



Evaluation Design Options Report

Veterans' Employment and Training Services (VETS) Research Study Design

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Disclaimers and Language Usage

Unless otherwise noted, we use the term *veteran* to refer to anyone who was discharged from an active component of the armed services under conditions other than dishonorable (i.e., Army, Navy, Air Force, Marines, Coast Guard) and to reservists who served on active duty for more than 180 consecutive days. Reserve component members (e.g., National Guard, Army Reserve) are not included unless they made the active duty requirement (180 consecutive days) or accumulated at least 20 years of service. This is the definition the VETS program uses (DOL, 2014a).

In several places, this document touches on statutory and regulatory issues; those include the details of VETS program service provision and statutory provisions for sharing data. This report is not a legally binding document. We have provided our best understanding of the legal issues. That understanding could be incorrect or incomplete.

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¹ For full details on interview dates and interviewees, see Appendix A of the project's *Knowledge Development Report*.

List of Acronyms

ACF	Administration for Children and Families
ACS	American Community Survey
AFQT	Armed Forces Qualification Test
AJC	American Job Center
CATI	computer-assisted telephone interviewing
CBA	Cost-benefit analysis
CEO	Chief Evaluation Office
CLEAR	Clearinghouse for Labor Evaluation and Research
CPS	Current Population Survey
DC	Disability Compensation
DiD	Difference in Differences
DMDC	Defense Manpower Data Center
DoD	U.S. Department of Defense
DOL	U.S. Department of Labor
DVA	U.S. Department of Veterans Affairs
DVOP	Disabled Veterans' Outreach Program specialist
EB	Extended Benefits
ES	Employment Service, Wagner-Peyser
ETA	Employment and Training Administration
EUC	Emergency Unemployment Compensation
FY	fiscal year
ICS	individualized career services
IRS	Internal Revenue Service
ITA	Individual Training Account
ITT	Intention to Treat
JTPA	Job Training Partnership Act
JVSG	Jobs for Veterans State Grants program
KDR	<i>Knowledge Development Report</i>
LVER	Local Veterans' Employment Representative
MEPCOM	Military Entrance Processing Command
NDNH	National Directory of New Hires
NSC	National Student Clearinghouse
NSV	National Survey of Veterans
OCSE	Office of Child Support Enforcement
OMB	Office of Management and Budget
OPM	Office of Personnel Management
PGIB	Post 9/11 GI Bill
PIRL	Participant Individual Record Layout
PSM	Propensity Score Matching
RQ	research question
SBE	significant barrier to employment
SSA	Social Security Administration
SORN	System of Records Notice

SSI	Supplemental Security Income
SSN	Social Security number
TAA	Trade Adjustment Assistance program
TAP	Transition Assistance Program
TEGL	Training and Employment Guidance Letter
ToT	Treatment on the Treated
UCX	Unemployment Compensation for Ex-Servicemembers
UI	Unemployment Insurance
VDEI	Veterans' Data Exchange Initiative
VETS	Veterans' Employment and Training Services program
VPL	Veterans Program Letter
WDB	Workforce Development Board
WEX	Work Experience File
WIA	Workforce Investment Act of 1998
WIASRD	Workforce Investment Act Standardized Record Data
WDB	Workforce Development Board
WIB	Workforce Investment Board
WIOA	Workforce Innovation and Opportunity Act

Executive Summary

The Department of Labor’s workforce system serves veterans both through the dedicated Jobs for Veterans State Grants (JVSG) program, as well as through resources available to the broader population—most notably the Workforce Investment and Opportunity Act (WIOA) Adult and Dislocated Worker programs and the Wagner-Peyser Employment Services (ES).

Recognizing the potential of evaluation research to improve employment and training services to veterans, DOL’s Chief Evaluation Office (CEO) in partnership with DOL’s Veterans Employment and Training Services (DOL VETS), awarded a design contract—the “**Veterans’ Employment and Training Services Research Study Design**”—to Abt Associates and its partners, RAND Corporation and Capital Research Corporation. The objective of this contract is to “develop design recommendations” in response to a series of research questions aimed to expand DOL’s understanding its programs that serve veterans and how they might be improved. Among the research questions are those specified in Section 502 of the **Jeff Miller and Richard Blumenthal Veterans Health Care and Benefits Improvement Act of 2016** (PL 114-315), which directs DOL to fund a “longitudinal study of job counseling, training, and placement service for veterans.”² This report presents design options to meet this requirement and add to the evidence base on veterans’ workforce development and employment assistance needs.

Chapter 1 of the document provides background information and a theory of action. Chapter 2 discusses relevant data and Chapter 3 discusses methods. Chapter 4 is the core of the report. It uses the discussions of data and methods to systematically present and compare a wide range of design options to address four types of research questions:

- **Implementation:** What services are made available to veterans in American Job Centers (AJCs)?
- **Descriptive:** What are the characteristics of veterans? Characteristics of interest include demographics, military service, receipt of education and vocational rehabilitation benefits, utilization and perception of AJC services, and subsequent outcomes—in particular employment and earnings. The statute specifies that these characteristics be reported separately for three groups of veterans: (i) those using intensive workforce services in AJCs; (ii) those using only non-intensive workforce services in AJCs; and (iii) those using no workforce services.
- **Causal (Impact).** What difference does receipt of workforce services make in veterans lives?
- **Cost/benefit.** How much do those programs cost? And, how do the costs compare to the benefits (i.e., the impacts of the program)?

Chapter 5 of the document summarizes the discussion and provides some cross-cutting observations. An appendix to the document list the statutory research questions, discusses the statutory requirements, and considers issues related to addressing those requirements.

The next four sections of this Executive Summary provide a high-level summary of the design options discussed in more detail in Chapter 4 of the body of the document. At the end of this Executive Summary,

² <https://www.congress.gov/114/plaws/publ315/PLAW-114publ315.pdf>. See Appendix A for the exact statutory language.

Exhibit ES.1 lists all of the design options described in this report. Chapter 4 of this report also contains a series of tables that respectively compare options for answering each of the four types of research questions.

ES.1 Design Options to Address Implementation Research Questions

Substantial changes have occurred to DOL programs serving veterans in recent years—including new JVSG guidance regarding serving veterans with significant barriers to employment and the authorization of WIOA. Given the lack of published descriptions that capture AJC’s responses to such changes, there is a gap in understanding AJCs’ current service delivery approaches to veterans. There are several complementary approaches to gathering information needed to thoroughly describe the current service delivery landscape for veterans.

1. **Site Visits** to a sample of states, Workforce Development Boards (WDBs), and American Job Centers (AJCs) providing services to veterans. This approach would provide deep information on a sample of states, WDBs, and AJCs. For more on this approach see the discussion of Design Option 1.1 in the body of the report.
2. **Survey** all—or a substantial number of—states, WDBs, and AJCs. Building on the deep information collected from site visits, this approach would attempt to collect information on all, or at least a large sample, of states, WDBs, and AJCs. Obtaining data that covers most or all WDBs is important to support analyses with the potential to identify which approaches that are most successful (see ES.3) Given that the cost per unit of a survey is much lower than for a site visit, surveys would provide information on a much larger set of states, WDBs, and AJCs. For more on this approach see the discussion of Design Options 1.2 and 1.3 in the body of the report.
3. **Extant Administrative Data.** DOL holds participant-level data on individuals served by the workforce system across multiple programs (hereafter “DOL Workforce Data”). That information is submitted to DOL by states. Information collected includes veteran status, other demographics, services received, and post-services outcomes. States do not send DOL personal identifiers such as name or social security number. This design option would analyze these DOL workforce data to further characterize services received by veterans. Issues that could be considered would include the relative importance of VETS and non-VETS programs, the characteristics of veterans using services, and the services they receive. For more on this approach see the discussion of Design Option 1.4 in the body of the report.
4. **Customer Satisfaction Survey.** State workforce system records include name, address, telephone number, and email address. This information could be used to contact veterans using workforce services and to survey them about their experiences (i.e., a “customer satisfaction survey”). This feedback ideally, would identify options for improving service delivery. Such customer satisfaction surveys usually accept relatively low response rates, keeping costs low. For more on this approach see the discussion of Design Option 1.5. This could be complemented by a user focus group (Design Option 1.6).
5. **Nonuser Data Collection.** A key question in any program is: Why do eligible individuals not use the program? Typically, collecting information on nonusers is harder than collecting information on users. Program records do not include current contact information and veterans are a relatively

rare population. For more on this approach see the discussion of Design Options 1.7 and 1.8 in the body of the report.

The first four approaches and the corresponding design options are complementary and all clearly feasible. They would provide a mutually reinforcing characterization of current workforce services for veterans. They are also relatively low cost. The first four options could be implemented for between \$2 and \$4 million, depending on the number of sites to be visited. Large samples or high response rates would rapidly drive up the cost of customer satisfaction surveys as would an attempt to contact veterans who do not use workforce services (i.e., Approach 5).

ES.2 Design Options to Address Descriptive Research Questions

DOL would like to understand: Which veterans do and do not use the workforce system? And, what are their post-usage outcomes? Indeed PL 114-315 focuses on such descriptive research questions. Approaches to addressing the descriptive research questions might involve: (i) survey data; (ii) universal administrative data; or (iii) some hybrid approach (i.e., a combination of more limited administrative data and surveys).

The direct approach to the descriptive research questions—and in particular, the questions included in PL 114-315—would be a *survey*. In the absence of any administrative data, such a survey would need to contact members of the general population looking for veterans. Once a veteran is identified, the survey would then ask about demographic characteristics, use of the workforce system, and outcomes (again, in particular, employment and earnings). The natural survey approach appears to be Address Based Sampling; i.e., a mailing to (stratified) random sample of all postal addresses.

The discussion of Design Option 2.1 in the body of this report considers this approach in more detail. This approach has the standard disadvantages of survey data collection: high per unit cost, leading to relatively small sample sizes; low response rates leading to concern about non-response bias; and the nature of survey respondents leading to concerns about data quality (i.e., response errors). For describing veterans and their use of workforce services, a pure survey approach has an even bigger disadvantage. Veterans using the workforce system are a rare population; veterans using intensive workforce services or DOL VETS’s services are an even rarer population. This induces a “needle in a haystack” problem. As a result, any survey pure survey effort would “waste” a lot of surveys looking for veterans using the workforce system, using intensive workforce services, and using DOL VETS’s services. Those wasted surveys will substantially drive up costs. Even accepting the standard low responses rates from Address Based Sampling the “needle in a haystack problem” imply costs in the range of \$100 million.

An attractive alternative approach to addressing the descriptive research questions would use *administrative data only*. That approach would merge three types of universal and national administrative data: (i) a list of veterans, (ii) information on their use of workforce services, and (iii) information on outcomes—in particular, employment and earnings. The requisite administrative data exist and this approach would be relatively low cost (perhaps \$1 million for the first match and another \$1 million over the next four years). The resulting analysis file would include all veterans—no sampling, no survey non-response, no limitation to select states—and the resulting data would be of high quality.

The discussion of Design Option 2.2 in the body of this report emphasizes that this natural approach faces substantial feasibility challenges. DOL controls none of the three types of data. They are held by other federal agencies (e.g., VA, DoD, Census, SSA) or state workforce agencies and are often highly

protected, so it is far from certain that all three types of data could be obtained. Nevertheless, for addressing the descriptive research questions, it is our sense that this design option is so superior to the others (see discussion below) that, if DOL wants to address these research questions, substantial effort to gain access to these data would be worthwhile.

Hybrid approaches which assume *access to some administrative data* are also possible. In particular, even in the absence of identified national PIRL data, it might be possible to access PIRL data for some states. Contact information from state PIRL data would help with the “needle in the haystack” problem. Finding veterans who do not use the workforce system would remain a challenge, but the “needle in the haystack” problem would be much less severe. The discussion of Design Options 2.3 through 2.8 in the body of the report considers such approaches in more detail. These approaches have higher cost than a pure administrative data approach, but much lower cost than a survey, perhaps \$3 to \$5 million. However, challenges in gaining access to state data make it unclear whether these approaches could plausibly be viewed as yielding even nationally representative data. Analyses of a subset of self-selected states that agree to participate risk generating information that is not reflective of services to veterans nationwide.

ES.3 Design Options to Address Causal Research Questions

Approaches to causal research questions will vary sharply with the specific causal research question.

With respect to the WIA program, DOL has rigorously examined the *impact of intensive services and training, respectively, compared to non-intensive services alone*. While the WIA Gold Standard Study used random assignment, statutory priority of service appears to prohibit random denial of services to veterans. (See the discussion of Design Option 3.1 in the body of the report for more discussion of this issue.) Instead, any evaluation of services to veterans vs. no veterans, or VETS and WIOA vs. VETS alone, would need to follow the methods used in the WIA non-experimental studies. Those methods involve recruiting states to provide PIRL data and then applying some form of propensity score matching to those data. The discussion of Design Options 3.2 through 3.4 in the body of this report consider these approaches in more detail. As with the hybrid approaches to description, getting access to state data seems likely to be a substantial challenge. However, representativeness issues are less salient for causal research question than they are for descriptive research questions.

Given limited program resources, it is important to understand which veterans most need and are able to benefit from different levels or types of services. To help better target resources, DOL might want to estimate *how the impact of services varies with veterans’ characteristics*. The discussion of Design Options 3.10 and 3.11 in the body of the report considers approaches to these research questions in more detail. The data and methods issues are similar to those discussed in the previous paragraph.

DOL might also be interested in estimating the *relative impact of various approaches to service delivery*. For example, some states and WDBs appear to place relatively greater emphasis on training while others emphasize job search assistance. The design options to address the implementation research questions would likely provide candidate approaches to service delivery to be tested. Strong random assignment methods could then be used to estimate differential impact. For such studies, states would both need to provide data and agree to randomization. The discussion of Design Options 3.4 through 3.6 in the body of the report considers such random assignment approaches in more detail. In addition, Design Options 3.7 through 3.9 consider non-experimental approaches to these research questions.

ES.4 Design Options to Address Cost-Benefit Research Questions

Cost-benefit analyses build on estimates of impact. Thus, any cost-benefit analysis would need to start with one of the causal design options discussed in the previous section. From that starting point, a cost-benefit analysis would probably involve an *individual-level survey of services used* and a *cost survey of AJCs*. Given a completed impact study, total cost is likely to be on the order of \$0.5 million. The discussion of Design Options 4.1 through 4.3 in the body of the report consider these approaches in more detail.

ES.5 Closing Considerations

The body of this report reviews several dozen design options to answer a range of research questions of potential interest to DOL. This Executive Summary has provided a very high level discussion of those design options. Those design options vary in both feasibility and cost.

In particular, the discussions of design options to address the descriptive research questions (in Section ES.2) and of design options to address the impact research questions (in Section ES.3) are strikingly distinct. The broad group of veterans using no workforce services is too diffuse to serve as a useful comparison group for impact analyses. Instead, design options to address causal research questions use (i) veterans applying for any workforce service services or (ii) veterans claiming UI.

On the other side, most of the impact design options would require recruiting a set of states to provide their PIRL data, perhaps their UI data, and perhaps to allow randomization of their veterans' caseload. Recent experience suggests that recruiting states may be challenging. Counts of veterans using intensive services are sufficiently small that any such analysis would need states with at least a moderate share of veterans. At least ten percent would be a useful goal.

DOL will need to balance these multiple considerations as it develops and pursues a research agenda that improves understanding of the workforce services that most effectively promote employment and economic self-sufficiency for our nation's veterans.

Exhibit ES.1. List of Design Options Discussed in this Report

Option	Option Name	Type of Research Question
1.1	Site Visits	Implementation ^a
1.2	Occasional Surveys of States, WDBs, and AJCs	Implementation ^a
1.3	Regular Surveys of States, WDBs, and AJCs	Implementation ^a
1.4	Analysis of Deidentified DOL Workforce Data	Implementation ^a
1.5	Customer Satisfaction Survey	Implementation ^a
1.6	Customer Focus Groups	Implementation ^a
1.7	Non-user Reason Survey	Implementation ^a
1.8	Non-user Reason Focus Groups	Implementation ^a
2.1	Pure Survey	Descriptive ^b
2.2	Pure National Administrative Data	Descriptive ^b
2.3	National Administrative Data on JVSG	Descriptive ^b
2.4	Workforce Data for Selected States and a National List of Veterans	Descriptive ^b
2.5	Workforce Data for Selected States, but no National List of Veterans	Descriptive ^b
2.6	UI and Workforce Data for Selected States	Descriptive ^b
2.7	Survey Starting from a List of Veterans	Descriptive ^b
2.8	Survey Starting from Workforce Data for Selected States	Descriptive ^b
3.1	Matching-based Study of Veteran UI Claimants	Impact ^c
3.2	Matching-based Study of Veterans Using Any Workforce Services	Impact ^c
3.3	Impact of Changing the Level of Funding of JVSG	Impact ^c
3.4	Individual-Level Random Assignment to Alternative Program Models	Impact ^c
3.5	AJC- or WDB-Level Random Assignment to Alternative Program Models	Impact ^c
3.6	Difference-in-differences Applied to Naturally Occurring Variation in Program Models for all Veterans	Impact ^c
3.7	Matching-based Study of Program Models for Veteran UI Claimants	Impact ^c
3.8	Matching-based Study of Program Models for Veterans Using Any Workforce Services	Impact ^c
3.9	Matching-based Analysis of Differential Impact among UI Claimants	Impact ^c
4.1	A CBA with No Individual Survey	Cost-benefit ^d
4.2	An Individual Survey CBA	Cost-benefit ^d

Key: AJC/American Job Center; CBA/Cost-benefit Analysis; DOL/U.S. Department of Labor; JVSG/Jobs for Veterans State Grants program; UI/Unemployment Insurance; WDB/Local workforce development board.

^a Option is described in Section 4.1.

^b Option is described in Section 4.2.

^c Option is described in Section 4.3.

^d Option is described in Section 4.4.

1. Introduction

The Department of Labor’s workforce system serves veterans through its network of American Job Centers (AJCs). AJCs are designed to bring together services from multiple programs under one roof. AJCs provide services to veterans both through the Jobs for Veterans State Grants program, which is available only to veterans, as well as through programs that serve the broader population—most notably the Workforce Investment and Opportunity Act (WIOA) Adult and Dislocated Worker programs and the Wagner-Peyser Employment Services (ES).

Evaluation research has the potential to improve DOL’s programs providing employment and training services to veterans. This in turn, has the potential to improve veterans’ labor market outcomes (e.g., employment, earnings) as well as broader measures of the economic well-being (e.g., assets, homeownership, homelessness, participation in transfer programs).

Recognizing the importance of understanding the veterans served by DOL, their use of workforce services, and their labor market outcomes, DOL’s Chief Evaluation Office (CEO) awarded a design contract—the “**Veterans’ Employment and Training Services Research Study Design**”—to Abt Associates and its partners, RAND Corporation and Capital Research Corporation. The objective of this contract is to “develop design recommendations” in response to a series of research questions (RQs) aimed to expand understanding of DOL programs that serve veterans and how those programs might be improved. Among the specified RQs are a set of questions from Section 502 of the **Jeff Miller and Richard Blumenthal Veterans Health Care and Benefits Improvement Act of 2016** (PL 114-315; hereafter, simply “the statute”), which directs DOL to fund a “longitudinal study of job counseling, training, and placement service for veterans.”³ This report presents options to meet the requirements and “add to the evidence base on veterans’ workforce development and employment assistance needs.”⁴

This report presents options to answer a set of research questions drawn from DOL’s solicitation and statute (see Exhibit 1.1). The questions are of four types:

- **Implementation** (see RQ1)—describing the services made available to veterans in American Job Centers (AJCs).
- **Descriptive** (see RQ4-RQ17)—describing the characteristics of veterans served by AJCs (e.g., military service history and demographics), their receipt of educational and vocational rehabilitation benefits, utilization and perceptions of AJC services, and outcomes (especially employment and income). These are the questions from statute, which are to be addressed via a longitudinal study, covering a period of at least 5 years.
- **Causal (Impact)** (see RQ2)—rigorously capturing how and to what extent AJC services improve veterans’ outcomes.
- **Cost/benefit** (see RQ3)—estimating how the costs of AJC services compare to the benefits they produce.

³ <https://www.congress.gov/114/plaws/publ315/PLAW-114publ315.pdf>. Statutory language is in Appendix A.

⁴ This language is a quote from DOL/CEO’s Statement of Work for the Research Design Contract.

