



**FEDERAL RESERVE BANK
OF MINNEAPOLIS**

Community
Development
and Engagement

WORKING PAPER

Evaluation Plan: Enhanced Services Pilot of the Montana Reemployment Services and Eligibility Assessment Program

October 2023

Tyler Boesch

Federal Reserve Bank of Minneapolis

Ayushi Narayan

Federal Reserve Bank of Minneapolis

Ryan Nunn

Federal Reserve Bank of Minneapolis

Keywords: Reemployment services, Randomized control trial, Pre-analysis plan

The views expressed herein are those of the authors and not necessarily those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.

Evaluation Plan: Enhanced Services Pilot of the Montana Reemployment Services and Eligibility Assessment Program

Tyler Boesch, Ayushi Narayan, Ryan Nunn

Federal Reserve Bank of Minneapolis

Abstract: The Reemployment Services and Eligibility Assessment (RESEA) Program is a state-administered program funded through the U.S. Department of Labor to help unemployed workers find jobs. Montana's Department of Labor and Industry has implemented a randomized pilot in which the treatment group is requested to use enhanced virtual services before a RESEA appointment. These enhanced services include resources such as checklists for résumé development, video trainings for utilizing labor market information, and information about career exploration. This document outlines the plan for evaluating the randomized pilot.

Background

The Reemployment Services and Eligibility Assessment (RESEA) program is a state-administered program funded through the U.S. Department of Labor to help unemployed workers find jobs. In 2019, roughly 1.2 million, or 10 percent of, individuals on unemployment insurance (UI) participated in the program (Boesch and Lim [2023](#)). During the COVID-19 pandemic, the RESEA program faced additional challenges related to service delivery, as described in Boesch and Lim ([2023](#)). Notably, social distancing requirements forced a shift to the remote provision of services. The shift to remote provision also allowed individuals located in more secluded areas to access services. An open question is how the delivery of services remotely can enhance the efficacy of the program. In this analysis plan, we outline our strategy to evaluate a new set of online services provided by the Montana Department of Labor and Industry (MT DLI).¹

The set of online services we study are those provided by Reemployment Central, a new tool MT DLI has developed for virtual service delivery to assist job seekers, including RESEA participants, with reemployment. Reemployment Central, uses the Moodle platform to provide users with access to numerous resources such as checklists for résumé development, video trainings for utilizing labor market information, and information about career exploration. The goal of this tool is to offer information and activities to job seekers outside the typical one-on-one appointment window with the intent of improving one-on-one appointment efficacy.

To evaluate the impact of these additional services, DLI has implemented a randomized pilot in which the treatment group is requested to use enhanced virtual services, i.e., Reemployment Central, before a RESEA appointment. Job seekers are required to complete three activities in Reemployment Central, one of which must be a résumé checklist, and they have access to any other resources they wish to use beyond the required three. Job seekers having access to these resources prior to an appointment offers them an opportunity to prepare, consider options, and attend in-person appointments with more concrete goals in mind, with the intention of improving the specificity and quality of assistance received at appointments.

Project Team Members

The State of Montana has designed and conducted a pilot study of RESEA services, with emphasis on new enhanced services provided through its Reemployment Central platform. Federal Reserve Bank of Minneapolis staff are providing assistance with evaluation of the pilot.

Tyler Boesch
Data Scientist
Community Development and Engagement
Federal Reserve Bank of Minneapolis

Christopher Bradley
Senior Economist
Department of Labor and Industry
State of Montana

¹ Well before the pandemic, the state of Montana became interested in addressing barriers to participation in RESEA for those living far away from job services offices, where services are delivered in person. Virtual service delivery was one potential solution.

Logan Hendrix
Senior Economist
Department of Labor and Industry
State of Montana

Ayushi Narayan
Economist
Community Development and Engagement
Federal Reserve Bank of Minneapolis

Ryan Nunn
Assistant Vice President
Community Development and Engagement
Federal Reserve Bank of Minneapolis

Data privacy is a priority. Any contact with program participants is by the State of Montana only. All information used for evaluation purposes is stripped of personally identifiable elements before it is securely transferred by the state to the evaluation team at the Federal Reserve. Data movement, use, and storage are governed by a legally binding agreement between the two entities.

Structure of evaluation

Eligibility and assignment to RESEA

Eligibility for RESEA is largely defined by the rules governing unemployment insurance in Montana.² Each week, newly approved claimants for unemployment insurance are eligible for RESEA. If the number of new UI applicants is below a state-determined threshold, all applicants are *required* to receive RESEA services. During most of the pilot, that threshold was 100. Consequently, if there are more than 100 new UI applicants, the 100 applicants with the highest assessed probability of benefits exhaustion (i.e., continuing to claim UI until reaching the maximum allowable number of weeks) are required to participate in RESEA services, and the remainder are not required. For any given cohort, it may be that all members are required to participate in RESEA. That is, if a cohort has 100 or fewer members, all of them will be so required. For the duration of the pilot, the cohorts have had sufficiently low numbers so that the large majority of UI recipients are selected to receive RESEA services.³

² Not all UI claimants are subject to RESEA. Claimants on temporary layoff (job-attached), employed through union hiring halls, filing interstate claims, and claimants meeting other criteria are excluded from the program. On the other hand, according to law, veterans are given preference in assignment to RESEA.

