

Governor's Office of Planning & Budget

Blueprint Solution Evaluation Report

A Performance and Efficiency Improvement Evaluation of the Blueprint Solution

January 2024

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Executive Summary

In August 2020, the Governor's Office of Planning and Budget (GOPB) implemented the Blueprint Solution, an integrated data system for data sharing developed in collaboration with the Department of Corrections, the Department of Health and Human Services, and the Department of Workforce Services. Through client matching, the Blueprint Solution was designed to enable better coordination of social services among case managers in the participating programs. In this evaluation, GOPB assessed usage of the tool and how well it is facilitating successful service coordination to evaluate the current system and inform future data integration projects.

The findings of this research show that levels of familiarity with the Blueprint Solution are low and vary significantly by agency and case manager experience. On average, controlling for other factors, even for case managers with more than 10 years of experience, their likelihood of being familiar with Blueprint is only 52% while case managers with less than one year of experience have a likelihood of being familiar with the tool around 14%.

From descriptive statistics, usage of the Blueprint Solution is relatively low. Of case managers who are familiar with the tool, only 10% of respondents reported using the tool frequently; about a quarter of respondents (24%) stated they never use the tool, 38% report rarely using it, and 28% report occasional usage. Furthermore, statistical tests provide insufficient evidence that Blueprint usage can be explained by case manager experience, telework, and perceptions of system outcomes.

Three years into the Blueprint Solution pilot, it is concerning that even among the most experienced case managers, only slightly more than half are familiar with the tool. It makes it difficult to have a high level of tool usage when awareness levels remain relatively low.

In terms of service coordination, a majority of responding case managers reported that Blueprint has increased their knowledge of clients receiving services from multiple providers so the tool is achieving one of its core objectives. However, the

tool seems to have had only a modest impact on communication among case managers with 24% reporting an increase and 17% reporting a decrease in communication with case managers from different programs after the tool was implemented. Controlling for other factors, communication among case managers is mainly impacted by the knowledge outcome with individuals who think that Blueprint has increased their knowledge of clients receiving services from different programs reporting increased communication with other case managers although the size of the impact is moderate. Lastly, most case managers are neutral about whether the Blueprint Solution has achieved its other intended outcomes increased number of clients meeting plan goals, reduction in clients' overlapping goals, more efficient use of case manager work time, and improved job morale.

This information suggests that enhancing usage and effectiveness of the Blueprint Solution will first require raising awareness about the tool among case managers from participating programs. Ideally that increased awareness will lead to increased tool usage. With more case managers using the tool, future research could more rigorously examine the degree to which the Blueprint is meeting their needs and its intended outcomes for effective service coordination.



Levels of familiarity with the Blueprint Solution are low and vary significantly by agency and case manager experience.

Background & Research Objectives

Blueprint Background

Social services programs run independently, but are interdependent. In an effort to transform them, the GOPB and the state's social services agencies developed the Blueprint Solution to improve results for customers, employees, and taxpayers. Utah's Social Services Blueprint Solution is an ongoing pilot managed by GOPB. Launched in August 2020, the interoperability initiative allows case managers who have clients in common to exchange service-level data. It facilitates coordination between five programs including two within the Department of Health and Human Services (DHHS), two within the Department of Workforce Services (DWS), and the entirety of the Department of Corrections:

- Department of Corrections (UDC)
- Division of Child and Family Services (DCFS in DHHS)
- Juvenile Justice and Youth Services (JJYS in DHHS)
- Family Employment Program (FEP in DWS)
- Vocational Rehabilitation (VR in DWS)

In 2016 in <u>HB 3</u>, the Legislature appropriated \$2 million for an integrated data system that coordinates services for vulnerable populations in Utah. This project applied about a quarter of that funding toward developing the pipelines and interface for case managers to see the integrated goals, milestones, progress, and roadblocks for clients shared among them.¹

The Blueprint Solution was designed to address a common challenge identified by research and interviews with frontline workers: the challenge case managers face in knowing a client's history, and duplicative or conflicting program requirements and services for clients themselves.2 Simultaneous enrollment in multiple programs can lead to unintended consequences for clients if their case managers unknowingly overload clients, establish conflicting deadlines, or otherwise create conflicts or redundancy. Relying on clients to consistently communicate, disclose, or fully comprehend the extent of the services with which they are engaged is not a dependable approach. The responsibility lies with the institutions to facilitate clients' success by ensuring case managers are aware of the specific activities related to the case management of clients who are concurrently enrolled.3



The Blueprint Solution allows case managers who have clients in common to exchange service data.