Exhibit 1.1. Final Set of Research Questions from the Project Work Plan

Research Question (RQ)	Type of Question
RQ 1. What are the types and packages of services or policy approaches provided under American Job Center's job counseling, training, and placement service for veterans?	Implementation
RQ 2. What key components or approaches are successful or contribute to the success of job counseling, training, and placement service for veterans?	Impact
RQ 3. What are the costs of job counseling, training, and placement service for veterans?† Do estimates of benefits of providing services or implementing policy outweigh the costs of those initiatives?‡	Cost-benefit
RQ 4. What was the average number of months the individual served on active duty? †	Descriptive
RQ 5. What are the disability ratings of the individual?†	Descriptive
RQ 6. Did the individual receive unemployment benefits?† What type of unemployment benefits?	Descriptive
RQ 7. What was the average number of months the individual was employed during the year covered by the report?‡	Descriptive
RQ 8. What is the employment status of each individual?† What is the average number of months the studied veterans were employed during each of the 5 years under study?	Descriptive
RQ 9. What was the average annual starting and ending salaries of the individual during each of the 5 years under study?‡	Descriptive
RQ 10. What was the average annual income of the individual during each of the 5 years under study?‡	Descriptive
RQ 11. What was the average total household income of the individual during each of the 5 years under study?‡	Descriptive
RQ 12. Did the individual own their principal residences?†	Descriptive
RQ 13. Does the individual believe that any service provided by a Disabled Veterans' Outreach Program specialist or Local Veterans' Employment Representative helped the individual to become employed?†	Descriptive
RQ 14. For those individuals who believe that such services helped the individual to become employed, (i) did the individual retain the position of employment for a period of 1 year or longer?† and (ii) does the individual believe that such a service helped the individual to secure a higher wage or salary?†	Descriptive
RQ 15. Under what conditions was the individual discharged or released from the Armed Forces?†	Descriptive
RQ 16. Has the individual used any educational assistance to which the individual is entitled under this title?†	Descriptive
RQ 17. Has the individual participated in a rehabilitation program under chapter 31 of this title?†	Descriptive
RQ 18. Did this individual have contact with a One-Stop Career Center employee while attending a workshop or job fair under the Transition GPS Program of the Department of Defense?†	Descriptive
RQ 19. What are the demographic characteristics of this individual?†	Descriptive

Research addressing these questions would expand the evidence based on DOL's workforce services and thereby help to better serve veterans and improve their outcomes. To that end and building on the

project’s early *Knowledge Development Report* (Klerman, et al, 2018; hereafter simply *KDR*), this document describes a range of evaluation activities to answer various aspects of these four types of research questions, and presents tradeoffs between them.

The balance of this opening chapter has three sections. Section 1.1 provides a brief review of DOL workforce services for veterans and a logic model for their impacts. Section 1.2 discusses the role and structure of this document.

1.1 Workforce Services for Veterans

Veterans—primarily unemployed veterans looking to be reemployed—receive DOL workforce services in AJCs through programs available only to veterans as well as through programs that serve the general population.

- 1) ***Veteran-specific services.*** Through the JVSG program, DOL/VETS funds states to provide veteran-specific workforce services. Those JVSG grants fund Disabled Veterans’ Outreach Program specialists (DVOPs) and Local Veterans’ Employment Representatives (LVERs). DVOPs assist veterans with “significant barriers to employment” (SBEs). LVERs work with employers to meet their workforce needs by hiring veterans. Understanding the details of those inputs will be crucial for any cost-benefit analysis (see *KDR* 4.4).
- 2) ***Non-veteran-specific services.*** DOL also provides funding to states for the Wagner-Peyser Employment Service (ES) and WIOA Adult and Dislocated Worker programs⁵ that serve the general population. State workforce agencies in turn distribute funds to local Workforce Development Boards (WDBs), which use these multiple funding streams to support and organize services in AJCs, designed to be workers’ one-stop shop for all government-funded employment and training resources. By statute, veterans are to receive “priority of service” in accessing ES and WIOA services.

Exhibit 1.2 provides more detail on these programs.

Exhibit 1.2. Key DOL Workforce Programs Available to Veterans at AJCs

Program	Population Served	Program Description
Jobs for Veterans State Grants	Veterans only	JVSG-funded services are provided by two types of staff: Disabled Veterans’ Outreach Program specialists and Local Veterans’ Employment Representatives. DVOPs provide intensive (re)employment services to veterans (and eligible spouses) who are disabled or have other significant barriers to employment. The set of services are similar to those provided via WIOA-funded counselors, but DVOPs are trained to meet the particular needs of veterans with SBEs. LVERs work with employers to help them fill their talent needs by hiring veterans. LVERs may collaborate with DVOPs for help identifying candidates for jobs their employer partners have open.

⁵ Because veterans are unlikely to use it, this report ignores the WIOA Youth Program. For example, according to DOL/VETS’s *Annual Report to Congress, Fiscal Year 2016*, the number of veterans exiting WIOA Title I programs nationwide in FY 2016 was 78,296 from the WIOA Adult program and 38,994 from the WIOA Dislocated Worker program, compared to only 47 in the WIOA Youth program.

Program	Population Served	Program Description
Wagner-Peyser Employment Service	General population of job-seekers; veterans receive "priority of service"	Nearly all individuals who register at an AJC are enrolled in the Wagner-Peyser-funded Employment Service. Established in 1933, ES funds a range of job search assistance, referrals, and (re)employment services to job-seekers. Services to job-seekers are limited to basic career services (non-intensive). ES also funds services to employers to find job candidates. Consistent with its focus on bringing job-seekers and employers together, ES typically funds states' online job banks.
Workforce Innovation and Opportunity Act	General population of job-seekers; veterans receive "priority of service"	WIOA funds employment and training services for adults, dislocated workers, and youth. WIOA's basic career services (non-intensive) are available to all job-seekers. These typically involve light-touch or one-time staff assistance—such as referrals to other services, provision of labor market information, and eligibility assessments. These are not always readily differentiable from Wagner-Peyser-funded services. WIOA's individualized career services (intensive services), by contrast, typically involve more in-depth and ongoing staff involvement—including comprehensive assessments, development of an individualized employment plan, and case management. These services are available to individuals whom AJC staff deem in need of more intensive assistance to obtain or retain employment. In addition, WIOA funds classroom training, on-the-job training, and work experience.

Key: AJC/American Job Center. ES/Employment Service. JVSG/Jobs for Veterans State Grants program. DVOP/Disabled Veterans' Outreach Program specialist. LVER/Local Veterans' Employment Representative. SBE/significant barrier to employment. WIOA/Workforce Innovation and Opportunity Act.

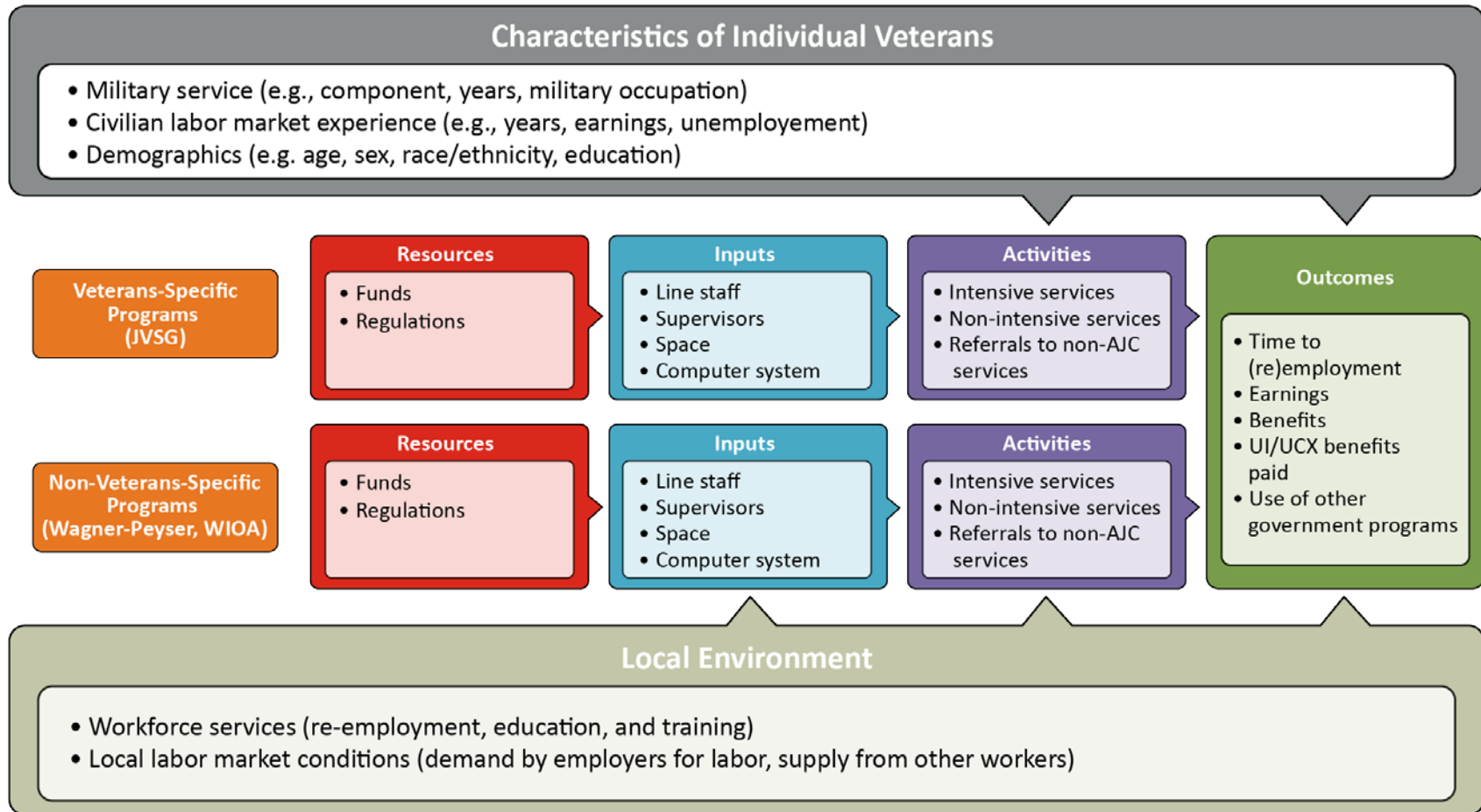
Note: See the following DOL websites for more detail on these programs:

- Wagner-Peyser Employment Service: https://www.doleta.gov/performance/results/wagner-peyser_act.cfm
- Wagner-Peyser Labor Exchange: https://www.doleta.gov/programs/wagner_peyser.cfm
- WIOA: <https://www.doleta.gov/WIOA/Overview.cfm>
- JVSG: <https://www.dol.gov/vets/grants/state/Jobs-for-Veterans-State-Grants-Program-Fact-Sheet-2017.pdf>

Exhibit 1.3 provides a logic model for these programs and is conceptually integrated as follows:

- DOL provides funds to states for veterans-specific and non-veterans specific workforce programs (the middle two panels of the exhibit). States provide these funds to WDBs, who in turn provide funds to AJCs.
- Constrained by federal guidance—usually in program letters—AJCs acquire inputs (line staff, supervisors, space, computer systems)
- Who in turn generate activities (intensive services, non-intensive services, referrals to non-AJC services),
- Which in turn generate outcomes (time to reemployment, earnings, benefits, use of public programs, broader measures of well-being).

Exhibit 1.3. A Logic Model for Veteran-Serving Employment and Training Program Services in AJCs



Key: AJC/American Job Center. UCX/Unemployment Compensation for Ex-Servicemembers. UI/Unemployment Insurance.

1.2 Role and Structure of the Balance of the Document

This is the capstone document for the project. This document notes where the *KDR* provides more detail. For the most part, this document suppresses sources of information and references to the broader literature. See the corresponding discussion in the *KDR* for that detail.

The balance of the document proceeds in five chapters.

Chapter 2 describes key extant data sources. Chapter 3 considers methods. Then, building on the previous two chapters, Chapter 4 proposes a range of specific design options. The discussion compares the options' feasibility, cost, and capacity to answer the relevant research questions.⁶ Finally, Chapter 5 provides some closing thoughts.

⁶ The high/moderate/low levels of feasibility and cost presented in those sections are intended to provide a high-level comparison across options. "Feasibility" refers particularly to how difficult will be to make arrangements with other entities that would be needed to carry out the study design. Agreements to obtain the needed data are the primary consideration. The study team conducted preliminary conversations with representatives of a number of relevant entities, which provided a sense of the types of challenges involved and requirements that DOL would face in trying to forge data sharing agreements. "Low" feasibility options entail agreements with other entities that will require substantial effort to arrange and may ultimately be unsuccessful. "Moderate" feasibility options entail agreements that will require substantial effort to arrange, but are likely to be successful. "Low" feasibility options entail either no agreements with external entities or agreements that can be made reasonably straightforwardly.

The cost estimates are at "an order of magnitude" level of specificity. "High" cost options are \$5 million or more for a first-year cost. "Medium" cost options are between \$2 million and \$5 million for the first year. "Low" cost options are under \$2 million. Those first-year costs are very rough estimates and will depend on decisions such as the number of states or individuals to include. Marginal costs for additional rounds (years) of data collection will typically be lower than the first year costs.

2. Data

This chapter provides a high-level discussion of issues related to individual-level data to address implementation, description, impact, and cost-benefit research questions. Specifically, Section 2.1 describes the key administrative data systems. Section 2.2 discusses issues in merging the data together. Section 2.3 discusses issues in recruiting states to provide data or participate in a random assignment study. Section 2.4 briefly considers extant survey data. Finally, Section 2.5 considers several broad issues in fielding a new survey.

The research questions and related specifications from the statute and the DOL solicitation require a variety of data including (but not necessarily limited to):

- 1) A list of veterans in the workforce
- 2) Veterans' use of workforce services
- 3) Veterans' characteristics and outcomes (earnings, employment, income, demographics, military service history, barriers to employment, use of veterans benefits, etc.).

These data could come from administrative data or survey data. Survey data may come from extant sources or a customized survey fielded as part of the study.

A study-specific survey has the benefit of being able to collect data on any subject of interest. However, administrative data are generally superior to the extent that they contain the needed data. Specifically, such extant data cover the entire population, in every time period. In contrast, cost considerations typically imply that surveys only include a small sample and gather less frequently. Furthermore, not everyone responds, resulting in concerns about non-response bias. In addition, administrative data are usually of higher quality, because they are recorded in real time as part of ongoing administrative processes that require accurate data. In some cases, the administrative data nearly define true status, e.g., benefit checks are written based on information in the system. In contrast, the way that humans respond to survey questions implies that survey responses are subject to—often considerable—response bias.

Beyond the above noted data quality considerations, extant data—whether administrative or survey—are usually far less expensive than fielding a new survey. The costs of accessing extant survey data are relatively low, comparable and perhaps lower than the cost of accessing extant administrative data. In contrast, the cost of fielding a new survey is \$50 per case or more. For reasons we discuss below, one might need to contact tens or even hundreds of thousands of individuals in order to build a sample of several thousand veterans of interest. Given these parameters, a new survey would have substantial cost—above and beyond project management, analysis, and reporting. At the same time it is important to emphasize that to address some research questions specified in the DOL solicitation and statute, only a new survey can provide the desired information.

This chapter assesses the current regulatory environment. We note that the Commission on Evidence-Based Policymaking has proposed changes that have the potential to ease access to deidentified administrative data. As of this writing, those proposals had not been enacted in statute. Adoption of those proposals might help to address some of the data access issues. Without knowing the exact provisions that are adopted and how data custodians will interpret them, it is hard to say more at this time.

The proposals currently under consideration concern matching and then analyzing deidentified administrative data. This is what is required for pure administrative data analyses. It does not appear that even adoption of the Commission's proposals would substantially ease the challenge of locating veterans in order to survey them. Such surveys required identified information; the Commission's proposals only consider deidentified data.

2.1 Administrative Data Sources

This section describes the key administrative data systems for the design options presented in Chapter 4. Section 2.1.1 provides information on DoD data. Section 2.1.2 considers DOL-held on individual participants in workforce programs (hereafter "DOL workforce data"). Section 2.1.3 considers earnings data. Section 2.1.4 considers other administrative data. *KDR* Section 5.2 provides more detail on these administrative data systems and discusses others.

3.1.1 Department of Defense Data

Veterans are those who once served in the military. While in the military, DoD maintained several databases that listed them, their characteristics at entry, their experiences while in the military, and their characteristics at exit. For our purposes, DoD does not maintain post-service information on most veterans. (The exception is primarily those in the active or inactive reserve; only a small fraction of veterans.)

- ***Military Entrance Processing Command (MEPCOM)***. The military collects MEPCOM data to screen potential recruits. This information about each applicant includes educational attainment, height and weight (and thus Body Mass Index), results from the physical exam, a background check (to look for contact with the criminal justice system), drug and alcohol tests, and the AFQT percentile score. The AFQT score in particular is a very important measure of cognitive ability and has been shown to be a powerful predictor of labor market earnings (Neal & Johnson, 1996). Other information contained on the application record includes date of application, the service component to which the applicant applied, and basic demographic information (race/ethnicity, gender, and age). The MEPCOM records also include an applicant's home state and county. Officers and officer candidates are not included in this database (Martorell et al., 2013; Loughran et al., 2011).
- ***Work Experience File (WEX) and Personnel Master Files***. The Defense Manpower Data Center (DMDC) maintains the Active Duty Military Personnel Master file and Reserve Components Common Personnel Data System file, which contain information on each service member's military career history. From these files, DMDC constructs the WEX, which provides a monthly snapshot of service members' enlistment status, pay grade, unit, component, military occupation, and educational attainment in each month, starting September 30, 1999. The WEX can be used to compute length of service, pay grade/rank, educational attainment, and military occupation at the time of separation (Martorell, Klerman & Loughran, 2008; Charles Goldman's discussions with DMDC).
- ***DD Form 214 (Separation) Database***. DMDC maintains a record of each service member's separation from the military, which is provided on paper to each member on Form DD 214. This database records the separation date and a standardized reason-for-separation code, which indicates whether the service member is separating because of normal end-of-service (short of

retirement), retirement, service-related or other disability, or discharge for conduct or legal reasons such as drug and alcohol use or criminal conviction (information derived from Charles Goldman’s discussions with DMDC).

3.1.2 DOL Workforce Data

DOL possesses nationwide data workforce system participants and the services they receive across multiple programs, including services provided through JVSG, WIOA, and ES. States submit the data to DOL following a consistent layout of fields (the Participant Individual Record Layout, or “PIRL”). Information on services received includes first and last date of receiving any Basic (non-intensive) Career Services and Individualized (intensive) Career Services, as well as details on the most recent date that particular services were received within each of those broad categories. Exhibit 2.1 provides examples of specific services for which DOL workforce data contain details on timing of service receipt. The data also record dates that individuals entered DOL-funded training and the type of training (e.g., ITA-funded, on-the-job, registered apprenticeship), and the date of completion or withdrawal.

Exhibit 2.1. Examples of Services for which DOL Workforce Data Record Timing

Basic/Non-Intensive	Individualized / Intensive
Information-only (e.g., labor market information)	Individual employment plan
Career guidance	Comprehensive assessments
Job search assistance	Pre-vocational skills development
Referrals (e.g., to VA services, DVOP services)	Work experience

In addition, DOL workforce data contains detailed data on participants’ characteristics including date of birth, sex, race/ethnicity, educational attainment, veteran status, date of separation from military services, residential location (state, county, zip code), other program participation (e.g., SSI/SSDI, TANF, SNAP), and various barriers to employment (e.g., disability, homelessness, long-term unemployment, ex-offender status, low income, and basic skills deficiencies). Thus, even deidentified DOL workforce data, will support cross-tabulations of services received by client characteristics and across geography.

Finally, for performance reporting purposes, DOL workforce data also contains information on participants’ employment and earnings outcomes, though limited in time frame and level of detail.

States collect SSNs in their operation of workforce programs such as WIOA and JVSG. The states use those SSNs to link to earnings data in order to report JVSG and WIOA (and previously WIA) standard outcomes (e.g., employment and earnings). In addition, states are required to report deidentified data to DOL.

However, though states collect SSNs, they are statutorily prohibited from reporting WIOA participants’ SSNs to DOL as part of their workforce data submissions:

29 USC 3341 SEC. 501. Privacy.

(b) (1) In general—Nothing in this Act (including the amendments made by this Act) shall be construed to permit the development of a national database of personally identifiable information on individuals receiving services under title I or under the amendments made by title IV.

(2) Limitation—Nothing in paragraph (1) shall be construed to prevent the proper administration of national programs under subtitles C and D of title, or the amendments

made by title IV (as the case may be), or to carry out program management activities consistent with title I or the amendments made by title IV (as the case may be).

It is important to note that this general prohibition on federal collection of SSNs applies only to programs authorized under title I and title IV of WIOA. Although JVSG is not covered by that restriction, DOL/ETA does not require states to submit SSNs for JVSG participants.

