281b6df23b.

Miller, S., L Wherry and D. Foster (2020). The Economic Consequences of Being Denied an Abortion. NBER Working Paper 26662.