³ The assessment of benefits exhaustion probability is made using a so-called profiling model, developed by the state, that takes into account worker characteristics like their years of education, occupations, and other variables like the tenure at their previous employer. In principle, the profiling model accurately distinguishes between those who are unlikely to exhaust their benefits and those who are likely to do so.

Assignment to treatment

After being assigned to RESEA, participants are randomized into either “enhanced services” or standard RESEA. RESEA participants face a 50 percent chance of being required to receive enhanced services provided through the Reemployment Central platform, followed by a RESEA appointment with an agent. Enhanced services consist of a résumé checklist in addition to two other offered services, which include options like video trainings covering job search essentials, and interviewing and applicant tracking systems. Having received these services, participants must then attend a standard RESEA appointment with an agent. During the pilot, roughly 20 percent of participants selected to receive enhanced online services have been waived from enrollment due to job attachment before their scheduled appointment. A further 10 percent have failed to take up the program despite it being a precondition for receiving UI benefits.

If not randomly selected for enhanced services, participants are only required to attend a standard RESEA appointment. While not required to do so, participants may elect to receive enhanced services if desired. However, this is very uncommon. Less than 1 percent of pilot control members have opted to enroll in the program. Features of the program make it unlikely that participants would notice the opportunity or avail themselves of it.

Note that the number of eligible participants varies across cohorts, but treatment selection probability does not. For example, if only 80 workers apply for UI in a given week, 40 will be assigned to the enhanced services treatment and 40 will be assigned to the RESEA control. If 120 workers apply for UI, then 50 workers will be assigned to the enhanced services treatment and 50 will be assigned to the RESEA control. 20 workers would not receive any RESEA services.

Timeline

The first cohort of participants was evaluated for RESEA eligibility on February 25, 2023. Each subsequent week, another cohort was evaluated for RESEA eligibility. Because the state is targeting 1,300 total members of the treatment group and 1,300 total members of the control group, we anticipate that the last cohort will be evaluated for eligibility in fall 2023.⁴

We expect to produce a preliminary report on the results of this evaluation plan in 2024, using post-treatment data that will be available at that time. Subsequently, we expect to produce a final report with at least two quarters of post-treatment data, including wages.

Analysis plan

This section details an evaluation plan that aims for a better understanding of how enhanced services affect RESEA participants. Randomization of the enhanced services requirement allows these effects to be estimated.

Subsections below focus on the use of pre-treatment variables, the outcomes of interest, and the identification strategy for parameters of interest.

⁴ During a three-week period in which the virtual platform was under renovation, incoming cohorts were not included in the pilot.

Pre-treatment variables and balance

Even when a treatment is explicitly randomized, it is desirable to observe pre-treatment characteristics of participants. This allows for validation of the randomization, i.e., confirmation that treatment and control groups are roughly balanced on observable characteristics. It also allows for more precise estimates of the treatment effect.

We plan to assess balance in the treatment assignment on the following variables:

- Date of treatment assignment
- Gender
- Age: <25, 25-54, >55
- Race/ethnicity
- Educational attainment: <HS, HS only, two-year degree only, four-year degree only, more than a four-year degree
- County of residence
- Profiling score
- Weeks of UI already claimed at time of treatment assignment
- Full-year wages in the year before the quarter of initial UI claim
- Wages in the quarter before filing initial UI claim
- UI benefit amount
- RESEA agent handling an appointment

Assuming that missing values for each of these variables are few, each will also be used as controls in the appropriate regression specification. To assess balance, we will report a table of means and standard deviations of each variable in the treatment (Enhanced RESEA) and control (Standard RESEA).

Post-treatment outcomes of interest

RESEA services are intended to help workers regain employment faster than they otherwise would. Within the RESEA program, Reemployment Central is designed to improve the usefulness and accessibility of reemployment services. As such, the chief questions of interest are about post-assignment program participation and subsequent labor market outcomes.

The core program participation outcomes we plan to assess are:

- Engagement with reemployment services
 - Completion of scheduled appointments
 - Participation in nonmandatory activities
 - enrolled in job service program after appointment,
 - contact with job services staff after appointment,
 - had contact with job service staff after appointment
- Total benefits claimed
- Percent of available benefits claimed

The core labor market outcomes we plan to assess are:

- Amount of work search performed
- Total UI weeks claimed
- Employment
- Wages

Estimation Strategy

We will estimate regressions where our main coefficient of interest will be that on an indicator for whether the individual was assigned to the enhanced services group. This will provide us with an intent-to-treat estimate for the enhanced services pilot. Our sample will consist of cohorts for which half of participants were randomly offered enhanced services. The primary specification for our regressions will include cohort effects and baseline characteristics, both to increase precision in our estimates. Additional analyses will explore heterogeneity based on macroeconomic conditions. The following section provides more detail on our preferred estimation strategy.