3.1.3 Earnings Data

As noted in the previous section, DOL workforce data contains information on employment and earnings for three quarters prior to program enrollment and four quarters after exit. For our purposes, this provides some post-treatment data, but no pre-treatment data. Ideally, we would want both. Crucially for our purposes, DOL workforce data are only available for participants in the workforce system, not for veterans who have not used services. Concerns also exist about the quality and completeness of the earnings measures in DOL workforce data, as reflected in the fact that the WIA Gold Standard Evaluation did not use them despite having access.

This subsection considers additional sources for earnings and income data—the conventional focal outcome for analyses of the causal impact of the workforce system.

- **State UI Quarterly Wage Data.** To administer their Unemployment Insurance (UI) systems, employers report quarterly earnings information to the states. Earnings not subject to UI taxes (e.g., self-employment income) are not included. Sources of these data include:
 - **State-Reported:** Includes only in-state earnings for the state(s) providing data. State UI data were intensively used in evaluations using administrative data before NDNH became available. For many states, they are now difficult-to-impossible for researchers to obtain as privacy concerns have grown.
 - **National Directory of New Hires (NDNH):** Aggregates all state UI quarterly earnings data and augments them with data on federal earnings (which are not reported to states). By law, NDNH purges data that is more than three years old, unless “held” for an evaluation project to increase child support collections. In recent years, this has been DOL’s standard source for administrative data on earnings. There have, however, been concerns about the completeness of the data.

Finally, note that the NDNH also accumulates state UI payment data and I-9/W-4 New Hire Data. The former are believed to be nearly complete; the latter appear to miss many new hires.
 - **Census Bureau:** Maintains its own copy of state data, but access requires either a “Census project” or explicit permission from each state (which is nearly impossible to maintain).
- **Annual Federal Tax Data.** To administer the federal income tax and the Social Security and Medicare systems, individuals report earnings to the Internal Revenue Service (with employers and other payers making complementary filings). Sources of these data include:
 - **Internal Revenue Service:** Gathers all tax data (including non-labor earnings), but access is extremely limited.

- **Social Security Administration:** Records only earnings subject to payroll taxes, including self-employment income (which is not subject to state UI taxes).
- **Census Bureau:** Maintains its own copy of federal tax data (in addition to its own copy of state UI earnings data), but access requires either a “Census project” or explicit permission from the IRS (which is nearly impossible to maintain).

3.1.4 Other Administrative Data Sources

This section briefly describes other potentially promising administrative data sources.

- **State Unemployment Insurance (UI) Payment Data.** State UI files are one potential source of data on sample members’ UI claims and benefit receipt. These data appear to be easier to obtain than earnings data.
- **DD Form 214 List of Veterans.** DVA maintains a list of veterans based on DD Form 214 data.
- **Veterans Benefits Management System.** Centralizes more VA individual-level records. This system includes current contact information—for those veterans who have used VA benefits. Not included in this system are GI Bill education benefits (see below) and health care records. Those data systems may have more current contact information.
- **Post 9/11GI Bill (PGIB) Data.** The DVA maintains data on PGIB usage. Since September 2015, DMDC has maintained several files containing that information, which include cumulative data on when and at which institutions veterans use their GI Bill benefits for themselves and their dependents.
- **National Student Clearinghouse (NSC).** NSC maintains college enrollment and degree data for contracting institutions. Coverage is increasing over time. For recent years, coverage is nearly complete for bachelor’s degrees and improving for community colleges and non-degree granting programs.

2.2 General Issues in Accessing Administrative Data

The previous section has emphasized that administrative data are a potentially powerful source for evaluation of issues related to veterans’ workforce policy (see also Appendix Exhibit A.1). There, nevertheless, appear to be substantial—perhaps insurmountable—barriers to accessing these administrative data with identifiers and in a location that allows them to be merged. This section considers those barriers. Section 2.2.1 explicates the barriers to accessing and matching administrative data. Section 2.2.2 discusses “safe harbor” strategies for access administrative data. Section 2.2.3 reviews precedents for accessing and merging administrative data. *KDR* Chapter 7 discusses these issues in more detail.

3.1.5 Issues in Accessing Administrative Data

Access to administrative data is a matter of law, regulation, and practice. The Privacy Act of 1974 as amended (codified in 5 U.S.C., Section 522a) governs Federal agencies’ collection, storage, and use of

personally identifiable information (PII) on individual U.S. citizens and residents.⁷ The Privacy Act specifies that agencies can only use and disclose PII in specific ways allowed by law (most of which are not helpful to this study) or through routine uses published in the agency’s System of Records Notice (SORN) for each data system. The Department of Defense has published SORNs for its personnel data systems that allow disclosure for studies that address the health and well-being of service members, families, and veterans. Other agencies, however, require that any use of data benefit the administration of the agency’s *own* programs. For those agencies, generating knowledge through studies—in general or to benefit some other agency’s programs—is *not* an allowable reason to permit disclosure of data. This more restrictive approach prevents or inhibits agencies from sharing data for purposes like this study.

Furthermore, the barriers rise with the perceived sensitivity of the data. The most sensitive data are usually personal identifiers—name, SSNs, address, date of birth. These are exactly the variables needed to link across administrative data systems or to use the data to generate names and contact information for a survey. Also sensitive are earnings data—the key outcome for workforce programs. Examples of outcome data considered less sensitive are UI benefits paid and use of GI Bill benefits.

3.1.6 “Safe Harbor” Strategy for Accessing Administrative Data

What we call a “safe harbor” provides a strategy for creating and analyzing research files drawn from multiple data systems—despite legal and policy considerations that induce a reluctance to share identifiers. In safe harbor matching, the study team never has access to SSNs for one and perhaps any data set. Instead, a designated third party (perhaps the custodian of one of the data sets) matches data across the various sources based on SSN, performing the matching inside its secure data facility. To do so, the third party replaces the SSN (and all other potential identifiers) in both data sets with a common identifier. Other than serving as the common identifier in each dataset, this identifier is meaningless (i.e., cannot be used to match to any data outside the safe harbor).

In some safe harbor arrangements, study analysts can access individual-level records with this new identifier. In some cases, as with the NDNH, this access may occur only on specially-secured computers. In other arrangements, such as ones used at SSA, only the agency staff may interact with the individual matched records. The study team receives only aggregated results derived from the analysis and reviewed by agency staff prior to disclosure to the study team.⁸

The type of data sharing proposed here would be covered by the proposal of the Commission on Evidence-Based Policymaking (2017). The Commission has specifically proposed changes to data-sharing legislation to explicitly permit data matching for statistical purposes, subject to appropriate safeguards. If such legislation were to be enacted, design options relying on safe harbor data sharing would likely become feasible.

⁷ Source: <https://www.gpo.gov/fdsys/pkg/USCODE-2012-title5/pdf/USCODE-2012-title5-partI-chap5-subchapII-sec552a.pdf>

⁸ See *KDR* Section 7.1 for more discussion of the safe harbor concept, several different safe harbor models, and specific examples.

3.1.7 Precedents for Accessing Administrative Data

This section considers precedents for accessing administrative data for analyses of veterans' workforce policy. First, it considers precedents by classes of data. Then, it considers precedents by organization accessing the data.

Precedents for accessing relevant classes of administrative data are as follows:

- ***Lists of Veterans:*** DoD and DVA have lists of veterans for their own operation. Two other organizations appear to have received these data from either DoD or DVA. The Census Bureau has identified data. The RAND Corporation—for these purposes a DoD contractor—has deidentified data.
- ***Utilization of Workforce Services:*** The states have identified data for their own operations; DOL has deidentified data. As noted in Section 2.1.2, DOL is prohibited by statute from getting identified data for most programs, but not for JVSG. We are unaware of any multi-state database of identified data on participation in DOL workforce programs.
- ***Tax Data on Annual Earnings:*** The Census Bureau has identified tax data. With the exception of Census, we are unaware of any non-tax agency having access to identified tax data. Both IRS and SSA have mechanisms to provide research access to deidentified data, with the possibility of matching other identified data to the tax data, (See the discussion of “safe harbor” in the next section.) Such research access requires a showing of benefit to the tax agency. In the recent past, RAND researchers and others in the distant past have accessed such deidentified data through that mechanism. Discussion with SSA staff suggested that this standard has recently become harder to satisfy and that this project would find it challenging to meet the new standard.
- ***UI Data on Quarterly Earnings:*** DOL has considerable experience accessing state earnings data through NDNH; NDNH has a mechanism to provide research access to deidentified data, (see the discussion of “safe harbor” in the previous section.) To gain access, NDNH requires demonstration that research access would advance program administration. In practice, DOL-funded research has almost always been deemed to meet the requirements for accessing the data.
- ***DVA Service Utilization Data:*** Negotiations are currently underway to provide DVA data on service utilization to the Census Bureau. The DMDC gets some DVA data (e.g., usage of GI Bill education benefits). Through DMDC, RAND has used DVA data on use of GI-Bill benefits. We are unaware of any other outside parties getting access to data on DVA benefits and use of DVA services.

As is implicit in the previous discussion, there are two institutions with long histories of successfully matching at least some administrative data on veterans:

- ***RAND:*** RAND's data match starts with the DoD's WEX file (see Section 2.1.1). It then appends other DoD data, SSA earnings data, and sometimes DVA data on GI Bill utilization and NSC data on higher education attendance. As of this writing, RAND is negotiating a new access agreement for access to SSA data, but those negotiations have not yet concluded (as of Summer 2018).

- **Census:** Census has a list of veterans and UI and IRS earnings data. Census appears likely to soon get access to some data on DVA service utilization. In addition, Census has access to the survey data it collects (see the next section).

2.3 DOL Accessing State Workforce Data

Under guidance and, in part with funding, from DOL, states administer their workforce programs. Those workforce programs include UI, WIOA, and JVSG. Section 2.1 noted that states are prohibited from reporting SSNs for WIOA participants. Though JVSG is not directly covered by the statutory prohibition, DOL does not require states to submit SSNs for JVSG participants. DOL may have the statutory right to demand UI data. If so, such a demand could greatly improve the feasibility of design options that rely on the use of state UI data.

An alternative is for a contractor to try to recruit states to voluntarily provide their workforce and UI data for specific evaluations. Two cases suggest that this alternative is likely to be challenging.

- 1) Section 2.1 noted that state UI earnings data provides the foundation for one of the two national sources of data on earnings. Section 2.1 also noted that recent evaluation efforts rarely approach states directly for data. Instead, recent evaluations use existing national aggregations of state UI earnings data, in particular the NDNH. One reason for this is the desire to include “out of state” (i.e., the state in which the workforce services were provided) earnings. A second and more salient reason is that over the last two decades, states have substantially constricted access to their UI earnings data. Experience with trying to get access to those data suggests that some states would provide the data readily, some would provide the data only after extended negotiations, and some would never provide the data. Furthermore, many of the larger states are in the last two groups.
- 2) The WIA non-experimental studies proceeded using state UI earnings data and workforce system.⁹ Those studies found recruiting states to provide their data extremely challenging. One study (Heinrich et al. 2013) attempted to recruit all states. Even with the strong support of DOL, the study recruited only 12 states. Another study (Andersson et al, 2013) tried to recruit nine states, selected because they were larger and because they were more likely to participate. Even given that the states were chosen because they were more likely to participate, the study recruited only two states. In both cases, while the studies produced state-specific estimates (rather than pooled estimates), the states refused to allow the studies to identify which estimates applied to which states.

These two cases suggest that any study that relies on recruiting states will be challenging. The number of participating states may be small. Furthermore, the possibility that veterans, local economic conditions, veterans-specific workforce programs, and non-veterans-specific workforce programs are different¹⁰ in states that provide workforce system data for the study than in states that do not provide data implies that this option would only partially address the statutory requirement for a statistically valid sample.

⁹ Often referred to as “WIASRD” (Workforce Investment Act Standardized Record) data—the data format formerly used for reporting WIA data.

¹⁰ Indeed, the *KDR 4.7* showed evidence of very different service patterns across states, including fraction of veterans served and fraction of veterans served getting intensive vs. non-intensive services.

The previous discussion considers recruiting states simply to provide data. A random assignment study would involve asking local WDBs to change their service delivery patterns—who they serve and how they serve them. Recruiting WDBs for a random assignment study seems potentially more challenging. The national JTPA study received 150 refusals before successfully recruiting 16 sites (Bloom et al., 1993). Learning from that experience, the WIA Gold Standard Evaluation (Mastri et al., 2016) had more recruitment success. That study selected 30 WIBs (the pre-cursors to WDBs) as replacement for each select WDB. Of those 30 initially selected WIBs, the study successfully recruited 26. For the four refusals, two of the replacements were successfully recruited. However, that success came only as a result of elements including very low assignment rates to the restricted service groups, substantial site payments, considerable contractor time, and strong pressure from DOL.

Finally, even trying to negotiate with states would incur moderate costs—likely over \$100,000 per state.

2.4 Extant Survey Data

This section briefly discusses extant survey data. *KDR* Section 5.32 provides more detail on these surveys and discusses others.

- ***Current Population Survey (CPS)***. The CPS is a monthly national general population survey collected by the Census Bureau. Depending on which data elements are required, the sample size is either about 5,000 or 15,000 unique veterans per year. The CPS includes basic demographics and limited information on military service (component and broad periods of service). Exact information on labor market outcomes varies with how the data are used. The CPS includes no data on utilization of the workforce system.
- ***American Community Survey (ACS)***. The ACS is a very large national general population survey, about three million households per year, also collected by the Census Bureau. It thus reaches 300,000 households with a veteran. Available information is similar to the CPS.
- ***National Survey of Veterans (NVS)***. The NVS, funded by the VA, is an approximately every-10-years survey of about 50,000 veterans. The last survey was fielded in 2010, surveying about 9,000 veterans. Planning for the next wave is underway, but final decisions have not been made.

Survey data are even more closely held than administrative data. Access to Census data is only at Census. Given the lack of information on workforce system utilization, these data are of limited utility alone. The CPS is too small for most analyses. Matching to the ACS might provide useful information, but for most purposes superior data are available in administrative data.

2.5 Fielding a New Survey of Veterans

In addition to using administrative data and extant survey data, an evaluation could field its own survey of veterans. This section considers several design issues with respect to this option: sampling frame, field methods, longitudinal considerations, and matching to administrative data.

The discussion that follows suggests that a value of the information produced by a new survey is likely to compare poorly to administrative data. Data quality, sample sizes, and data frequency are generally more problematic than for administrative data. Costs are non-trivial, especially in the likely case of limited access to administrative data and therefore a need to screen, i.e., to interview many people looking for the target respondents.

The exception would attempt to survey those using the workforce system or perhaps those collecting Unemployment Insurance. In those cases, we would have good address information and less need to screen. Together these two considerations drive down cost per case.

Sampling Frame. Conducting a survey requires a sampling frame, i.e., a list of names, contact information (street address, telephone number, email address), and perhaps workforce utilization status. No such file currently exists. To field any new survey, such a file will need to be created using multiple sources. There are many permutations of administrative data access as described in KDR Section 10.2. Here we simply note some of the issues.

- Identified workforce data provide relatively current contact information for veterans using the workforce system. Having such identified data (either from states, or DOL-held data for JVSG participants) would be a major positive for a survey.
- DoD or DVA data provides a list of veterans, but usually no contact information. A commercial data aggregation would—imperfectly and for a fee—append that information.
- If the study is only in a subset of the states sharing workforce data, then researchers need to pass a larger number of records to the commercial data aggregator in order to find veterans in the states of interest. The smaller the states as a share of the veteran population, the bigger the task.
- If the study does not have a list of veterans nor workforce data, it needs to screen random households or individuals looking for veterans—in particular, the rare veterans who use intensive workforce services. Households with a veteran who used intensive workforce services are about 0.2 percent of the population. So to build a sample of 1,000 such veterans, the study needs to contact half a million households. (See *KDR* Sections 4.6 and C.2 for more on prevalence estimates)
- If the study does not have a list of veterans, but has identified workforce data, it needs to contact random households or individuals looking for veterans. Households with a veteran make up 10 percent of the population. So to build a sample of 1,000 such veterans, the study needs to contact 10,000 households. (Again, see *KDR* Sections 4.6 and C.2 for more on prevalence estimates.)
- If the study has a list of veterans, but not identified workforce data, then it needs to contact a random sample of veterans looking in each of the three groups. Veterans who used intensive workforce services are about 1 percent of the all veterans. So to build a sample of 1,000 such veterans, the study only needs to contact 100,000 veterans.

These sample sizes estimates are very rough and refer to completed interviews. The study will need to contact a larger number of cases—perhaps five times as many—to achieve the target for completed interviews.

On the other side, stratified sampling could help reduce the number of households that have to be contacted to find veterans in the populations of interest. This is because stratified sampling samples disproportionately from certain places or populations with a high (likely) prevalence of the population of interest (e.g., veterans). The study might, for example, stratify by demographic characteristics from DoD administrative data (e.g., older veterans are likely to have retired and therefore not to be using workforce services) or geographic areas (veterans are over-represented in some areas, e.g., around military bases).

Finally, note that the previous discussion implicitly assumed not only access to administrative data, but also permission to use that information to contact veterans. Data custodians prefer safe harbor arrangements specifically because they are reluctant to share identifiers and allow re-contact. Gaining access to identifiers and permission to re-contact is likely to be much more difficult than access through a safe harbor.

Field Methods. Surveys of veterans would probably be conducted by mail. That was the approach of the 2010 NVS. If the study has a list of veterans, a mail survey is straightforward. If the list does not provide proper address information, then a commercial data aggregator will—imperfectly and for a fee—append address information. Nevertheless, multiple mailings would be needed, and final response rates would probably be in the range of 20 percent.

In the absence of a list of veterans, the study must contact a random list of individuals or households. Random Digit Dial is one possible approach, i.e., calling random phone numbers. A more attractive alternative would probably be Address Based Sampling, i.e., mailings to addresses randomly selected from USPSs Computerized Delivery Sequence File (see *KDR* Section 6.2.2).

In either case, cost per sample member is probably about \$20. A response rate of 20 percent implies a cost per complete of about \$100 and a cost to survey 3,000 veterans of \$300,000. Random Digit Dial costs would be considerably higher.

Longitudinal Considerations. The statute and DOL’s solicitation call for a longitudinal study. One approach to that requirement would be a longitudinal survey. Less expensive field methods have low response rates. Low response rates imply small longitudinal samples and perhaps the need for much larger initial samples. A probably preferable alternative would be more intensive field methods at follow-up interviews. Such more intensive field methods would raise costs. (See *KDR* Section 6.3 for more on longitudinal considerations.)

Matching to Administrative Data. As discussed above, matching administrative data has many features that make it more attractive than a longitudinal survey. However, doing so is likely infeasible. In as much as the study uses Address Based Sampling (or Random Digit Dial), it would need to collect name, date of birth, and SSN in order to match back to administrative data. In the current environment, many respondents would be reluctant to share that information. Even with that information, to match survey data back to administrative data a study would need consent of those interviewed. It seems likely that many would refuse to give that consent.

Together these two considerations suggest that matching to administrative data is unlikely to be sufficiently universal to preserve even face validity. As a result, any survey approach would probably need to be a longitudinal survey.

3. Methods

The goal of this contract and this document is to develop and discuss design options to address research questions from CEO’s solicitation—including questions mandated by statute—to evaluate DOL programs that serve veterans. The design options that address impact and cost-benefit research questions involve some general methodological concerns, addressed using specific methods. This chapter discusses those methodological issues and specific methods, as a foundation for the subsequent discussion of specific design options in Chapter 4.

Given this chapter’s goal—providing methodological background for the design options in Chapter 4—the discussion in this chapter focuses on the key insights and assumptions for each approach, in non-technical language. This chapter is not intended to be a general discussion of the methodological issues or a broad survey of methods. Many assumptions, conditions, and details of approach are suppressed. Instead, only issues, methods, and technical details that are relevant for the discussion in Chapter 4 are considered here.

This chapter proceeds in two parts. Section 3.1 provides background information on the three impact analysis methods relevant for the discussion of design options in Section 4.3. Then, Section 3.2 provides background information on cost-benefit analysis methods. (See *KDR* Sections 8.3 and 8.4, respectively, for more detail.) For our purposes, methodological issues for implementation and description research questions are (more) straightforward. No sustained discussion is needed in this chapter in order to support the design options discussed in Chapter 4.

This chapter considers both impact analysis and cost-benefit analysis (CBA) because the two methods are related. Both compare outcomes with the intervention—sometimes called the treatment—to outcomes without the intervention—sometimes called the counterfactual. In that sense, cost-benefit analysis is a special case of impact analysis—where the outcome is “cost.” We will see however that, relative to generic impact analysis, CBA raises special issues. Furthermore, CBA assumes estimates from a strong impact analysis.

In this chapter’s discussion of methods, we occasionally allude to research options. Sustained discussion of research options is deferred until the next chapter.

