Evaluating impact of outreach nudges among individuals losing Medicaid coverage in California

Principal Investigators

Emory Wolf, MPP, Covered California 1601 Exposition Blvd Sacramento CA 95815
Emory.wolf@covered.ca.gov

Marina Lovchikova, PhD, Covered California, 1601 Exposition Blvd Sacramento CA 95815
Marina.lovchikova@covered.ca.gov

Conflict of Interest
None

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Design Document and Analysis Plan

Project Objective
In May 2023, Covered California, California's ACA marketplace, implemented its automatic enrollment program for individuals losing Medicaid coverage, as defined by Senate Bill 260. If individuals are found eligible for subsidized marketplace coverage, individuals will be automatically enrolled in the lowest cost silver plan available to them, but individuals must still take action to confirm their plan or pay their first month's premium. To identify whether the phone outreach is the effective outreach strategy to increase take-up in this population, Covered California implemented this intervention. The results of this evaluation will inform operational and budgeting decisions.

Target population
The experimental population includes an estimated 60,045 households among consumers who have been discontinued from Medi-Cal, California's Medicaid program, and found eligible for subsidized marketplace coverage.

Interventions and Randomization

We evaluate the effectiveness of phone outreach on health insurance take-up among auto-enrolled households given that this is a new population for Covered California.

The project's research design is a block-randomized intervention among automatically enrolled households. We separate households by preferred spoken language and net premium of the assigned health plan and randomly assign households within each on continuous basis to (1) a control group with a standard eligibility notice for auto-enrolled households, or to (2) a treatment group to receive additional phone outreach from Covered California's service center.

Table 1. Approximate sizes of control and treatment groups for the evaluation

Cohort month	Control	Treatment
August 2023	750	500
September 2023	1,698	5,365
October 2023	7,466	3,132
November 2023	1,838	4,935
December 2023	487	5457
May 2024	6,696	2,021
June 2024	8,000	2,100
July 2024	8,000	2,100
Total	**30,101**	**29,944**

Power:
To arrive at an estimate for the minimum detectable effect (MDE) for our primary outcome, we assume a baseline health insurance take up of 6 percent. The baseline rate was determined with the historical data on the plan effectuation of individuals disenrolled from Medi-Cal in 2018-

2022 years. The intervention was powered at the 80% level to detect a 0.6 percentage point increase in effectuation rate[1].

Likely Effect Size:
Based on prior phone outreach campaigns carried out by Covered California, we would expect to observe an ITT effect between 0 and 4 percentage points.

Data and Data Structure
Outcomes:
We use Covered California administrative data to examine health insurance take-up behavior and health care utilization among households included in the study.

The primary outcome of interest will be a binary indicator for whether a consumer is effectuated into Covered California plan, either the plan assigned through the auto-enrollment process, or into another plan chosen by the consumer by the end of the month at which outreach was conducted.

Our secondary outcomes will be measured 1-2 years after the intervention when data becomes available will include:
1. Tenure with Covered California (measured in months);
2. A binary indicator for whether someone had an office visit during 1-2 years since the intervention;
3. A binary indicator for whether someone had a prescription drug fill during 1-2 years since the intervention;
4. A binary indicator for whether someone had an emergency room visit during 1-2 years since the intervention;
5. A binary indicator for whether someone had a hospital admission 1-2 years before and 1-2 years after the intervention.
6. Total out-of-pocket spending for the 1-2 years since the intervention
7. A binary indicator for whether someone self-reported being uninsured while filing their taxes;

Data:
We will use Covered California administrative data to obtain enrollment outcomes and baseline demographics for our sample and health care claims database to obtain health care utilization and financial outcomes.

We will use data from the Department of Health Care Access and Information for hospital admissions data for all individuals in the intervention. We will use data from the California Franchise Tax Board to measure which individuals reported not having Minimum Essential Coverage (MEC) while filing their state taxes.

Quality Control Checks:
After carrying out the randomization, we will check for balance across several observable covariates (e.g., gender of head of household, presence of email address on the application,

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[1] Authors' calculations based on a two-sample proportion Pearson's chi-squared test using Stata 18 SE software

age, and income as a percent of the federal poverty level), which could indicate that there would be no significant dissimilarities across treatment arms.

Statistical Models

Intention-to-treat estimation: To estimate treatment effects, our primary analysis will be an intent-to-treat (ITT) specification, examining the effect of treatment assignment. We will estimate the effect of the treatment using ordinary least squares (OLS) regression. That is, we will regress the outcome of interest (e.g., take-up) for household *i* on the treatment indicator:

$$outcome_i = \propto + \beta_1 Treatment_i + \varepsilon_i$$

The coefficient β_1 will be the intent-to-treat estimate of the causal effect of the outreach.

Complier average causal effect estimation: We will examine the effects of health insurance (among households induced to enroll in a Covered California as a result of random assignment) on our four utilization outcomes. We anticipate a significant share of noncompliers among those households assigned to receive outreach (intervention) as they may have opted out of assigned plan or not enroll into another Covered California plan. Thus, to augment our analysis of insurance take-up, we will also estimate treatment effects based on treatment receipt (enrollment into Covered California Plan), using two-stage least squares regression (2SLS).

Pre-Specified Subgroup Analyses
We will examine treatment heterogeneity by race and ethnicity of the head of household, written or spoken language, gender of head of household, income group measured by the percentage of the federal poverty level, net premium of assigned plan, age bracket (30 years and younger, 31-49 years old, older than 50 years old), health status as measured by HCAI discharge data, mixed eligibility household status. Same subgroup analyses will be performed for our complier average causal effect analysis.

Inference Criteria, Including Any Adjustments for Multiple Comparisons:
We will not perform any corrections for multiple hypothesis testing, and we will use two-tailed tests with p-values <= 0.05 to denote statistically significant effects.