When assessing treatment effects on multiple outcomes, we plan to minimize the chance of false discoveries of statistically significant effects. We do two things to address this. First, we will limit the number of core worker outcomes that we assess. Second, we will explore a formal statistical correction for multiple hypothesis testing.

Future work may explore similar outcomes measured at a longer time horizon to assess whether effects persist, increase, or decrease with time. Heterogeneity analyses may further help identify when and for whom additional online services are most beneficial.

Parameters of interest and identification

For the study population described above, we aim to estimate the effect (intent-to-treat) of the offer of enhanced services within the RESEA program.

We use the following notation:

- C_i denotes the cohort j for participant i .
- n_j denotes the share of participants in cohort j .
- D_i denotes randomly assigned treatment status for participant i .
- $Y_i(1)$ and $Y_i(0)$ denote treated and untreated potential outcomes for participant i , each of whom will belong to a study cohort j .

Potential outcomes define the concept of a treatment effect for every unit.⁵ Participant i 's treatment effect equals the difference between its outcomes in the state of being treated and the state of being untreated: $Y_i(1) - Y_i(0)$. Of course, any given participant will only inhabit one state, for which we will then observe the outcome. For those randomized to receive treatment, our survey measurements represent $Y_i(1)$, their actual outcome having received treatment. For those randomized into the control group, we observe $Y_i(0)$, their actual outcome having not received treatment.

Randomized treatment assignment allows for a relatively straightforward identification of the average treatment effect. Since control group members are a random draw from the study sample, their outcomes show what would have happened had the entire sample been untreated: $E[Y_i(0)|D_i = 0] = E[Y_i(0)]$. For

⁵ See Rubin (2005) for one discussion of the potential outcomes framework.

the same reason, the average outcome in the randomized treatment group is the same as the average treated potential outcome in the whole sample: $E[Y_i(1)|D_i = 1] = E[Y_i(1)]$. Therefore, randomization means that the average outcome for treated units minus the average outcome for untreated units equals the average treatment effect: $E[Y_i(1)|D_i = 1] - E[Y_i(0)|D_i = 0] = E[Y_i(1)] - E[Y_i(0)] = E[Y_i(1) - Y_i(0)] = \tau_{ITT}$. In order for this to be correct, we require the standard assumption that treatment received by one participant does not affect outcomes for any other participant.⁶

Participant characteristics at baseline, denoted by X_i , are not strictly necessary for identifying τ_{ITT} , but are included in order to enhance precision (Angrist and Pischke 2009). Similarly, we include indicators for cohort even though treatment assignment is random within cohort.

We are interested in the **intent-to-treat effect (ITT)** of being offered enhanced virtual services—relative to core services—among the study population.

$$\begin{aligned}\tau_{ITT} &\equiv E[Y_i(1) - Y_i(0)] \\ &= \sum_{j=1}^J n_j E[Y_i(1) - Y_i(0) | C_i = j, X_i] \\ &= E[\tau_{ITT}^j]\end{aligned}$$

Under the assumption that the treatment effect is constant over time and across participants, we can then implement the following linear regression to recover τ_{ITT} . This constitutes our baseline specification.

$$Y_i = \beta D_i + X_i \gamma + \delta_j + \epsilon_i$$

However, treatment effects can vary with participant characteristics and time. We do not have a sufficiently large sample size to explore variation in treatment effect across groups of participants. For the same reason, we do not attempt to estimate treatment effects that can vary freely by cohort. But we can allow for treatment effects that vary with macroeconomic conditions. To accommodate this, we proxy for macroeconomic conditions with Montana's unemployment rate, interacting that proxy with the treatment indicator. Formally:

$$Y_i = \beta D_i + \eta D_i * UR_t + X_i \gamma + \delta_j + \epsilon_i$$

where UR_t is Montana's unemployment rate in a given month (as provided in the Local Area Unemployment Statistics) and the unemployment rate main effect UR_t is subsumed in the cohort effects δ_j . β remains our coefficient of interest.

⁶ The Stable Unit Treatment Value assumption requires that potential outcomes for a given participant be unaffected by treatment given to a different participant. For example, reemployment services received by person X in the treatment group cannot change the likelihood of subsequent UI receipt by person Y in the control group. Given how small the participant pool is in this study, we regard the assumption as defensible.

Acknowledgments

Some of the structure and content of this analysis plan is borrowed with permission from Goodman-Bacon, Palmer, and Nunn (2023). The authors thank Katie Lim and Matt Gregg for contributions and consultation in early stages of this work. Christopher Bradley and Logan Hendrix contributed to evaluation design throughout its development. However, any errors are the responsibility of the authors.

References

Angrist, Joshua D. and Jörn-Steffen Pischke (2009). [*Mostly Harmless Econometrics: An Empiricist's Companion*](#). Princeton University Press.

Goodman-Bacon, Andrew, Vanessa Palmer, and Ryan Nunn (2023). [Evaluation Plan: Minneapolis Guaranteed Basic Income Pilot](#). Federal Reserve Bank of Minneapolis.

Rubin, Donald B (2005). [Causal Inference Using Potential Outcomes](#). *Journal of the American Statistical Association*, vol. 100 (469): 322–31.