3.2 Impact Analysis

Generically, impact analysis asks the question: *What difference did an offer of treatment make?* This simple question implicitly addresses several issues:

- 1) Causal impact is always a comparison: outcomes under one program environment vs. outcomes under another program environment. That other program environment is sometimes called “the *counterfactual*.”
- 2) For impact analysis, the appropriate comparison “holds all else equal.” The thought experiment involves taking the same individual, in the same time period and observing outcomes for both program environments.

- 3) Of course, assigning the same individual, in the same time period to both program environments is impossible. Rigorous impact analysis methods however try to approximate that thought experiment.
- 4) We use the term “treatment” generically. Treatment might be a program; then the natural counterfactual would be no program. Treatment might be an innovation in a program; then the natural counterfactual would be the regular program. Treatment might be a change in the level of program funding; then the natural counterfactual would be the regular level of funding.
- 5) Workforce programs are voluntary. The policy choice is whether to “offer” the treatment. Veterans may or may not take up the treatment. Thus, for most policy analyses, we want to know the impact of offering the treatment (sometimes called Intention to Treat or ITT), not getting the treatment (sometimes called Treatment on the Treated or ToT). For other policy analyses, we want to know the impact of getting treatment (i.e., ToT). The two concepts are related, but distinct. Under some circumstances one can convert ITT estimates into ToT estimates and vice versa.

3.2.1 Overview of Methods for Estimating Impact

Usually we observe outcomes with the treatment for the population of interest. Given that no individual can both be offered the treatment and not offered the treatment, the challenge is to project what outcomes would have been, for those offered the treatment if they had not been offered the treatment, i.e., under the counterfactual, holding all else equal.

To see the challenge, consider a naïve approach to estimating the effect of getting treatment, i.e., ToT. We observe some people getting the treatment; we observe others not getting the treatment. We could estimate the impact of the treatment as the difference between average outcomes for those getting the treatment and those not getting the treatment.

In general, this naïve approach will not estimate the true impact of treatment. This is because the two groups will almost always differ in many ways besides receipt of treatment. Those other differences will usually also shift the outcomes, but the naïve estimator incorrectly attributes all of the difference to the treatment.

- Perhaps more motivated veterans seek out treatment. Even in the absence of treatment, those who get treatment would have better outcomes than those who do not get treatment. In this case, the naïve estimator will overestimate the impact of treatment.
- Alternatively, perhaps better off people (correctly) conclude that they do not need the treatment. Only the worse off get treatment. In this case, in the absence of treatment, those who get treatment would have had worse outcomes than those who do not get treatment. In this case, the naïve estimator will underestimate the impact of treatment.

Impact analysis methods differ in how they project, for those offered/received the treatment, what outcomes would have been if they had not been offered/received the treatment. Those methods, in turn, vary in their:

- **Internal validity**, i.e., how closely do the comparison group’s outcomes reflect what the treatment group’s outcomes would have been in the absence of the treatment offer? And therefore how confident are we that the methods truly estimate causal impact?
- **Precision/power**, i.e., for a given sample size, how precise will the estimate be? Put differently, how small an impact can be detected?

For our purposes, there are two approaches. First, instead of using natural occurring variation in who is offered/receives treatment, the study could **induce random variation in who is treated**. This approach leads to random assignment (see Section 3.1.2). This approach is conceptually straightforward and leads to estimates with high internal validity, i.e., treating the estimate as a proper estimate of causal is appropriate. In the terminology used by the What Works Clearinghouse and DOL’s Clearinghouse for Labor Evaluation and Research (CLEAR), if well executed, such studies can achieve the highest “meets standards without reservation” rating.

Second, the study could try to “**control for**” all the ways in which those who are offered/receive treatment differ from those that are not offered/receive treatment. Trying to control at the group level leads to what we refer to generically as difference-in-differences (DiD) (see Section 3.1.3). Intuitively, those approaches compare changes over time. Specifically how do differences groups’ outcomes after exposure to the intervention compare to differences before the intervention? Trying to control at the individual level leads to what we refer to generically as propensity score matching (PSM), or “matching approaches” (see Section 3.1.4).

This second approach—controlling for differences—is *not* conceptually straightforward. It implicitly relies on a *selection on observables* assumption, i.e., that all relevant differences between those who are offered/receive treatment and those who are not offered/receive treatment are measured (correctly) and properly included in the statistical model. These are strong and untestable assumptions. As a result, these estimators have lower internal validity, i.e., treating the estimate as proper estimate of causal impact. In the terminology used by the What Works Clearinghouse and DOL’s CLEAR, if well executed, such studies can only achieve the lower “meets standards with reservation” rating.

3.2.2 Random Assignment (RA)

Random assignment mimics the impact thought experiment. Some people who would otherwise be offered the treatment are not offered the treatment. Who is assigned to which group is random, e.g., the flip of a coin. Thus, beyond being offered treatment, there is no systematic difference between the two groups.

Any difference between the two groups must be due either to the program or to chance. We can use statistical methods to bound the likelihood that any difference is due to chance (e.g., confidence intervals, hypothesis test). Furthermore, as the sample gets larger the likelihood of chance differences shrinks. We note that, as in all statistical methods, this likelihood decreases painfully slowly with sample size. One must quadruple the sample size to cut the standard error in half.

Random assignment has the strongest internal validity because it requires the weakest assumptions. The only required assumption is proper implementation of random assignment. Furthermore, the only required variables are treatment condition (treatment/control) and the outcome.

With slightly stronger, but still weak, assumptions, pre-randomization variables yield more precise estimates. For otherwise stable outcomes, measures of the outcome of interest (or a closely related variable) before randomization can sometimes yield striking improvements in precision (or smaller required sample sizes).

As a result, studies that use random assignment are typically eligible for top rankings (e.g., “High” or “Meets Standards without Reservations”) from systematic clearinghouses, such as CLEAR or the What Works Clearinghouse.

Two notes about precision are relevant. First, random assignment makes the most efficient use of data. For a given sample size, estimates will be more precise with random assignment than with any other methods.

Second, precision changes with the level of randomization. Sometimes we randomly assign individuals. Sometimes we randomly assign groups of individuals, e.g., all veterans seeking services from a given WDB or AJC are/are not offered the program. Both approaches inherit the strong internal validity of random assignment. Randomizing groups is often easier to implement. For example, it is operationally challenging to run two different and distinct program models in a single location. However, randomizing groups makes less efficient use of the sample, i.e., for a given sample size it yields less—often much less—precise estimates.

Random assignment has several related disadvantages.

- 1) Inserting random assignment often changes the operation of the program. Program operators often dislike being told by evaluators who they may serve.
- 2) Timelines are long(er). Observational studies (discussed below) can use historical data. In contrast, random assignment must be inserted into program operation, sample must accumulate, and then outcomes must occur and be available in the data source of interest. This process often takes two years (or more, depending on the desired length of follow-up).
- 3) Because it requires denying service to a randomly selected group of applicants, random assignment is sometimes legally, politically, and/or ethically problematic.

This third disadvantage probably makes random assignment infeasible for some research questions. Veterans have priority of service for all workforce services. Random assignment to the offer of workforce services or the offer of JVSG services would deny some veterans some workforce services. Doing so seems inconsistent with priority of service.

In contrast, recruiting WDBs for random assignment to the current program or to an alternative program might be easier than recruiting them for a no services control group. We would usually propose some alternative program because it arguably had better outcomes or the same outcomes for lower cost. We would only test the new program if it plausibly had better outcomes for a given cost or the same outcomes for a lower cost. Plausible, but we are not sure. This true uncertainty about impact makes it less problematic to deny some veterans the current program and to deny other veterans the alternative program.

Similarly, we might randomly offer higher funding to some WDBs/AJCs to test how changes in funding would change veterans’ outcomes.

3.2.3 Difference-in-differences

Difference-in-differences uses naturally occurring policy variation, e.g., which locations adopt some alternative model of service delivery, to estimate the impact of that policy variation. Suppose one has data on outcomes for time/place combinations and policies at those time/place combinations. Applied to these data, the naïve approach (see Section 3.1.1) would compare outcomes in time/place combinations with the program to outcomes in time/place combinations without the program. As noted in Section 3.1.1, comparing those offered/getting the treatment to those not offered/not getting the treatment is problematic. Perhaps outcomes were systematically better (worse) in some places than others; perhaps outcomes were systematically better (worse) in some time periods than others. Simply comparing outcomes would attribute to the treatment (i.e., impact) what is simply outcomes or time periods with better (worse) outcomes.

The difference-in-differences approach directly controls for these two potential sources of bias. The approach can be thought of as follows. Suppose that there are two places (P1 and P2) and two periods (T1 and T2). The program is in place only in P1 at T2. For this simple case the difference-in-differences approach proceeds as follows. First, in P1, compute the change in average outcomes from T1 to T2. This “first difference” controls for persistent differences in place (i.e., P1 serves as its own control). Then, for P2, also compute the change in average outcomes from T1 to T2. This difference gives the pure effect of time (i.e., an estimate of what the change from T1 to T2 would have been in P1, in the absence of the program). Subtracting the two, i.e., the difference-in-differences, gives an estimate that controls both for factors that do not change across place and factors that do not change over time.

Difference-in-differences is better than simple treatment/control comparisons. Often it is the best that can be done. Nevertheless, it has only moderate internal validity which stems from at least two issues.

First, difference-in-differences implicitly assumes that—up to sampling variability—the T1 to T2 change in P2 would have been the T1 to T2 change in P1, in the absence of the treatment. This is a strong assumption. The more similar P1 and P2 are the more plausible is the assumption. To some extent the assumption is testable, but only partially.

Second, while the difference-in-differences approach controls for persistent differences across place and common differences across time, it does not control for time varying differences within a place. For the approach to give a proper estimate of impact, we must assume that such differences are non-existent, or at least small relative to the impact. For this reason, difference-in-differences studies cannot receive a top rating from DOL’s Clearinghouse on Labor Evaluation and Research (CLEAR) or the What Works Clearinghouse.¹¹

When the projected policy impact is large, sometimes this second assumption is plausible. It is not usually plausible that the impact of the policy change of interest is large. To see this, consider a partial list of time varying factors that might lead to an improper estimate of impact:

- *State of the local economy.* Outcomes for workforce interventions are likely strongly related to the local economy, but we probably do not measure the right proxies or even things sufficiently closely related.

¹¹ The highest rating such a study can receive is “Moderate” from CLEAR or “Meets Standards With Reservations” from the What Works Clearinghouse.

- *Other policies.* Policies are often adopted in bundles. Sometimes we only observe some of the bundle.
- *Local leadership.* Strong leaders adopt promising programs. Perhaps the estimated impact is due to the leader, not the program.

This insight generalizes well beyond the simple two place/two period motivating example. The difference-in-differences insight generalizes to:

- More than two time periods, more than two units; some always offering the treatment, some never offering the treatment, and some offering the treatment in different periods (e.g., starting earlier vs. later, starting and stopping, stopping and starting).
- Continuous (rather than binary) policies. The motivating example was the presence or absence of a policy (a binary policy choice). Difference-in-differences ideas generalize to continuous policies, e.g., funding levels, average/maximum hours per client.
- Controlling for (measured) time varying factors (see the list above). There is no need to control for persistent differences by location; they were controlled for by the first difference, i.e., before/after in the location that changed from no treatment to treatment. Relatedly, there is no need to control for common differences across time. They were controlled for by the second difference; i.e., before/after in the locations that did not change policy. Thus, we only need to control for potential influence on outcomes of interest that vary within a location across time (and are not influenced by the treatment). Standard variables include local economic conditions, other veteran workforce policies, and other policies that might affect veterans.

Finally, two comments about data for the difference-in-differences approach. First, the approach only requires measurement of average outcomes and policies for multiple times and places. Second, it does *not* need to measure treatment status for individuals. Given the challenge of getting identified workforce data (see Section 2.1.2), this might be an advantage.

Difference-in-differences does require consistently measuring policy across many locations (WDBs, AJCs) and time periods. This document has not specified which policies, i.e., for which there is variation across places and times and which plausible have moderate to large impacts on outcomes. As DOL identifies policies of interest, DOL would need to measure—across place and time—in order to apply difference-in-differences.

3.2.4 Propensity Score Matching (PSM)

Difference-in-differences tries to relate group level policies (i.e., the offer of treatment, estimating ITT) to group level average outcomes. In contrast, another class of methods attempts to relate individual service receipt to individual outcomes (i.e., to estimate TOT). There are many such methods. For parsimony we refer to them here by the leading example in current work—Propensity Score Matching (PSM), or, more generally “matching approaches.” Matching approaches compare outcomes for individuals who are or are not *treated*, controlling for observable differences. “PSM” refers to a specific technical approach to controlling for observable differences. Those technical details are not relevant for our discussion.

Matching approaches attempt to simulate what would occur in a randomized controlled trial, without the need to randomize individuals. That is, their aim is to produce a comparison group of individuals who did

not receive an intervention that is roughly identical to the group of individuals who did receive the intervention (the treatment group). Relative to random assignment, matching has the benefit that it does not require arbitrary denial of services or the study procedures that can be burdensome for staff to carry out.

But matching approaches have two substantial problems. First, matching implicitly assumes that we control for all of the relevant ways in which those who do and do not get the program differ. The literature on the ability of matching to do so is contentious and domain specific. This should not be surprising. What variables are relevant and whether they are measured (well) will vary from domain to domain. Because whether or not someone uses services at an AJC—or uses different levels of services (intensive vs. core only)—is likely to depend heavily on the individuals’ assessment of their current employment prospects and willingness to expend job search effort, characteristics that are both consequential and hard to measure. In general, matching approaches are a more attractive option:

- with large samples
- with richer control variables
- when the control variables include pre-treatment values of the outcome
- when—in the absence of treatment—the outcome is relatively stable over time.

By these criteria, analyses of labor market outcomes are only fair candidates for matching approaches for several reasons:

- With respect to rich control variables, the available administrative data usually includes only weak covariates (basic demographics, not deep psychological profiles or intelligence test results¹²). Veterans may be a better case. Military personnel records are rich. They include test scores at enlistment and detailed information on the military career. However, as time since enlistment and discharge increases, that rich information becomes less current.
- With respect to pre-treatment values, administrative data include lagged earnings measures. The extant literature suggests that the three years of historical data in the NDNH might be sufficient. This assumes that NDNH data is held, rather than purged.
- With respect to stability, earnings data are relatively unstable. Earnings instability is a particular concern for those losing a job and especially for those who do not find another job quickly. A long job search suggests that the worker is not going to easily find a similar job at similar pay.

Second, matching approaches compare veterans by services *received* (i.e., TOT). This is different than random assignment which compares veterans by services *offered* (i.e., ITT). Furthermore, we argued that services offered is the more policy-useful concept. These are standard issues, but they need to be kept in mind when choosing methods and then when interpreting results. Even with proper estimates of causal impact, ITT estimates will be different from ToT estimates.

¹² DoD does possess veterans’ AFQT scores. If DoD were willing to provide those data, they would be very beneficial as control variables for a matching analysis.

3.3 Cost-Benefit Analysis

Impact analysis yields estimates of the impact of a treatment. Most treatments have costs, sometimes substantial. Cost-benefit analysis attempts to compare the costs and benefits for all parties, on a consistent scale. This section considers costs and benefits to whom (Section 3.2.1) costs and benefits over time (Section 3.2.2), and issues in estimating costs and benefits (Section 3.2.3). For complementary discussions of CBA in the context of workforce programs, see Heinberg et al. (2005), Andersson et al. (2013), Barnow and Trutko (2015), and Barnow and Smith (2016).

3.3.1 Costs and Benefits to Whom

The comparison of costs and benefits will vary depending on whose perspective is being considered. Analyses would likely consider costs and benefits from the respective perspectives of participants, DOL, and the federal government. For most treatments, the costs accrue to the government, while the benefits accrue to the individuals receiving services—in our case, veterans. Acknowledging this disjunction, most cost-benefit analyses are done from multiple perspectives: from the perspective of the individual, from the perspective of government (perhaps distinguishing VETS from the rest of DOL, from the rest of the federal government, from other levels of government), and from the perspective of society—considering the net social costs and benefits of the treatment.

Proper treatment of costs and benefits will vary with the concept. For example:

- 1) *Earnings* (net of taxes) are a benefit to the veteran and to society, but neutral for government as whole.
- 2) *DOL expenditures on the treatment* are a cost to government and society and neutral to the veteran.
- 3) *Taxes paid* are a cost to the veteran and a benefit to government, but neutral to society (they are a transfer from some citizens to other citizens).

A CBA attempts to capture and attribute a monetary value to all outcomes changed by the treatment, even if they do not appear as costs to the particular program. In addition, to those noted above, outcomes of interest might include increases in costs to other programs (e.g., the cost of increased attendance at community college) and decreases in benefits paid by other programs (e.g., higher earnings might lower SNAP/Food Stamp and Medicaid costs).

3.3.2 Costs and Benefits over Time

Costs and benefits accrue over time, sometimes well into the future. Furthermore, costs usually accrue early, while benefits accrue later. Thus, a CBA should attempt to consider costs and benefits over an extended timeframe. No matter how long measurement continues however, some benefits and costs will accrue later. This underscores the importance of projecting costs and benefits into the future.

The analysis will want to discount future costs and benefits. For a given dollar amount, costs and benefits in the future are less valuable than they are currently.

The real (i.e., net of inflation) rate of interest on government bonds is a conventional discount rate. The literature proposes and discusses alternatives. For example, that people pay credit card interest rates suggests that much higher discount rates might be appropriate.

3.3.3 Estimating Costs and Benefits

Estimating costs and benefits begins with the impact estimates.

- For some outcomes, the impact analysis yields estimates in dollars, e.g., earnings by period. Discounting future earnings yields the concept of interest, i.e., costs and benefits that are comparable.
- For other outcomes, especially when the study includes an individual-level survey, the impact analysis (may) yield a quantity, e.g., hours meeting with a JVSG staff person, months of training at a community college. Those quantities need to be converted into dollars. Sometimes quantities can be converted to dollars using aggregated funding information, e.g., cost per case might be estimated as total cost divided by total cases. This approach is less attractive when a funding stream covers multiple services. Sometimes quantities can be converted to dollars using standard external databases (e.g., for community college costs). Sometimes converting quantities to dollars requires primary data collection, e.g., reviewing program cost documents, interviewing program finance staff, custom tabulations for accounting systems.

Throughout, careful attention needs to be given to capturing all costs that vary with the program, not just the direct salary cost of the JVSG staff person, but also their benefits and taxes, and those up the supervisory chain, and non-salary costs (e.g., space, computers, and supplies). Often this is done, in part, using standard overhead rates and existing time use studies.

- For some outcomes, some form of extrapolation may be useful. For example, standard tax estimation systems are often used to project impacts on taxes given impacts on earnings from the impact analysis.
- For some outcomes, projecting the future path of impacts may be crucial. Do earnings increase continue indefinitely? Do they shrink or grow over time? Here, results from similar interventions with longer follow-up may suggest how to do the projections.

Clearly, details will vary with the specific intervention and the source of data for the impact analysis. In addition to data collection for the impact analysis, CBA will usually require an effort to collect cost data and often a separate survey of those in the treatment and control/comparison groups to collect information on use of services. In an administrative data-based impact analysis, the corresponding survey for CBA is often smaller than for a survey data-based impact analysis.

4. Design Options

This chapter is the core of this *Evaluation Design Options Report*. Chapter 2 provided background on data; Chapter 3 provided background on methods. Against this backdrop, this chapter presents specific design options, corresponding to DOL’s broad RQs: implementation (Section 4.1), description (Section 4.2), impact (Section 4.3), and cost-benefit (Section 4.4). Within each section, sub-sections discuss specific design options. For most options, the discussion begins with a brief description, continues with a discussion of feasibility. There follows a review of cost and a rough cost estimate. Then, the discussion of the design option concludes with an overview of advantages and disadvantages (beyond feasibility and cost). We emphasize that the costs estimates are quite preliminary, intending to communicate order of magnitude differences among the options presented.

The approaches to answering different types of questions have some commonalities, but are largely distinct. A wide range of possible combinations of approaches could be pursued to answer the full set of questions, some of which are more complementary than others. Where options to answers one type of question depend on options to answer other questions (e.g. analyses of implementation that are required to categorize service delivery approaches that can be examined in impact analyses), we note those clearly. But, otherwise, the number of possible combinations of options to answer the full set of research questions is too large to cover. We do, in the final chapter of this report, discuss further interrelationships between options for different types of questions.

4.1 Overview of Options to Answer Implementation Questions

DOL’s RQ 1 asked: *What are the types and packages of services or policy approaches provided under American Job Center’s job counseling, training, and placement service for veterans?*

There is little current information on service delivery models. The most recent major published description of service delivery is from the DOL-funded *Workforce Investment Act Gold Standard Evaluation* (D’Amico et al., 2015). Because veterans could not be included in that evaluations’ random assignment design, a *Veterans Supplemental Study* was conducted alongside it (Rosenberg et al., 2015). More recently, DOL funded an *Institutional Analysis of American Job Centers* (results forthcoming). However, data collection for both those studies occurred before important changes in AJC service delivery were implemented, including changes resulting from new guidance regarding Significant Barriers to Employment (SBEs) (DOL 2014) and the transition from WIA to WIOA.

Because of those limitations, new primary data collection is required to understand service provision under current policy and administrative guidance. This section sketches seven design options. Exhibit 4.1 provides an overview of those options, which begin with conventional site visits and proceed to more structured and larger sample efforts.

Exhibit 4.1. Overview of Options to Answer Implementation Questions

Option No.	Option Name	Data Collection Activities	Feasibility	Cost	Research Value
1.1	Site Visits	Review program documents Semi-structured interviews during in-person visits	High	Moderate	High level of detail on program implementation (RQ 1), for a limited sample of states and WDBs
1.2	Occasional Surveys of States, WDBs, and AJCs	Survey all states, all WDBs, and a subset of AJCs one or more times	High	Low	Nationwide implementation information (RQ 1), at a moderate level of detail and limited points in time.
1.3	Regular Surveys of States, WDBs, and AJCs	Repeatedly survey all states, all WDBs, and a subset of AJCs	High	Very Low	Nationwide, longitudinal implementation information (RQ 1), at a moderate level of detail. Could support non-experimental impact analysis of program designs.
1.4	Analysis of Deidentified DOL Workforce Data	None	High	Very Low	Nationwide, longitudinal implementation information (RQ 1), at a level of detail limited to what is available in extant data. Could support non-experimental impact analysis of program designs (RQ 2).
1.5	Customer Satisfaction Survey	Survey AJC customers Obtain state workforce data (for a sampling frame)	High	Low	Provides data on users' perspectives on services provided in a moderate number of locations (RQ 1). Can answer or help answer descriptive questions involving customer perceptions (RQ 13, RQ 14).
1.6	Customer Focus Groups	Interview groups of AJC customers Obtain state workforce data (for a sampling frame)	High	Very Low	Provides rich data on users' perspectives on services provided in a small number of locations (RQ 1). Can answer or help answer descriptive questions involving customer perceptions (RQ 13, RQ 14).

Option No.	Option Name	Data Collection Activities	Feasibility	Cost	Research Value
1.7	Non-user Reason Survey	Survey veterans who do not use AJC services Obtain state UI data (for a sampling frame)	Moderate	Low	Provides insight on perceptions of value of services in a moderate number of local areas. Perceptions may vary by program model, and can help WDBs understand how to better appeal to veterans' needs (RQ 1).
1.8	Non-User Reason Focus Groups	Survey veterans who do not use AJC services Obtain state UI data (for a sampling frame)	Moderate	Very Low	Provides rich insight on perceptions of value of services in a small number of local areas. Perceptions may vary by program model, and can help WDBs understand how to better appeal to veterans' needs (RQ 1).

Key: AJC/American Job Center; WDB/Local workforce development board; UI/Unemployment Insurance.

4.1.1.1 Design Option 1.1 Site Visits (Conventional Qualitative Field Work)

Description. Qualitative field work—with site visits as a central feature—is a common approach to studying implementation. A promising design option in the present context would involve site visits and other qualitative data collection visits at multiple levels: national, state, local WDB, and AJC.

At the national level such an effort might begin with review of program documents (e.g., controlling statutes, VPLs). There would follow a series of semi-structured interviews with federal DOL/VETS and DOL/ETA staff, and conference calls with DOL regional staff overseeing services to veterans.

This review of document and discussions at the national level would lead to selection of states to be included in the study. Selected states should include a range of sizes, but focused on those with larger numbers of veterans. Selected states should also include a range of program designs and levels of success. Review of state reports to DOL and discussions with regional staff should help with the selection process that would be conducted in conjunction with DOL, i.e., the contractor would prepare a memo with a list of states and an explanation for that list. DOL would comment and the process would iterate until there was a mutually acceptable list.

At the state level, data collection would begin with a half of a day of semi-structured discussion with the state veteran coordinators (SVCs) and state WIOA administrative staff. There would then follow a half day of semi-structured discussions with local WDB administrators at several WDBs in a state.

These interviews would be followed by a day at several AJCs within selected WDBs. These site visits would include semi-structured interviews with AJC managers and either interviews or focus groups with DVOPs, LVERs, WIOA counselors, resource room staff, and AJC clients.

At each level, areas of focus for the discussions would reflect the goals of the research: to describe the broad patterns of current programs, how they vary across units (and at which levels), how they vary

over time, and promising practices. To this end, the discussions would address characteristics of the veterans served, major employment challenges those veterans face, current program priorities and design, coordination among programs that serve veterans, perceived promising or successful practices, ongoing challenges, recent program changes, and program changes under consideration.

Feasibility. Generally feasible, though studies may encounter some reluctance to participate, given the burden involved in hosting visitors. Insistence from DOL is likely sufficient to overcome resistance in most cases.

Costs. Clearly cost will vary with the number of states, the number of WDBs in each state, and the number of AJCs for each WDB. In general, a repeated design is preferred, i.e., three or more units at each level. Such a repeated design allows the study to understand within unit (state, WDB) variation which is crucial for later analyses.

As a starting point, we suggest 10 states, 3 WDBs per state, and 3 AJCs per WDB. This design implies about 130 field days: 1 at the federal level, 10 at the state level, 30 at the WDB level and, 90 at the AJC level.

There are thus two cost components: an approximately fixed-cost component and a component that varies with the number of field days. With respect to the approximately fixed-cost component, project management, developing the detailed plan and protocols, required OMB clearance, analysis (using qualitative analysis software to identify “themes”), and writing a report would cost roughly \$250,000-\$500,000, depending on scale. With respect to the variable cost component, considering time to set up the field work, time in the field (two person teams—one senior, one junior), preparation of initial notes, and travel, a day of field work costs roughly \$15,000. Given 130 field days, this would be about \$2 million and a total cost of about \$2.5 million. Fewer states, fewer WDBs per state, and fewer AJCs per WDB would yield fewer field days and lower cost.

Advantages. This design option yields rich description for a small number of states, WDBs, and AJCs. It is helpful for identifying nuanced variations among sites, potentially promising practices to test, detailed understanding of challenges in implementing different models, and hypotheses for why some models or components may be more or less effective than others.

Disadvantages. As costs would increase linearly with scale, this approach is likely too expensive to field annually or to visit even a substantial fraction of the 550 WDBs. As such it cannot be used to systematically categorize models used by large numbers of sites, as would be required to define treatment variables for a quasi-experimental impact analysis (Design Options 3.6 and 3.7) of impacts to different service models.

4.1.1.2 Design Option 1.2: Occasional Surveys of States, WDBs, and AJCs

Description. This design option would field closed-form web surveys of all states, all WDBs, and a sample of AJCs. The surveys would attempt to characterize how states, WDBs, and AJCs differ in scale and program design. Any such option would probably follow site visits that would have defined hypothesized dimensions of variation—and the options in each dimension. The survey would then capture the prevalence of each option, using descriptions from the field work to inform item wording and category definitions. The effort would involve moderately intensive follow-up in an attempt to

yield an established response rate threshold (ideally well above 70 percent). Strong support from DOL national and regional staff would be of great value in increasing response rates.

Feasibility. No issues.

Costs. As with DO 1.1, there are thus two cost components: an approximately fixed-cost component and a component that varies with the number of field days. With respect to the approximately fixed-cost component, project management, required OMB clearance, developing and web coding three surveys, analyses, and writing a report would cost roughly \$250,000. With respect to the variable cost component, there are 53 states and territories, and roughly 550 WDBs and 2,500 AJCs. Assuming 53 states and territories with two respondents per state (one VETS, one WIOA), 550 WDBs and 1,100 AJCs (i.e., a 44 percent sample), and 80 percent response rate, and a cost per complete of \$350 for moderately intensive (an hour per survey) phone follow-up, the cost for data collection would be about \$500,000 and the total project cost would be \$750,000.

Advantages. This design option yields a descriptive overview of a broad array of services to veterans and how they may vary across states, WDBs, and AJCs. As we discuss below under Design Option 3.7, the data collected as part of this design option could also support a non-experimental analysis of how outcomes vary with service patterns. That design would benefit from running such a survey longitudinally, perhaps every other year. This would allow better controls for confounding variables, i.e., how changes in outcomes relate to variation in program design.

Disadvantages. A survey does not provide the same richness of implementation detail that can be produced through site visits. Thus, it is more useful as an addition to site visits, rather than a replacement. Occasional surveys may fail to sufficiently keep up with changes over time.

4.1.1.3 Design Option 1.3. Regular Surveys of States, WDBs, and AJCs

Description. Difference-in-differences analyses (see Section 3.1.3 and Design Option 3.7 below) require information on how service delivery changes over time. This design option would field an annual web survey on the details of service delivery and year-to-year changes.

Feasibility. No issues.

Costs. Consistent with the previous description, here we cost five consecutive annual surveys as a single package. We envision the effort under a single contract, with only incremental year-to-year changes in the survey and in reporting. Presumably this effort would build on the results of Design Option 1.2, so even the first year would include analyses of year-to-year change.

As with DO 2.1 and 2.2, there are thus two cost components: an approximately fixed-cost component and a component that varies with the number of field days. With respect to the approximately fixed-cost component, project management, developing the instrument, securing (required) OMB clearance, developing and web coding analysis, and writing an annual report would cost roughly \$100,000 per year. Surveying 500 units (states and AJCs) would cost about \$50,000 per year (consistent with the earlier estimate of \$100 per survey for intensive follow-up). The resulting five-year cost estimate would be about \$500,000.

DO 1.1 and DO 1.2 are intended, in part, to determine basic levels of variation in service delivery. It seems plausible, but far from certain, that there is less systematic service delivery variation among

smaller units of service delivery, AJCs, than among larger units. Inasmuch as that is true, for DO 3.7, we could limit the survey to larger units—perhaps only states, or perhaps states and WDBs, but not AJCs. Clearly, if the survey can be limited larger units—of which there are fewer—then costs will be lower, allowing an annual or semi-annual survey at moderate cost.

Advantages. This design option yields a descriptive overview of a broad array of services to veterans and how they may vary across places as well as *across time*. It would provide the key missing information for a difference-in-differences analysis (see DO 3.7_{below}).

Disadvantages. The disadvantages flow back from the difference-in-differences analysis. Is there systematic service delivery variation—between units and through time—that can be captured in a web survey? Can high enough response rates be obtained at low enough cost? Implementing occasional surveys (DO 1.2) should provide early answers to these questions.

4.1.1.4 Design Option 1.4: Analysis of Deidentified DOL Workforce Data

Description. DO 1.2 attempts to use institutional surveys to characterize *service delivery models and program design*—separately for each state, each WDB, and a sample of AJCs. DO 1.3 attempts to do that *over time*. A complementary approach would use DOL workforce data to characterize *services delivered*—in every state, in every WDB, and in every AJC. States are already required to submit deidentified data to DOL/ETA, so the data are available.

Feasibility. No issues.

Costs. These are extant data that DOL already collects. A first-year report could be produced for \$250,000. Updated annual reports could be produced for \$100,000.

Advantages. This DO yields a descriptive overview of a broad array of *services received* by veterans and how they vary across units. If the study was repeated across years, it would also yield estimates of how services received by veterans vary over time. It would cover all AJCs and describe services received. The option is much less costly than a survey. This information obtained could also be used in difference-in-differences analyses (see Section 3.1.3 and DO 3.6 below).

Disadvantages. Although much less costly than a survey, extant data may not be able to provide all information that may be of interest, unlike a survey that could include questions specifically designed to examine a particular program nuances. The information generated by this design option regarding *service delivery models* would also only be indirect. This is because even with a common delivery model, services may vary across different populations. There is also concern that some differences among sites reflect variation in how local staff classify services for recording purposes, rather than differences in the actual services provided.

4.1.1.5 Design Option 1.5: Customer Satisfaction Survey

Description. A study would survey veterans using workforce services about their experiences, satisfaction, and suggestions for improvement. Low intensity mail survey would be an appropriate field method. Workforce data for recruited states would serve as the sampling frame.

Feasibility. States would need to be recruited to provide workforce data to serve as a sampling frame. (See Section 2.3 for a discussion of issues related to recruiting states.).

Costs. Sample sizes and low response rates are common for such customer satisfaction surveys. This is a low to moderate cost design option. Total cost would vary with the number of recruited states and the sample per state, but is likely to be under \$1 million.

Advantages. This DO would yield the perspectives of veterans using workforce services for a much larger sample than the focus groups of DO 1.1.

Disadvantages. DOL would also like to know why veterans do not use workforce services, but this design option would not contact those veterans. Information gathered is less rich than could be obtained in direct conversation.

4.1.1.6 Design Option 1.6: User Focus Groups

Description. DO 1.5 would provide responses to structured interview questions for users of AJC services. Focus groups would provide richer information and more insights into why veterans chose to use an AJC services and what their experiences, both positive and negative with those services were.

This design option would follow on DO 1.5. Some of the users interviewed as part of DO 1.5 would be invited to focus groups. Focus groups are at a given location. To provide a useful sample for such focus groups, the survey in DO 1.5 would need to have a geographically clustered sample.

Feasibility. As in DO 1.5 states would need to be recruited to provide UI data to serve as a sampling frame. (See Section 2.3 for a discussion of issues related to recruiting states.)

Costs. Focus groups are a low cost option. Exact costs would vary with the number of focus groups. Total cost would probably be under \$0.5 million.

Advantages. Relative to DO 1.5, this DO would yield richer perspectives from users that can be readily translated into program design.

Disadvantages. Cost considerations dictate small, and likely unrepresentative, samples, which limit the generalizability of the findings.

4.1.1.7 Design Option 1.7: Non-user Reason Survey

Description. Many veterans do not use workforce services. DOL might want to contact them in order to learn why. Perhaps veterans are unaware of the available services; perhaps veterans perceive them as unhelpful at all or for them. This design option would use new UI claimants as a sampling frame to survey non-users. A sample of veterans would be surveyed (i.e., no attempt to match to workforce data and eliminate veterans using workforce services); most of them would be non-users. As in DO 1.5 (the user survey), a low-intensity mail survey would be an appropriate field method.

Feasibility. States would need to be recruited to provide UI data to serve as a sampling frame. (See Section 2.3 for a discussion of issues related to recruiting states.)

Costs. Sample sizes and low response rates are common for such customer satisfaction surveys. This is a low to moderate cost design option. Total cost would vary with the number of recruited states and the sample per state, but is likely to be under \$1 million.

Advantages. This option would yield the perspectives of veterans not using workforce services.

Disadvantages. The option is unable to speak to the experiences of workforce system participants. Information gathered is less rich than could be obtained in direct conversation.

4.1.1.8 Design Option 1.8: Non-user Reason Focus Groups

Description. DO 1.7, above, would provide responses to structured interview questions for non-users. Focus groups would provide richer information and more insights into how to induce more veterans to use workforce services.

This design option would follow on DO 1.7. Some of the non-users surveyed as part of DO 1.7 would be invited to focus groups. Focus groups are at a given location. To provide a useful sample for such focus groups, the survey in DO 1.7 would need to have a geographically clustered sample.

Feasibility. As in DO 1.7 states would need to be recruited to provide UI data to serve as a sampling frame. (See Section 2.3 for a discussion of issues related to recruiting states.)

Costs. Focus groups are a low cost option. Exact costs would vary with the number of focus groups. Total cost would probably be under \$0.5 million.

Advantages. Relative to DO 1.7, this DO would yield much richer perspectives from non-users that can be readily translated into program design.

Disadvantages. Cost considerations dictate small, and likely unrepresentative, samples, which limit the generalizability of the findings.

4.2 Overview of Options to Answer Descriptive Questions

This section considers design options to address the descriptive RQs in DOL SOW. These are the research questions that are explicitly stated in the statute. The section begins with several introductory comments on the research questions, the process of addressing the research questions, and on the relation of these descriptive research questions and design options to the impact research questions and design options.

After the introductory comments, succeeding sub-sections present several specific design options grouped as follows: (i) pure survey (Section 4.2.1), (ii) pure administrative data (Section 4.2.2), and (iii) hybrid approaches combining survey data and administrative data (Section 4.2.3). Exhibit 4.2 provides a quick comparative overview of the options discussed (*KDR* Sections 10.1. and 10.2 discuss most of these design options at greater length and discuss other design options to address the descriptive research questions that are not discussed here.)

Exhibit 4.2. Overview of Options to Answer Descriptive Questions

Option No.	Option Name	Data Required	Feasibility	Cost	Research Questions Addressed
2.1	Pure Survey	Study-specific survey	High	Very Very High	All (though for a relatively small sample)
2.2	Pure National Administrative Data	List of veterans (DoD or DVA) State workforce data (identified, all states) Earnings (NDNH, SSA or IRS) Other data from VA, DoD, and ACS ^a	Low	Low	All but RQ12, RQ13, and RQ 14
2.3	National Administrative Data on JVSG	List of veterans (DoD, DVA) DOL workforce data on JVSG participants (identified, all states) Earnings (NDNH, SSA or IRS) Other data from DVA, DoD, and ACS ^a	Moderate	Low	All but RQ12, RQ13, and RQ 14
2.4	Workforce Data for Selected States and a National List of Veterans	List of veterans (DoD, DVA) State workforce data (identified, some states) Earnings (NDNH or State UI) Other data from DVA, DoD, and ACS ^a	Moderate	High	All but RQ12, RQ13, and RQ 14 (but only for a subset of states).
2.5	Workforce Data for Selected States, but no National List of Veterans	State workforce data (identified, some states) Earnings (NDNH or State UI) Other data from DVA, DoD, and ACS ^a	Moderate-High	Moderate	All but RQ12, RQ13, and RQ 14 (but only for subset of states). Veterans not using services are excluded
2.6	UI and Workforce Data for Selected States	State workforce data (identified, some states) State UI data for earnings and list of veterans Other data from DVA, DoD, and ACS ^a	Moderate	Moderate	All but RQ12, RQ13, and RQ 14 (but only for subset of states). Veterans who are not UI claimants are excluded
2.7	Survey Starting from a List of Veterans	Study-specific survey List of veterans (DoD, DVA) Other administrative sources would be helpful (for sample size and accuracy), but not necessary, as the survey could collect all measures	Moderate	Very High	All (though for a relatively small sample for survey-based measures)

Option No.	Option Name	Data Required	Feasibility	Cost	Research Questions Addressed
2.8	Survey Starting from Workforce Data for Selected States	Study-specific survey State workforce data (identified, some states) Other administrative sources would be helpful (for sample size and accuracy), but not necessary, as the survey could collect all measures	Moderate	High	All (though for a relatively small sample for survey-based measures in a subset of states)

Key: ACS/American Community Survey; DoD/U.S. Department of Defense; DOL/U.S. Department of Labor; DVA/U.S. Department of Veterans Affairs; IRS/Internal Revenue Service; RQ/Research Question; SSA/Social Security Administration.

^a DoD data are the only administrative source for RQs related to military service and services received while in the military (RQ 4, RQ 5, RQ 15, RQ 18). VA data are the only administrative source for use of veteran-specific educational assistance (RQ 16) and rehabilitation services (RQ 17). Total household income (RQ12) requires IRS or ACS data, but earnings data that are available from other sources (NDNH, state UI, SSA) may be considered a sufficient proxy. Failure to obtain any of those datasets would render it impossible to answer the particular RQs using administrative data.

The Research Questions. In part following the statutory language, DOL's SOW included multiple descriptive RQs.

- RQ 4. What was the average number of months the individual served on active duty?
- RQ 5. What are the disability ratings of the individual?
- RQ 6. Did the individual receive unemployment benefits? What type of unemployment benefits?
- RQ 7. What was the average number of months the individual was employed during the year covered by the report?
- RQ 8. What is the employment status of each individual? What is the average number of months the studied veterans were employed during each of the 5 years under study?
- RQ 9. What was the average annual starting and ending salaries of the individual during each of the 5 years under study?
- RQ 10. What was the average annual income of the individual during each of the 5 years under study?
- RQ 11. What was the average total household income of the individual during each of the 5 years under study?
- RQ 12. Did the individual own their principal residences?
- RQ 13. Does the individual believe that any service provided by a Disabled Veterans' Outreach Program specialist or Local Veterans' Employment Representative helped the individual to become employed?
- RQ 14. For those individuals who believe that such services helped the individual to become employed, did the individual retain the position of employment for a period of 1 year or longer; and does the individual believe that such a service helped the individual to secure a higher wage or salary?

- RQ 15. Under what conditions was the individual discharged or released from the Armed Forces?
- RQ 16. Has the individual used any educational assistance to which the individual is entitled under this title?
- RQ 17. Has the individual participated in a rehabilitation program under chapter 31 of this title?
- RQ 18. Did this individual have contact with a One-Stop Career Center employee while attending a workshop or job fair under the Transition GPS Program of the Department of Defense?
- RQ 19. What are the demographic characteristics of the individual?

Furthermore, the statute and DOL’s SOW specified that these descriptive analyses be stratified, i.e., performed separately for three groups: (A) veterans using intensive workforce services, (B) veterans using only non-intensive services, and (C) veterans using no workforce services. Finally, consistent with statute, DOL’s solicitation specified that the analysis should be “longitudinal,” following “a statistically valid sample” of those “3 groups of individual veterans over a five-year period.” (See *KDR* Section 2.4 for an extended discussion and Section A.2 of Appendix A of this document for a briefer discussion of the statutory language, most of which carries over to DOL’s SOW.)

Broad Issues in Addressing the Research Questions. The stratification requirement implies that addressing these research questions involves a three-step process (see Appendix A, Section A.2). First build a list of veterans and probably the basic characteristics of those veterans—demographics (e.g., gender, race/ethnicity, age, education) and military services (e.g., branch, years of service, military occupation, rank at exit). Second, append workforce utilization group and perhaps a richer characterization of their use of workforce services. Third, append outcome data (e.g., employment, earnings, household income).

Section 2.1 established that administrative data exists to construct a list of veterans (Step 1) and to classify those veterans by workforce services (Step 2). Appendix A, Section A.3 of this document considers whether the outcomes are available in administrative data. Most of the outcomes—in particular, earnings, the key outcome for workforce analyses—are in fact, available.

Thus, a pure administrative data analysis would, in principle, be able to answer most of the descriptive research questions.¹³ Such an analysis would include all veterans and could be easily replicated over time yielding the specified longitudinal survey. Data quality for such a pure-administratively-based analysis would be higher than for a survey-based study. Given access to the administrative data, the costs of such a study would be relatively low (see below). Furthermore, with unlimited access to administrative data, the research could, at moderate cost, field a complementary survey to fill in information on outcomes not measured in administrative data.

The requirement to identify both individuals who use and do not use workforce services will itself require multiple data sources. Options presented below typically use state workforce to identify those who use the workforce system in a state. However, a different source is required to identify veterans who do not use workforce services. The options below consider several such options.

¹³ The exceptions are the statutory requirement to measure the (1) how useful users of services perceive those services to be and (2) whether the veteran had contact with any AJC staff while involved in the Transition GPS program. Survey or focus group options covered in Section 4.1 would be required to answer that question. This consideration is relevant for any of the administrative data design options.

Although the data exist for such a study, there are serious barriers to expedient implementation. While the three classes of information—list of veterans, their workforce utilization, and outcomes—exist in administrative data, DOL controls none of the administrative data systems. Furthermore, it is unclear whether the custodians of the three classes of data would share them for a DOL-sponsored study and under what conditions. Attempts to arrange data sharing agreements with other federal agencies or states, even if ultimately successful, is likely to require substantial time and money. This is the problem that makes it challenging to specify compliant descriptive design options. As noted earlier, legislation to implement proposals by the Commission on Evidence-Based Policymaking (2017) explicitly permitting data matching for statistical purposes, would make administrative data options much more feasible.

Relation to Impact Analysis Research Questions. Some of these descriptive research questions are implicitly causal. The specification of stratification by use of the workforce system seems to imply the use of comparisons across the groups as a first cut towards estimates of the impact of use of intensive and non-intensive workforce services. The discussion in Section 3.1.1 noted that, if used to attempt to estimate causal impact, this approach of simply comparing outcomes across the different groups would yield very biased estimates.

More narrowly, two research questions seek subjective impressions of impact (emphasis added):

- RQ 13. Does the *individual believe* that any service provided by a Disabled Veterans’ Outreach Program specialist or Local Veterans’ Employment Representative *helped the individual to become employed*?
- RQ 14. For those individuals who believe that such services helped the individual to become employed, did the individual retain the position of employment for a period of 1 year or longer; and does the *individual believe* that such a service *helped the individual to secure a higher wage or salary*?

The discussion in this section deliberately ignores this implicit causal component of these nominally descriptive research questions. Instead, we defer all discussion about estimating impact until the next section (Section 4.3). We should point out however, that the databases that would need to be built to address these descriptive research questions are, to varying degrees, not satisfactory for estimating causal impact. The discussion in Section 4.3 addressing causal impact research questions notes when the necessary data base was also specified in Section 4.2 as it pertains to analyzing descriptive research questions.

4.2.1 Pure Survey Options

We only consider one pure survey option.

4.2.1.1 Design Option 2.1: Pure Survey

Description. A pure survey design would contact random households looking for veterans in each of the three workforce utilization groups. The study would survey located veterans about their history of military service, workforce utilization, and outcomes. As described in Section 2.5, survey field methods would probably involve Address-Based Sampling. Random Digit Dial would be an alternative. See Section 2.5 for more on survey field methods.

Feasibility. No issues with conducting the survey. However, matching survey responses to administrative data seems infeasible. Respondents would need to give their name, date of birth and SSN, plus consent to match. Rates of providing that information and consent are likely to be so low that the matched administrative data would not be useful.

Costs. As we discuss in detail in Appendix A.2, veterans are a rare population; and those using intensive workforce services are extremely rare. A sample size of 1,000 in each group is a small, but useful starting point. (DOL testimony assumed 4,000 in each group.) Without additional targeting help from administrative data, locating 1,000 veterans using intensive services would require obtaining responses from approximately 500,000 households. At \$100 per case, this design option would have a total cost of \$50 million.

Advantages. A survey has the advantage of being able to ask about any subject of interest. It could thus answer all of the descriptive questions.

Disadvantages. Quality of survey data is usually lower than for administrative data due to differential survey response, recall bias, and misunderstanding of questions. Obtaining accurate profiles of service receipt (including level of detail needed to distinguish intensive from non-intensive services) and which program funded the services (JVSG, ES, WIOA, or other) is likely to be a challenge. Research has also documented high and increasing levels of non-reporting of government program participation in existing surveys such as the SIPP and CPS (Meyer et al, 2015). Both non-reporting and unintentionally inaccurate reports could lead to misclassification of which veterans are in which group.

Above and beyond these data quality challenges, the major issue is cost. This would be among the largest surveys in the United States. Its projected cost would be as large as the entire annual DOL evaluation budget.

Note that this budget estimate only covers data collection for a single point in time, not the longitudinal component envisioned by the statute. Adding a longitudinal component would require a series of follow-on surveys at specified time intervals. The sample sizes would be small. The initial survey would already have identified the (perhaps) 1,000 veterans in each of the three groups. However, the survey is only longitudinal if they can be surveyed again. Surveying those same people at even moderate response rates will require more intensive field methods, perhaps \$500 per complete. Thus, the follow-on waves will cost in the range of \$2 million per year.

4.2.2 Pure Administrative Data Options

Here, we consider five pure administrative data options.

4.2.2.1 Design Option 2.2: Pure National Administrative Data

Description. As noted in Section 4.2.1, the administrative data exists for a pure national administrative design option. DOD and DVA both have lists of veterans (but not current contact information). State workforce data include all veterans using workforce services, and could be used to stratify intensive vs. non-intensive only (where no workforce services do not appear in those files). Earnings data are available from NDNH, SSA, and IRS (DOL has mostly positive experience using NDNH data). DVA has information on use of its services. In principle, these data could be linked via SSN. The data are available continuously or at least quarterly, so constructing a longitudinal data file would be straightforward.

This design option would almost certainly require a safe harbor. Given DOL's ongoing work relationship, NDNH is the natural choice. Census and SSA are also possible alternatives. The choice of safe harbor would determine the source of earnings data.

Feasibility. Even using a safe harbor, it is unclear whether this design is feasible. Data custodians indicated that negotiations for data access would need to be conducted by senior DOL staff. Data custodians would not negotiate with a contractor.

The WIOA legislation can be read as prohibiting DOL from constructing a database of workforce data for WIOA participants. It may also be read as prohibiting creation of such a database for ES participants. Exactly how the prohibition might apply to a contractor creating a database is less clear, though there is precedent in the WIA Gold Standard Evaluation creating a database for a contractor creating a database of WIOA workforce data covering nearly 28 local areas from 19 states. But it may not be legally permissible for a contractor to create a similar database covering all states. Even in the absence of a statutory prohibition, the pure form of this design requires that *all* states provide their workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.)

Costs. Assuming that DOL has established access in principle to the various data systems, this is a low cost option. Perhaps \$0.5 to \$1.0 million for a five-year longitudinal study

Advantages. The advantages of this approach are clear—high quality administrative data available quarterly for all veterans. The crucial earnings outcomes are clearly available although some secondary outcomes are not (e.g., subjective perceptions of the impact of programs).

This national DOL workforce data strategy is a very attractive design option. As such, substantial effort to overcome these barriers seems worthy of serious consideration.

Disadvantages. Although administrative data exist to answer the large majority of descriptive questions. Answering the question on participants' perceptions of the how helpful services were in finding employment, and whether they had any contact with an AJC employee while under the Transition GPS program, would require primary data collection such as a survey or focus group.

4.2.2.2 Design Option 2.3: National Administrative Data on JVSG

Description. The biggest barrier to DO 2.2 is identified national workforce data. DOL is now getting national, identified, JVSG data (but not for WIOA or ES). Thus, DOL could construct a database starting from national veterans' data (as in DO 2.2). Those veterans would be divided into two groups, those using JVSG and other veterans (who are not known to have used other AJC services). Those records would be matched to NDNH. Tabulations would be done for two groups.

Like DO 2.2, this design option would almost certainly require a safe harbor. Given DOL's ongoing work relationship, NDNH is the natural choice. Census and SSA are also possible alternatives. The choice of safe harbor would determine the source of earnings data.

Feasibility. DOL already has (or will soon have) identified workforce data for JVSG. DOL workforce data, thus provide no feasibility issues.

See the discussion in Section 2.1 about issues in negotiating access for national data. For this design option, the greatest challenge is likely to be getting access to national veterans' data. Discussions with DMDC staff suggested that it might be possible to overcome that challenge.

Costs. Assuming that DOL has established access in principle to the various data systems, this is a low cost option. Perhaps \$0.5 to \$1.0 million for a five-year longitudinal study

Advantages. The advantages of this approach are clear. High quality administrative data, available quarterly, for all veterans. The crucial earnings outcomes are clearly available although some secondary outcomes are not (e.g., subjective perceptions of the impact of programs).

Disadvantages. The major disadvantage of this strategy is that it only provides information on two groups. Veterans using non-intensive services would not be identifiable and therefore would need to be grouped with veterans using no workforce services. Furthermore, the group using intensive services would only include those using JVSG. Veterans receiving intensive services through DOL programs serving a broader population, who are not also JVSG participants, would also be grouped with veterans using no workforce services. That group appears to constitute just under 50 percent of all veterans who receive intensive services.¹⁴ So veterans identified as using intensive services would be a smaller sample, and likely of a somewhat different profile than the full sample, since veterans served by JVSG have SBEs, whereas those served only by other programs may not.

4.2.2.3 Design Option 2.4: Workforce Data for Selected States and a National List of Veterans

Description. If national veterans' data are available, but nationwide identified workforce data are not available, a study could start from state workforce data. Under this design option, the contractor—ideally with strong support from DOL—would approach states about providing identified data on workforce system participants who are identified as veterans.

National data on a sample of veterans would be passed to a commercial data aggregator. The data aggregator would pass back a list of veterans who live in participating states. Veterans on this list who are not in state workforce data would be assumed to not use workforce services. Matching has a cost, so a study would probably choose to only process a sample. Data from NDNH or, potentially, state UI files, could be also added to capture earnings and identify non-users of AJC services who are more similar to users.

Feasibility. States would need to be recruited to provide workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.). DoD or DVA would need to provide a list of veterans and permission to pass that list to a commercial data aggregator. It is unclear whether a safe harbor would be sufficient for that purpose.

Costs. Assuming that DOL has established access in principle to the various data systems, this is a high cost option, perhaps \$5 million. Processing the data is relatively straightforward. Recruiting states would have moderate costs.

Advantages. The advantages of this design option are high quality administrative data and relatively low cost. Both recruiting the states and subsequently working with the data (in relative terms) are only moderately expensive.

Disadvantages. The primary disadvantages of this approach is that not all states would be included. The attractiveness of this approach is sensitive to what fraction and mix of selected states agree to

¹⁴ See estimates presented in Exhibit 4.2 of the *KDR*.

participate. Depending on the level of persuasion applied by DOL and the other resources available, the number of states may be small and the composition unrepresentative.

4.2.2.4 Design Option 2.5: Workforce Data for Selected States, but no National List of Veterans

Description. If identified DOL workforce data are not available, a study could start from state workforce data. Under this design option, the contractor—ideally with strong support from DOL—would approach states about providing identified workforce data on individuals listed as veterans.

State workforce data that show which veterans use intensive and non-intensive workforce services could be matched to outcome data, in particular, NDNH data on earnings, using NDNH as a safe harbor.

Without a list of veterans in the state *not* using workforce services, no analyses would be possible for that group.

Feasibility. States would need to be recruited to provide workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.)

Costs. Assuming that DOL has established access in principle to the various data systems, this is a moderate cost option, perhaps \$3 million. Processing the data is relatively straightforward. Recruiting states would have moderate costs.

Advantages. The advantages of this design option are high quality administrative data and relatively low cost. Both recruiting the states and subsequently working with the data (in relative terms) are only moderately expensive.

Disadvantages. The primary disadvantages of this approach are coverage. Not all states will be included. Again, the attractiveness of this approach is sensitive to what fraction and mix of selected states agree to participate. Depending on the level of persuasion applied by DOL and the other resources available, the number of states may be small and the composition unrepresentative. In addition, we would still lack information on veterans not using the workforce system.

4.2.2.5 Design Option 2.6: UI and Workforce Data for Selected States

Description. If neither national veterans' data, nor identified DOL workforce data are available, a study could start from state recent UI claims and match them to that state's workforce data. UI data would allow identification of a list of veterans.

This design option would limit the population of interest to recent (perhaps new) UI claimants. Matching to state workforce data would allow disaggregating them into the three workforce utilization groups.

Feasibility. States would need to be recruited to provide UI and workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.)

Costs. Assuming that DOL has established access in principle to the various data systems, this is a moderate cost option, perhaps \$3 million. Processing the data is relatively straightforward. Recruiting states would entail moderate costs.

Advantages. The advantage of this design option is that it would provide data for all three groups for sub-population of high interest. The attractiveness of the option depends in part, on how large a fraction UI claimants are of all veterans using workforce services. The higher the fraction, the more attractive is this option. According to the *PY 2017 Quarter 3 Report for WIOA and Wagner-Peyser* (SPR, 2018), 41 percent of ES participants (which encompass the large majority of users of AJC services, including most JVSG and WIOA participants) in the most recently available 12-month period (April 2017–March 2018) were current UI recipients. Another two percent were UI exhaustees. This prevalence is likely to vary over time and could differ between veterans and non-veterans.

This design inherits the advantages of the previous option (DO 2.4) i.e., high quality administrative data and relatively low cost. Working with the data is not that expensive. Recruiting states is likely to be moderately expensive.

Disadvantages. The primary disadvantages of this approach are again, coverage. Not all states will be included. Sample sizes will be small. Included states may not be representative. In addition, there would be no information on veterans who are not recent UI claimants.

4.2.3 Hybrid Survey/Administrative Data Options

In the absence of national data on veterans, pure administrative data strategies cannot identify the third group, veterans who do not use workforce services (e.g., DO 2.5). To address this challenge, a study might fill in information about the missing group using a survey.

Each of these design options has common disadvantages: (i) the survey would be expensive, (ii) sample sizes would likely be small, (iii) survey data are of lower quality than administrative data, (iv) using survey data for some veterans and administrative data for other veterans raises concerns about comparability, (v) consent issues imply that it would probably be impossible to link back to administrative data, and as a consequence (vi) multiple survey waves would be needed to satisfy the requirement for a longitudinal study further increasing the costs.

4.2.3.1 Design Option 2.7: Survey Starting from a List of Veterans

Description. With a list of veterans but no access to any workforce data, the study would proceed as follows. The list of veterans would provide name, date of birth, and SSN. That list would be passed to a commercial locating service¹⁵ which would attach and return basic contact information, i.e., address, telephone number, email address. The research contractor would then attempt to contact those veterans, probably via mail. The key information to be collected via survey would be use of workforce services. Information on outcomes and other measures specified in the descriptive research questions could also be collected.

Feasibility. DoD or DVA would need to provide a list of veterans. Whether they would be willing to do that is uncertain. There may also be confidentiality restrictions that prohibit using the data to contact individuals.

Costs. This design option would provide national data on all three groups. Given that the study started from a list of veterans, survey costs would be a tenth of those for DO 2.1. Nevertheless, a large fraction of the surveys would still be “wasted.” Veterans using intensive workforce services are only about 1

¹⁵ See Appendix B.1 for more discussion of using a commercial locating service in this way.

percent of all veterans (slightly more if we under-sample older veterans). Thus, to find 1,000 veterans using intensive workforce services, the survey would need to survey 50,000 households. At \$100 per case, this design option would have a total survey cost of \$5 million. Arranging access to the list of veterans will involve moderate additional costs.

Advantages. This design option survey data's virtue of flexibility of content coverage.

Disadvantages. This design option has all of the common disadvantages of hybrid approaches.

4.2.3.2 Design Option 2.8: Starting from Workforce Data for Selected States

Description. As in DO 2.5, if national workforce data with identifiers are not available, a study could start from state workforce data as in DO 2.4. As in DO 2.4, the contractor would recruit states and use their workforce data to identify veterans using intensive and non-intensive workforce services.

However, unlike for DOs 2.4 and 2.5, this option assumes no access to a list of veterans. Instead, as in DO 2.2, the study would need to use Address Based Sampling to find veterans who do not use the workforce system.

Costs. Given that the study has already identified the rarest populations using state workforce data, the Address Based Sampling survey would only need to find veterans who are not users of AJC services. As described in Exhibit A.2, these individuals are found in roughly or one in every 13 households. Thus, to find 1,000 veterans using intensive workforce services, the survey would need to survey 12,500 households. An additional 2,000 respondents would be surveyed from across the two groups of users of AJC services, identified in state workforce data. At \$100 per case, this design option would have a total cost of \$1.5 million on top of the costs associated with state workforce data in DO 2.4. The study would also need to recruit several states in order to have a large enough sample of intensive service users. Recruiting states would involve moderate additional costs.

Feasibility. States would need to be recruited to provide workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.)

Advantages. This design option survey data's virtue of flexibility of content coverage.

Disadvantages. In addition to the common disadvantages of hybrid designs, this design option would be limited to participating states.

4.3 Causation/Impact

DOL's RQ2 asked: ***What key components or approaches are successful or contribute to the success of job counseling, training, and placement service?*** This is a question of causation or impact. Below is a wider range of causal impact research questions of potential policy interest:

RQ A: What is the impact of JVSG? i.e., how do outcomes differ with JVSG programs relative to what outcomes would be without JVSG programs, but with other DOL-funded programs that serve the general population (including veterans)? Are those benefits commensurate with the cost of the programs?

RQ B: How would outcomes change if the level of funding for services to veterans changed (increased/decreased)? i.e., how would outcomes at some other level of funding for services to

veterans differ from outcomes at the current funding level? Are those benefits/costs commensurate with the increased costs/cost savings?

RQ C: Are outcomes better with Program Model Y than with Program Model X? Often Program Model X is the current program model—sometimes called “business as usual”—including its variation across WDBs and AJCs, while Program Model Y is some innovation. The two program models might be quite different, or they might differ primarily in that Program Model Y includes some component (e.g., a one-on-one counseling session) which is not part of Program Model X. Are the benefits of the more expensive program commensurate with its higher cost?

RQ D: Are impacts, i.e., outcomes with the program relative to outcomes without the program, greater for some identifiable subgroup?

This section considers causal impact design options, organized by this longer list. The section relies heavily on Section 3.1’s discussion of the basic concept of impact, the challenge of impact estimation, and specific methods for estimating impact. In particular, RA designs have better internal validity than difference-in-differences or matching designs.

Like DO 2.6, many of the design options below proceed by recruiting states to provide their UI and workforce data and then to analyze outcomes only for recent UI claimants. Outcome data would be drawn from the NDNH. Here we make several global comments about this broad strategy. These comments apply to all design options using these data.

First, any such study would incur at least moderate costs. Recruiting states has moderate costs. To induce states to participate, DOL would probably want to make a payment to the states to cover their direct costs of providing data and any other activities required of them. There would be moderate costs to processing state UI and workforce data. NDNH data is well understood and easy to process.

Second, this approach uses administrative data to identify a population which, presumably, has higher rates of using workforce services in general and JVSG services in particular. What share of those using JVSG services are recent UI claimants is unclear.

Third and more importantly, samples sizes for similar matching approach (PSM) analyses of labor market interventions are usually in excess of 10,000. Achieving samples of veterans with a recent UI claim of that size would require recruiting many and larger states. Recent DOL experience with recruiting states to provide their data for non-experimental analyses suggests that recruiting enough states is likely to be a challenge. (See Section 2.3 for a discussion of issues related to recruiting states.)

This section discusses a range of design options to answer causal impact questions of interest. Exhibit 4.3 provides an overview of those options.

Exhibit 4.3. Overview of Options to Answer Impact Questions

Option No.	Option Name	Method and Data	Feasibility	Cost	Research Value
3.1	Matching-based Study of Veteran UI Claimants	Method: Matching UI claimants Data: State UI and workforce data; NDNH	Moderate	Moderate	Identify added value of JVSG compared to only programs serving a broader population, or intensive or non-intensive services to no services. Moderate internal validity. Generalizes only to UI claimants.
3.2	Matching-based Study of Veterans Using Any Workforce Services	Method: Matching AJC customers Data: State workforce data; NDNH	Moderate-High	Moderate	Identify added value of different levels or sources of services relative to each other. Moderate internal validity. Cannot assess impacts relative to receiving no services.
3.3	Impact of Changing the Level of Funding of JVSG	Method: Randomly assign funding to states, WDBs, or AJCs Data: State workforce data; NDNH	Very low	Moderate-High	Would rigorously identify how changing funding affects AJC customers. We currently do not consider this feasible.
3.4	Individual-Level Random Assignment to Alternative Program Models	Method: Randomly assign AJC customers to different service models Data: State workforce data; NDNH	Low	Moderate	Would rigorously compare impacts of alternative program models with high statistical power for a modest number of localities.
3.5	AJC- or WDB-Level Random Assignment to Alternative Program Models	Method: Randomly assign AJCs or WDBs to use different program models Data: State workforce data; NDNH	Moderate-Low	High	Would rigorously compare impacts of alternative program models with lower statistical power than DO 3.4 for a modest number of localities.
3.6	Difference-in-differences Applied to Naturally Occurring Variation in Program Models for all Veterans	Method: Identify variation across time and locations in program models and compare changes in outcomes Data: DOL workforce data (de-identified); List of veterans from DoD or DVA; NDNH	Moderate-High	Low	Would, with moderate internal validity, compare impacts of alternative program models.

Option No.	Option Name	Method and Data	Feasibility	Cost	Research Value
3.7	Matching-based Study of Program Models for Veteran UI Claimants	Method: Identify naturally occurring variation in program models and match UI claimants in areas with different models Data: State workforce and UI data; NDNH	Moderate	Moderate	Would, with moderate internal validity, compare impacts of alternative program models in a subset of states. Results generalize only to UI claimants.
3.8	Matching-based Study of Program Models for Veterans Using Any Workforce Services	Method: Match AJC customers using different levels of services across local areas Data: State workforce and data; NDNH	Moderate-High	Moderate	Would, with moderate internal validity, compare how outcomes vary with different utilization of the workforce system under different program models. No impacts are estimated relative to a no-treatment counterfactual.
3.9	Matching-based Analysis of Differential Impact among UI Claimants	Method: Perform subgroup analyses of match comparison groups of UI Claimants Data: State UI and workforce and data; NDNH	Moderate	Low-Moderate	Would, with moderate internal validity, compare how impacts of AJC services vary across individuals with different barriers to employment. Results generalize only to UI claimants.

Key: AJC/American Job Center; DoD/Department of Defense; DVA/Department of Veterans Affairs; NDNH/National Directory of New Hires; JVSJG/Jobs for Veterans State Grants program; UI/Unemployment Insurance; WDB/Local workforce development board.

4.3.1 Impact of Different Levels or Sources of Services

This section considers three design options for estimating the impact of JVSG relative to no JVSG. We omit the most obvious option—random assignment of individuals to receive or not receive services, because it is legally prohibited to do so with veterans.

4.3.1.1 Design Option 3.1: Matching-based Study of Veteran UI Claimants

Description. Among veterans who are recent UI claimants, this design option would perform matching (PSM) with respect to their use of JVSG and non-veteran specific workforce services. (See DO 2.6 about using recent UI claimants to identify a frame.) For recent UI claimants, the study would then use a matching approach to explore how outcomes—employment, earnings and subsequent use of UI (from NDNH)—vary with utilization of the workforce system (from state workforce data).

Feasibility. States would need to be recruited to provide UI and workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.)

Cost. This would be a moderate cost study. (See DO 2.6 about costs associated with using recent UI claimants to identify a frame.) Because of concerns about potential selection bias, matching analyses involve more extensive sensitivity analyses than random assignment study would. A survey would expand the outcomes that could be analyzed (and be useful for CBA), but would substantially increase costs.

Advantages. Given that they are, by definition, job seekers, UI claimants who do not use AJC provide a reasonably strong counterfactual for users of AJC services who are also UI claimants.

Disadvantages. This design option would have moderate internal validity and the impact estimates would generalize only to veterans who are UI claimants, rather than all veterans served by AJCs. (See the earlier general comments about the disadvantages of using UI claimants as a frame.)

4.3.1.2 Design Option 3.2: Matching-based Study of Veterans Using Any Workforce Services

Description. Among veterans who use any workforce services, this design option would perform matching with respect to their use of intensive services, relative to non-intensive services. Use a matching approach to explore how outcomes—employment, earnings and subsequent use of UI (from NDNH)—vary with utilization of the workforce system (from state workforce data). Because the approach uses only data for workforce system participants, the analyses could only estimate relative impacts of different levels or types of services (e.g., intensive vs. non-intensive), not services vs. no services.

Feasibility. States would need to be recruited to provide workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.)

Cost. This would be a moderate cost study. (See DO 2.6 about costs associated with using recent UI claimants to identify a frame.) Matching and appropriate sensitivity analyses have some costs (higher than for random assignment). A survey would expand the outcomes that could be analyzed (and be useful for CBA), but would substantially increase costs.

Advantages. Unlike DO 3.1, this design option does not involve the challenge of obtaining state UI data.

Disadvantages. This design option cannot answer questions about program impacts relative to receiving no services. The option would have moderate internal validity and the impact estimates would only apply to veterans who are UI claimants. (See the earlier general comments about the disadvantages of using UI claimants as a frame.)

4.3.2 Impact of Changing the Level of Funding of JVSG

This section considers design options for estimating the impact increasing (or decreasing) the funding of JVSG. A program cost neutral approach would randomly increase and decrease JVSG funding to states or WDBs within a state or AJCs within a state. It is our sense that it would be very hard to recruit states for randomly lower funding or for randomly adjusting funding (holding total funding fixed). As such, we do not discuss those options further.

We do not propose a design using observational methods. DOL allocates JVSG funds according to a formula related to number of veterans in the labor force and the number of unemployed veterans in the state.¹⁶ WIOA and ES funds are distributed using similar criteria (though not focused specifically on veterans). Inasmuch as that formula is optimal or nearly optimal, there is no usable variation in funding. If funding were allocated using some more alternative criteria, e.g., state applications or strong dependence on previous applications, observational methods would be worth further consideration.

4.3.2.1 Design Option 3.3: WDB or AJC-Level Random Assignment of JVSG Funding

Description. This design option would randomly assign some WDBs or AJCs to receive additional JVSG funding. States would be offered more JVSG funding on the dual conditions that they randomize the allocation of the additional funding and that they provide UI and workforce data (as in DO 3.1). Outcome data would be derived from matching to the NDNH. (See the earlier general comment about using recent UI claimants to identify a frame.)

Feasibility. States would need to be recruited to provide workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.)

Cost. This would be a comparatively expensive study. (See DO 2.6 for general comment about costs associated with using recent UI claimants to identify a frame.) Again states would need to be recruited, and participating states would need some financial support to cover their incremental costs of participation. The offer involves more funding for JVSG, so the recruiting task should be easier. Randomization is at the funding level; with respect to WDBs or AJCs, while monitoring would still be needed, it should be relatively low cost. A survey would increase the outcomes that could be analyzed (and be useful for CBA), but would substantially increase costs.

The major cost is the additional JVSG funding. That increment to funding would need to be at least moderate—perhaps 10 percent or 25 percent—in order to plausibly detect impacts.

Advantages. This design option would have high internal validity and would address a policy relevant question. It is easy to imagine veterans groups supporting this proposal. States are also likely to be supportive.

¹⁶ More precisely the number of veterans (in the labor force and unemployed, respectively) as a share of the national totals—limited by an overall floor as well as floors and ceilings for how much allocations can change year-over-year (DOL, 2016; Code of Federal Regulations, 2018)

Disadvantages. The impact estimates would only apply to veterans who are UI claimants. (See the earlier general comment about using recent UI claimants to identify a frame.) Costs might be a barrier. The study would be limited to recent UI claimants.

4.3.3 Impact of Alternative Service Delivery Strategies

This section considers design options for estimating the impact of alternative service delivery strategies. These are the design options that correspond most closely to DOL's RQ2: *What key components or approaches are successful or contribute to the success of job counseling, training, and placement service?*

4.3.3.1 Design Option 3.4: Individual-level Random Assignment to Alternative Program Models

Description. Among veterans otherwise eligible for JVSG services, this design option would randomize some veterans to Program Model Y and others to Program Model X—where Program Model X would probably be the current program model. Earnings outcomes would be drawn from NDNH. We leave open the question of appropriate alternative program models. That would be a task for Design Option 1.1.

Randomization would occur at the individual level. Each participating AJC would need to run both program models.

Feasibility. States would need to be recruited to provide workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.) Presumably, Program Model Y would be chosen in part because of site enthusiasm, or at least interest. Given uncertainty about which program model is better and that all veterans seeking services would receive them, this design option does not seem to raise the major ethical and political issues of DO 3.1. Nevertheless, recruiting sites/states would still be a challenge, especially given a goal of recruiting sites with perhaps 5,000 veterans seeking JVSG services.

Cost. This would be a moderate cost study. Sites would need to be recruited, and randomization would need to be monitored. Data could come from a baseline information form administered at randomization and from the NDNH for earnings. A survey could further expand the outcomes to be analyzed (and be useful for CBA), but would substantially increase costs.

Advantages. This design option would have high internal validity and the impact estimates would apply to all veterans who would get JVSG services. This design option would address a clearly policy relevant question.

Disadvantages. Sites would face a logistical challenge of implementing two parallel service delivery models within the same AJCs. Substantial monitoring would be required to ensure staff were implementing study procedures and providing services appropriately.

4.3.3.2 Design Option 3.5: AJC- or WDB-level Random Assignment to Alternative Program Models

Description. Among veterans otherwise eligible for JVSG services, this design option would randomize some veterans to Program Model Y and others to Program Model X—where Program Model X would probably be the current program model. Earnings outcomes would be drawn from NDNH. We leave open the question of appropriate alternative program models. That would be a task for Design Option 1.1.

Randomization would occur at the AJC or WDB level. Each participating AJC would only need to run one program model. Group level randomization requires larger samples than individual level randomization.

Feasibility. States would need to be recruited to provide workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.) Presumably, Program Model Y would be chosen in part because of site enthusiasm, or at least interest. Given uncertainty about which program model is better and that all veterans seeking services would receive them, this design option does not seem to raise the major ethical and political issues of DO 3.1. Given required larger sample sizes for group randomization, the recruiting task would be substantially larger.

Cost. This would be a large cost study. Sites would need to be recruited, and randomization would need to be monitored. Group (in this case AJC or WDB) level randomization requires much larger samples for a given level of precision. Data could come from a baseline information form administered at randomization and from the NDNH for earnings. A survey could further expand the outcomes to be analyzed (and be useful for CBA), but would substantially increase costs.

Advantages. This design option would have high internal validity and the impact estimates would apply to all veterans who would get JVSG services. This design option would address a clearly policy relevant question.

Sites would only need to implement one service delivery model. Thus, much less monitoring would be required than for DO 3.4.

Disadvantages. Randomizing at the AJC level, introduces a risk that veterans would go to the AJC implementing their desired program, which would be a violation of the conditions for proper RA inference. The alternative of randomizing at the WDB level would solve that concern, but further increase required sample sizes relative to randomizing at the AJC level in order to obtain sufficient statistical power.

4.3.3.3 Design Option 3.6: Difference-in-differences Applied to Naturally Occurring Variation in Program Models for all Veterans.

Description. This design option would apply difference-in-differences to outcomes data from NDNH and information on naturally occurring variation in program models. That variation would be captured through some combination of the longitudinal survey of states, WDBs and AJCs described in DO 1.3 and the analysis of deidentified DOL workforce data described in DO 1.5. These analyses do not require individual-level data on service receipt; deidentified workforce data—such as the data currently held by DOL—are sufficient. Once the study matches to NDNH data, it can identify recent UI claimants. Thus, the sample can be either all veterans or recent UI claimants. A study would probably do both analyses.

Feasibility. DoD or DVA would need to provide a list of veterans. This requires longitudinal data on changes over time in policies of interest (and that there be moderate levels of change in policies). There would need to be some measured variation in program models.

Cost. Given the data on naturally occurring variation in program models and a list of veterans, this is a low cost study.

Advantages. The impact estimates would apply to all veterans. This design option would address a clearly policy relevant question. The burden on states would be small.

Disadvantages. The design option would have only moderate internal validity. Sufficient sample sizes might be an issue. With national data on veterans, the sample is all veterans. NDNH would allow identifying recent UI claimants as well. If a national list of veterans is not available, states would need to be recruited. Sufficient sample sizes would require recruiting some of the larger states. That could be a challenge.

4.3.3.4 Design Option 3.7: Matching-based Study of Program Models for Veteran UI Claimants

Description. Among veterans who are recent UI claimants, this design option would perform matching with respect to different naturally occurring program models across WDBs (See DO 2.6 about using recent UI claimants to identify a frame.) For recent UI claimants, the study would then use a matching approach to explore how outcomes—employment, earnings and subsequent use of UI (from NDNH)—vary with naturally occurring program variants (from state workforce data).

Feasibility. States would need to be recruited to provide UI and workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.)

Cost. This would be a moderate cost study. (See DO 2.6 about costs associated with using recent UI claimants to identify a frame.) Matching and appropriate sensitivity analyses have some costs (higher than for random assignment). A survey would expand the outcomes that could be analyzed (and be useful for CBA), but would substantially increase costs.

Advantages. Burden on states would be low.

Disadvantages. This design option would have only moderate internal validity and the impact estimates would only apply to veterans who are UI claimants. (See the earlier general comments about the disadvantages of using UI claimants as a frame.)

4.3.3.5 Design Option 3.8: Matching-based Study of Program Models for Veterans Using Any Workforce Services

Description. Among veterans who use any workforce services, this design option would perform matching with respect to different naturally occurring program models across WDBs. Use a matching approach to explore how outcomes—employment, earnings and subsequent use of UI (from NDNH)—vary with utilization of the workforce system (from state workforce data).

Feasibility. States would need to be recruited to provide workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.). There would need to be some measured variation in program models.

Cost. This would be a moderate cost study. Matching and appropriate sensitivity analyses have some costs (higher than for random assignment). A survey would expand the outcomes that could be analyzed (and be useful for CBA), but would substantially increase costs.

Advantages. Burden on states would be low.

Disadvantages. Without non-users of services, the estimates only compare outcomes for users, rather than comparing impacts (outcomes for users vs. non-users), so it is less certain whether differences in outcomes are attributable to program differences or differences in local conditions.

4.3.4 Differential Impact on Groups of Veterans

This section considers design options for estimating how the impact of JVSG varies with who is served. This information might be useful for targeting.

4.3.4.1 Design Option 3.9 Matching-based Analysis of Differential Impact among UI Claimants

Description. This design option is a generalization of DO 3.1. Among veterans who are recent UI claimants, DO 3.1 would perform matching with respect to their use of JVSG and non-veteran specific workforce services. (See the earlier general comment about using recent UI claimants to identify a frame.) This design option would repeat that study, considering differential impact of groups of veterans currently served. In particular, because JVSG is designed to focus on individuals with SBEs, this option would focus on questions of how to define the set of SBEs in order to ensure that the program serves those that are most likely to benefit from the services provided. The set of barriers DOL defines as SBEs has shifted over time, and seems likely to shift further in the future. Subgroup analyses of veterans with different types of barriers (e.g., physical or mental disabilities, low educational attainment, homelessness) would identify which groups of veterans derive the greatest benefit from JVSG services.

Feasibility. States would need to be recruited to provide UI and workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.)

Cost. The costs of this study would be similar to the cost of DO 3.1. If DO 3.1 was already being done, the incremental cost of this design option would be small.

Advantages. Burden on states would be low. Limiting the sample to UI claimants improves comparability between users and non-users of services.

Disadvantages. This design option would have only moderate internal validity and the impact estimates would only apply to veterans who are UI claimants. (See DO 3.1 about the disadvantages of using UI claimants as a frame.)

4.4 Cost-Benefit

DOL's RQ 3 asked: *What are the costs of job counseling, training, and placement service for veterans? Do estimates of benefits of providing services or implementing policy outweigh the costs of those initiatives?* This section presents design options in response to that research question.

CBA requires an impact estimate. Thus, these design options would be in addition to some impact design option (i.e., DO 3.1 to DO 3.6). Exhibit 4.4 provides an overview of the options described in this section.

Exhibit 4.4. Overview of Options to Answer Cost-Benefit Questions

Option No.	Option Name	Data Required	Feasibility	Cost	Research Questions Addressed
4.1	A CBA with No Individual Survey	Survey of WDBs Impact data collected under selected option in Section 4.3	High	Low	Costs to WDBs of providing AJC services, relative to benefits produced.
4.2	An Individual Survey CBA	Survey of WDBs. Survey of customers within those same WDBs. Impact data collected under selected option in Section 4.3	High	Moderate	Costs to WDBs of providing AJC services, and to customers, relative to benefits produced.

Key: AJC/American Job Center; CBA/Cost-Benefit Analysis; WDB/Local workforce development board.

4.4.1.1 Design Option 4.1: A CBA with No Individual Survey

Description. Field a cost survey of a sample of AJCs and their WDBs. Use those cost data to perform a CBA. OMB clearance would be required for the cost survey.

Feasibility. No issues.

Cost. This study would have low cost. The analysis is low cost. The cost survey is low cost.

Advantages. This design option is low cost.

Disadvantages. Lacking data on individual use of services, its cost estimates would be weak.

4.4.1.2 Design Option 4.2: An Individual Survey CBA

Description. Field a cost survey to a sample of AJCs and their WDBs to collect cost information. Also field an individual survey of a sample of veterans in those AJCs to collect detailed information on service use—including use of services with low marginal costs that may not be recorded by AJCs (such as online services) and any costs borne by them in accessing services, such as participants' share of training costs (such as tuition not covered by an ITA). Use those data to perform a CBA. OMB clearance would be required for both surveys.

Feasibility. States would need to be recruited to provide UI or workforce data. (See Section 2.3 for a discussion of issues related to recruiting states.)

Fielding the survey would require identifiers. Thus this option appears to be impossible under DO 3.4.

Cost. This study would have moderate costs. The analysis is low cost. The cost survey is low cost. Even a small individual survey would have moderate cost.

Advantages. The combined information would allow robust cost estimates.

Disadvantages. Higher cost than not surveying individuals.

5. Closing Thoughts

This is the final chapter for the capstone document—the *Evaluation Design Options Report*—prepared in support of the Veterans’ Employment and Training Services Research Study Design project. The next section briefly summarizes what the project has done to this point (Section 5.1). Section 5.2 offers some broad observations about how the design options fit together and how DOL might construct a research agenda. Section 5.3 considers the descriptive research questions alone. The final section makes some closing remarks (Section 5.4).

5.1 Summary of Project Deliverables to Develop Design Options

The project first generated a *Knowledge Development Report (KDR)* (Klerman et al., 2018). That *KDR* presented detailed information on the statute stimulating this project (Chapter 2), on veterans (Chapter 3), on workforce services for veterans (Chapter 4), on data to address DOL’s research questions (Chapters 5, 6, and 7), and on methods (Chapter 8). It then began the process of specifying design options (Chapters 9, 10, and 11).

Building on that *KDR*, this document has developed and presents multiple design options. Specifically, Chapter 1 provided some limited background on workforce programs for veterans and an expansion of DOL’s impact research questions. Chapter 2 described data sources relevant for the design options. Chapter 3 discussed methods of impact analysis and cost benefit analysis relevant for the design options. The previous chapter (Chapter 4) presented 28 design options: seven for implementation, eight for description, and 11 for causal impact, and two for cost benefit.

5.2 The Relation between the Design Options and a Research Agenda for DOL

Chapter 4’s discussion of design options was deliberately atomistic. Design options were organized by DOL’s four broad classes of research questions—implementation, description, impact, and cost-benefit—and assessed individually. Obvious dependencies, i.e., where one option required inputs from another option, were noted. But other interrelations among design options were not fully examined. This section considers such deeper relation between the design options and how they might be combined in pursuit of an evaluation agenda to that supports DOL’s desire to identify effective program strategies for serving veterans.

The most direct way that evaluation can improve outcomes is by providing strong evidence on the impact of programs and program alternatives (i.e., impact analysis) and on the cost and benefits of the programs and program alternatives (i.e., cost benefit analysis).

Implementation analysis and descriptive insights support strong impact analysis and cost benefit analysis. Understanding the programs (i.e., implementation studies) and describing outcomes (i.e., descriptive studies) are often insightful about what programs might be worth testing, how to refine those programs (see Epstein and Klerman, 2012), and potential explanations for observed results.

This perspective suggests starting our discussion of the inter-relation of the design option by considering the impact analysis design options. Exhibit 5.1 summarizes the design options presented in Section 4.3 in tabular form: (i) impact research question, (ii) method, and (iii) frame (i.e., the list of veterans whose outcomes are compared).

Exhibit 5.1. Impact Design Options in Brief

Design Option	RQ	Method	Frame
3.1	Any Impact	Matching	UI
3.2	Any Impact	Matching	Workforce data
3.3	Funding Level	RA	Workforce data
3.4	Program Model	RA	Workforce data
3.5	Program Model	RA	Workforce data
3.6	Program Model	DiD	List of Veterans
3.7	Program Model	Matching	UI
3.8	Program Model	Matching	Workforce data
3.9	Subgroup	Matching	UI

Key:

RQ/Research Question: Any Impact, Change in Funding level; Differential Impact of Program Model; Differential Impact by Subgroup.

Method (as in Section 3.1): RA/Random Assignment; DiD/Difference-in-Differences; Matching/Propensity Score Matching.

Frame. National List of Veterans matched to NDNH data; Workforce data (provided by states); UI/recruiting states provide UI benefit data and workforce data.

Exhibit 5.1 suggests several complementary and not mutually exclusive research programs, i.e., sequences of evaluation activities.

- **Differential Impact of Program Model.** DO 3.4 through DO 3.8 would directly address DOL’s interest in “key components and approaches [that are] successful or contribute to the success of job counseling, training, and placement service.” However, our discussion of these design options deliberately side-stepped the question of which “key components and approaches” to test. Implementation Design Options 1.1 (site visits) and 1.4 (analysis of deidentified DOL workforce data) would provide insight on exactly that question. Components or approaches identified as promising (or at least in wide use) might proceed to non-experimental tests, with moderate costs, albeit with only moderate internal validity (i.e., DO 3.6 to DO 3.8). Components or approaches passing this non-experimental screen might then proceed to more rigorous experimental testing (i.e., DO 3.4 or DO 3.5), with a corresponding cost-benefit analysis (i.e., DO 4.1 or DO 4.2).
- **Differential Impact by Group.** VPL 04-13 changed which veterans were to be deemed to have substantial barriers to employment (SBE). Evaluation evidence on differential impact for groups of veterans would be informative for further revisions to SBE policy. DO 1.1 would yield insights into possible changes to the list of SBEs. DO 3.9 would provide evidence with moderate internal validity. DO 4.1 or DO 4.2 would yield cost-benefit evidence.
- **Differential Impact of Changing Funding Level.** DO 3.4 would yield evidence on the impact of changing the level of funding for JVSG. DO 4.1 or DO 4.2 would yield cost benefit evidence. DO 4.1 or DO 4.2 would yield cost-benefit evidence. No implementation evidence would be needed.
- **Impact of Any JVSG.** DO 3.1 and DO 3.2 would explore those issues for JVSG using non-experimental methods and are likely feasible. DO 4.1 or DO 4.2 would yield cost-benefit evidence. No implementation evidence would be needed.

5.3 Descriptive Analyses

Consistent with Section 502 of the Jeff Miller and Richard Blumenthal Veterans Health Care and Benefits Improvement Act of 2016, most of the research questions in DOL’s RFP and Statement of Work were descriptive. Those research questions implied a need for tabulations of a set of descriptive outcomes, for three groups of veterans (those using intensive workforce services, those using only non-intensive workforce services, and those using no workforce services), over a five-year period.

Section 4.2 provided a set of design options for addressing these descriptive research questions. In particular:

- ***Augmented National Administrative Data.*** DO 2.2 would merge three types of national administrative data: (i) a list of veterans, (ii) information on their use of workforce services, and (iii) information on outcomes. Repeating this process over five years would yield high quality administrative data, on most of the outcomes, for all veterans. Identified data would not be needed; a safe harbor strategy would be sufficient. NDNH appears to be the most promising safe harbor.

The discussion in Section 5.2 noted that this design option faces substantial feasibility challenges. DOL controls none of the three types of data. It is far from certain that all three types of data can be obtained. Nevertheless, for addressing the descriptive research questions, this design option is so superior to the others that, if DOL wants to address these research questions, substantial effort to gain access to these data seems worthwhile.

Even DO 2.2 would not address all of the descriptive questions. To address the other descriptive research questions, some additional design option would be necessary. Possible strategies include a small survey using recruited state workforce files as a frame (i.e., DO 2.8) or focus groups (i.e., DO 1.1).

- ***Limited Analyses for Recruited States.*** If a national administrative data strategy proves infeasible, DO 2.3 to DO 2.8 provide a range of design options based on recruiting states and analyzing their data, perhaps with a survey. These approaches are less attractive for at least two reasons. First, they would include only a subset of states, probably only a small subset. This would raise questions about representativeness. Second, state administrative data only identifies the first two groups. Section 4.2 suggested strategies for generating information on the third group—veterans who do not use workforce services.

5.4 Closing Remarks

The goal of this *Evaluation Design Options Report* is to present a wide range of design options. Section 5.2 considered a research program for addressing the implementation, impact, and cost benefit research questions. Section 5.3 reviewed design options for addressing the descriptive research questions.

The discussions in those two sections are strikingly distinct. Gathering information on veterans using no workforce services drives the challenge of the descriptive design options. However, the broad group of veterans using no workforce services is too diffuse to serve as a useful comparison group for impact analyses. For that purpose, the designs in Section 2.3 use (i) veterans applying for services or (ii) veterans claiming UI.

On the other side, most of the impact design options would require recruiting a set of states to provide their workforce data, perhaps their UI data, and perhaps to allow randomization of their veterans' caseload. Recent experience suggests that recruiting states may be challenging. Counts of veterans using intensive services are sufficiently small that any such analysis would need states with at least a moderate share of veterans. At least ten percent of all veterans is a useful goal.

This report has presented several dozen design options to answer a variety of research questions of interest to DOL. Those design options vary in the research questions they address, their feasibility, and their cost. This report has described those tradeoffs, which DOL will need to balance as it develops and pursues a research agenda that improves our understanding of the workforce services that most effectively promote employment and economic self-sufficiency for our nation's veterans.

Appendix A. Statutory Language

This appendix presents a brief discussion of the statutory requirement. Section A.1 presents the exact statutory language. Section A.2 interprets the statute as requiring information on three groups. Section A.3 considers the extent to which the statutorily required outcomes are included in administrative data.

A.1 Statutory Language

The exact statutory language is as follows:¹⁷

SEC. 502/Sec. 4115. LONGITUDINAL STUDY OF JOB COUNSELING, TRAINING, AND PLACEMENT SERVICE FOR VETERANS.

- (1) The Secretary shall enter into a contract with a non-government entity to conduct a longitudinal study of a statistically valid sample of each of the groups of individuals described in paragraph (2). The contract shall provide for the study of each such group over a period of at least 5 years.
- (2) The groups of individuals described in this paragraph are the following:
 - (A) Veterans who have received intensive services.
 - (B) Veterans who did not receive intensive services but who otherwise received services under this chapter.
 - (C) Veterans who did not seek or receive services under this chapter.
- (3) The study required by this subsection shall include the collection of the following information for each individual who participates in the study:
 - (A) The average number of months such individual served on active duty.
 - (B) The disability ratings of such individual.
 - (C) Any unemployment benefits received by such individual.
 - (D) The average number of months such individual was employed during the year covered by the report.
 - (E) The average annual starting and ending salaries of any such individual who was employed during the year covered by the report.
 - (F) The average annual income of such individual.
 - (G) The average total household income of such individual for the year covered by the report.
 - (H) The percentage of such individuals who own their principal residences.
 - (I) The employment status of such individual.
 - (J) In the case of such an individual who received services under this chapter, whether the individual believes that any service provided by a Disabled Veterans' Outreach Program specialist or Local Veterans' Employment Representative helped the individual to become employed.

¹⁷ <https://www.congress.gov/114/plaws/publ315/PLAW-114publ315.pdf>

- (K) In the case of such an individual who believes such a service helped the individual to become employed, whether—
 - (i) the individual retained the position of employment for a period of 1 year or longer; and
 - (ii) the individual believes such a service helped the individual to secure a higher wage or salary.
- (L) The conditions under which such individual was discharged or released from the Armed Forces.
- (M) Whether such individual has used any educational assistance to which the individual is entitled under this title.
- (N) Whether such individual has participated in a rehabilitation program under chapter 31 of this title.
- (O) Whether such individual had contact with a One-Stop Career Center employee while attending a workshop or job fair under the Transition GPS Program¹⁸ of the Department of Defense.
- (P) Demographic information about such individual.
- (Q) Such other information as the Secretary determines appropriate.
- (b) Annual Report—By not later than July 1 of each year covered by the study required under subsection (a), the Secretary shall submit to the Committee on Veterans' Affairs of the Senate and the Committee on Veterans' Affairs of the House of Representatives a report on the outcomes of the study during the preceding year.

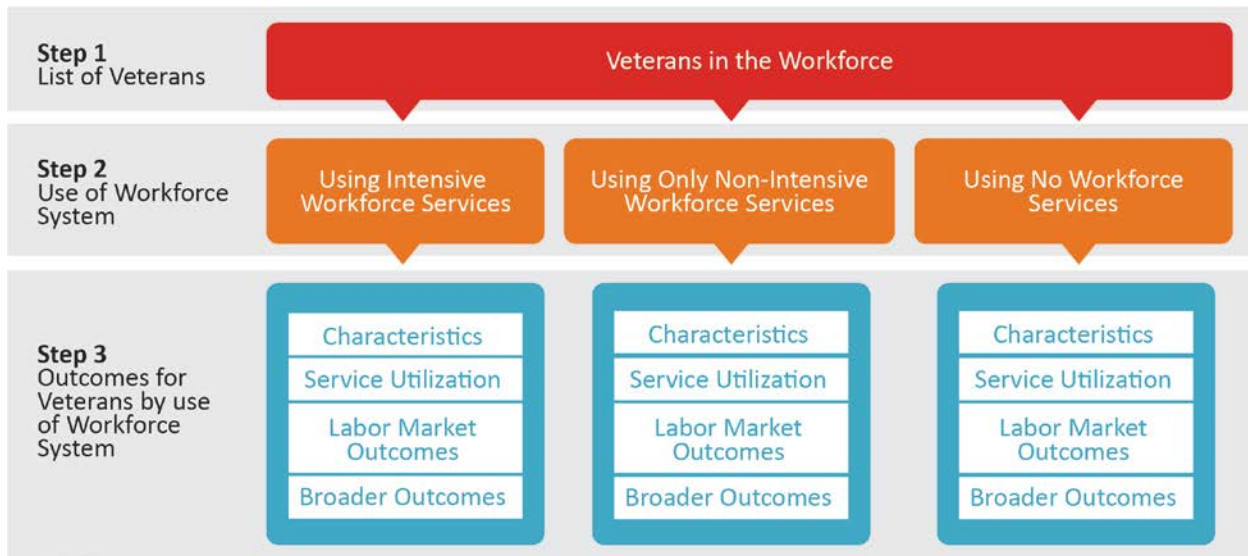
A.2 The Statute Requires Tabulations for Three Groups

An evaluation design that will satisfy the statutory requirement must include three steps (see Exhibit A.1):

- 1) Build a list of veterans in the workforce.
- 2) Classify those veterans by their use of workforce services.
- 3) Tabulate outcomes for each group.

¹⁸ Formerly the Transition Assistance Program (TAP).

Exhibit A.1. Three Steps of Design Challenge



The three groups in Step 2 reflect the emphasis of the Workforce Innovation and Opportunity Act (WIOA) which authorizes and funds the DOL Employment and Training Administration (ETA) to award grants to states to provide workforce services to American workers. In practice, those services are delivered through a network of American Job Centers (AJCs). For most workers, services are provided in three tiers (DOL, 2015):

- **Basic career services** (i.e., “non-intensive”) typically involve self-service (e.g., using the resource room to search for job openings) or light-touch or one-time staff assistance, such as referrals to other services, provision of labor market information, and eligibility assessments.
- **Individualized career services** (i.e., “intensive”) typically involve more in-depth and ongoing staff involvement, including comprehensive assessments, development of an individualized employment plan, and case management. Such individualized career services are available to job-seekers whom AJC staff deem in need of more-intensive assistance to obtain or retain employment.
- **Training services**, including classroom training, on-the-job training, and work experience.

The Jobs for Veterans Act of 2002 mandated that veterans get priority access to such WIOA services.

Veterans also receive individualized career services through the Jobs for Veterans State Grants (JVSG) program, a separate funding stream from DOL/VETS to state workforce agencies. These grants fund Disabled Veterans’ Outreach Program specialists (DVOPs) who provide individualized career services to veterans (and eligible spouses) who have a significant barrier to employment (DOL, 2014a). Such barriers include physical and mental disabilities; being homeless, a recently separated service member who has been unemployed for more than 27 consecutive weeks in the past year, or a recently released ex-offender; lacking a high school diploma or equivalent; being aged 24 or younger;¹⁹ or meeting WIOA’s standard for having a low income.

¹⁹ DOL added veterans aged 18-24 to the list of those eligible to be served by a DVOP in Veterans Program Letter No. 04-14 (DOL, 2014b).

Exhibit A.2 considers the prevalence of these groups. There are very roughly 20 million veterans. About half are of retirement age, e.g., WWII, Korean War, increasingly Vietnam War veterans, and are no longer in the workforce. Even among the 10 million veterans who are, the overwhelming share of them do not use workforce services in a year. Less than a million veterans use any workforce services; less than a quarter of a million use any intensive workforce services, whether provided through WIOA or through JVSG/DVOP. *That the use of workforce services in general is rare and the use of intensive workforce services is even rarer has important implications for the design of the study* (see Section 4.2).

Exhibit A.2. Conceptualizing the Sampling Frame

Group Z: Non-Veterans 209,954,884 adults 91% of adults ~ 98 million households ~ 84% of households	Group Y: Veterans Not in the Workforce 9,357,448 adults 4.1% of adults ~ 9 million households ~ 8% of households	Group A: Veterans Using Intensive Services 223,076 adults; 0.10% of adults ~ 200,000 households; ~ 0.2% of households
		Group B: Veterans Using Only Non-Intensive Services 675,979 adults; 0.29% of adults ~ 600,000 households; ~ 0.5% of households
		Group C: Veterans Not Using Workforce Services 9,851,829 adults; 4.3% of adults ~ 9 million households; ~ 8% of households

Source: KDR 9.1-9.3.

A.3 Statutory Outcomes and Administrative Data

The research questions from DOL’s solicitation and the statute require data on a variety of stratifying variables (i.e., veteran status and use of workforce services) and outcomes. Exhibit A.3 lists the research questions and whether and where the implied outcomes are available in administrative data. The information in the exhibit suggest that most, but not all, outcomes specified in the statute are available in administrative data.

Exhibit A.3. Research Questions from Statute and DOL’s Solicitation and Possible Data Sources

Research Question (RQ)	Availability in Extant Data ^a
RQ 1. What are the types and packages of services or policy approaches provided under American Job Center’s job counseling, training, and placement service for veterans?	<ul style="list-style-type: none"> • Not descriptive—implementation • Does not require data on individual participants • Probably requires key informant interviews and site visits to AJCs • DOL workforce data can be used to capture services received by veterans served by a particular AJC
RQ 2. What key components or approaches are successful or contribute to the success of job counseling, training, and placement service for veterans?	<ul style="list-style-type: none"> • Not descriptive—causal • Requires data on outcomes and background variables <see preceding rows>

Appendix A. Statutory Language

Research Question (RQ)	Availability in Extant Data ^a
RQ 3. What are the costs of job counseling, training, and placement service for veterans? Do estimates of benefits of providing services or implementing policy outweigh the costs of those initiatives?	<ul style="list-style-type: none"> • Not descriptive—costs and cost-benefit • Requires data on outcomes and background variables <see preceding rows> • Requires cost data from AJC partners • Requires estimates of impact; in particular on earnings <see previous row>
RQ 4. What was the average number of months the individual served on active duty?	<ul style="list-style-type: none"> • In DoD administrative data
RQ 5. What are the disability ratings of the individual?	<ul style="list-style-type: none"> • In DoD administrative data • In DOL and state workforce data (at a lower level of detail)
RQ 6. Did the individual receive unemployment benefits? What type of unemployment benefits? ^b	<ul style="list-style-type: none"> • Any UI benefits: in the NDNH (quarterly) and in state UI data • Type of UI benefits: State UI payment data
RQ 7. What was the average number of months the individual was employed during the year covered by the report?	<ul style="list-style-type: none"> • Monthly data on employment: does not appear to be available in any administrative data • Quarterly data on employment (i.e., positive earnings): in the NDNH and state UI data, and for four quarters after program exit in workforce data • Annual data on employment (i.e., positive earnings): in SSA data and IRS tax return data
RQ 8. What is the employment status of each individual? What is the average number of months the studied veterans were employed during each of the 5 years under study?	<i><data same as previous row></i>
RQ 9. What was the average annual starting and ending salaries of the individual during each of the 5 years under study?	<ul style="list-style-type: none"> • If “salary” is interpreted as quarterly earnings by job: in NDNH data and state UI data • Hourly wage and earnings: in the ACS
RQ 10. What was the average annual income of the individual during each of the 5 years under study?	<ul style="list-style-type: none"> • If “annual income” is interpreted as annual earnings: in NDNH data and state UI data, as well as for four quarters after program exit in workforce data • If “annual income” is interpreted to include individual sources of income beyond earnings (e.g., self-employment, investment income): in IRS tax return data • In the ACS
RQ 11. What was the average total household income of the individual during each of the 5 years under study?	<ul style="list-style-type: none"> • In IRS tax return data • In the ACS
RQ 12. Did the individual own their principal residences?	<ul style="list-style-type: none"> • In the ACS
RQ 13. Does the individual believe that any service provided by a Disabled Veterans’ Outreach Program specialist or Local Veterans’ Employment Representative helped the individual to become employed?	<ul style="list-style-type: none"> • Appears unavailable in any extant data

Appendix A. Statutory Language

Research Question (RQ)	Availability in Extant Data ^a
RQ 14. For those individuals who believe that such services helped the individual to become employed, (i) did the individual retain the position of employment for a period of 1 year or longer; and (ii) does the individual believe that such a service helped the individual to secure a higher wage or salary?	<ul style="list-style-type: none"> • Appears unavailable in any extant data
RQ 15. Under what conditions was the individual discharged or released from the Armed Forces?	<ul style="list-style-type: none"> • In DoD administrative data
RQ 16. Has the individual used any educational assistance to which the individual is entitled under this title?	<ul style="list-style-type: none"> • In VA administrative data
RQ 17. Has the individual participated in a rehabilitation program under chapter 31 of this title?	<ul style="list-style-type: none"> • In VA administrative data
RQ 18. Did this individual have contact with a One-Stop Career Center employee while attending a workshop or job fair under the Transition GPS Program of the Department of Defense?	<ul style="list-style-type: none"> • Available in workforce data • Might be available in the CPS
RQ 19. What are the demographic characteristics of this individual?	<ul style="list-style-type: none"> • Some demographic information (e.g., gender, age, race/ethnicity): in DoD administrative data and workforce data • More demographic information (e.g., marital status, number of children living at home): in the ACS

Key: ACS/American Community Survey. AJC/American Job Center. CPS/Current Population Survey. DoD/Department of Defense. DVA/Department of Veterans Affairs. IRS/Internal Revenue Service. NDNH/National Directory of New Hires. SSA/Social Security Administration. UI/Unemployment Insurance.

^a Non-descriptive questions noted.

^b Types of UI include regular UI, UCX/Unemployment Compensation for Ex-Servicemembers, UCF/Unemployment Compensation for Federal Employees, and various recession-period UI programs (EUC/Emergency Unemployment Compensation, EB/Extended Benefits). A broader set of types would also include Interstate Claim for Benefits and Combined Wage Claims. For more on these various types of UI, for example see <http://labor.alaska.gov/unemployment/ui-types.htm>

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