The overarching goal of the Blueprint Solution is successful service coordination. State case managers⁴ log in to the Blueprint tool to confirm matching clients and kickstart collaboration. Guidance provided to case managers encourages regular communication and a unified focus on achieving the most important priorities for the client, in priority order:



Maintain **Basic Needs**



Maintain Freedom



Build **Family**



Self Reliance

Blueprint Tool

The tool draws information from the software and database systems containing client personal information for each program. For UDC, VR, and FEP, information for all individuals are included. For JJYS, individuals with youth services via youth and family plans are included and, for DCFS, individuals with an in-home child and family plan or an outof-home child and family plan with a permanency goal of reunification, remain home, or individualized permanency are included.5

The Blueprint Solution formulates a match score for clients. The matching process determines similarities between individual records from two programs at a time using the names, birth date(s), and social security number(s) of the client which are available. The process produces match scores for as many of the three fields that it can match together. Then, it combines those scores into an overall score. The matching seeks to capture as many true matches as possible based on the information provided, meaning that several "false positive" matches will be surfaced in the tool.6 Every day, the Blueprint tool scans potential matches across more than 31,000 current clients and between 400 to 500 are confirmed as true matches.7

When case managers log in, they see potential matches for clients in their caseload from those in other programs. Users can click on their clients listed to see their potential matches and explore the details surrounding each match. They may reach out to the case manager with the potential match by: clicking on the case manager's name which prompts the system to produce a pre-written email; copying the other case manager's email address; or calling them using the phone number provided. Case managers are encouraged to verify the matches in their outreach. After case managers have verified the match, they need to be sure they have client consent to discuss the client and their services with the other case manager before they begin working with the other case manager to coordinate services. An additional release is also necessary before exchanging physical or written documents.8

Integrated Data Systems

The Blueprint Solution is one of many integrated data systems that have been implemented in recent years in state and local governments. Since the 1990s, governments began recognizing the importance of integrating data across different systems and agencies. In more recent years, this trend has only grown with the establishment of integrated data systems meant to improve service and outcomes for populations served by government. Some of the earliest efforts at data integration include the Allegheny County Human Services Data Warehouse which was completed in 20009 and the Statewide Longitudinal Data Systems (SLDS) federal grant program which first awarded grants in 2005 to support building and expanding early childhood through workforce integrated data systems.10

Fantuzzo, Henderson, Coe, and Culhane (2017)11 describe the growth of integrated data systems as a national trend "that seeks to intentionally integrate these concepts in a way that has been demonstrated to improve government administered human services" (p. 4). Womer and Stack (2023) provide a list of leading examples of integrated data systems. Along with Allegheny County, these examples include the Linked Information Network of Colorado (LINC); Indiana Management Performance Hub (MPH); Kentucky Center for Statistics (KYSTATS); InnovateOhio Platform; Rhode Island Ecosystem; Rhode Island Fraud System; and Washington State's Integrated Client Databases. 12 While an increasing number of state and local governments are implementing integrated data systems, there are no apparent evaluations of these systems.

Evaluation Overview

In this evaluation, we examine the Blueprint Solution and assess how well it is facilitating successful service coordination in the social services. The goal of the evaluation is to identify things that are and are not working well to inform future data integration projects. As part of the evaluation, we spent time describing the program; 13 identifying the program goals and strategies, which included developing a logic model for the Blueprint Solution which is depicted in Figure 1 (the evaluation framework we used is in Appendix A). The logic model identifies the context within which the tool was developed (situations and priorities), the activities or what the tool does, the desired outcomes, and the desired longer-term impact of the tool (population impact). The logic model facilitated clear communication about the Blueprint Solution and this evaluation to agency leaders, propelling our evaluation efforts forward.

FIGURE 1: Blueprint Solution Evaluation Logic Model

Situations and Priorities	Activ	ities	Measurable Outcomes		Population Impact
	Strategies	Measures	Outcome	Measures	·
Social service programs run independently, but are interdependent when they have clients in common We do not have clarity into the number of people who receive services across multiple agencies Individuals/ families struggle to comply with multiple plans, activities, and requirements There is a growing gap between demand and available revenue for these services Inefficient use of staff time (potentially duplicative work; staff morale and retention suffer)	Match clients receiving services from multiple entities (matched client rosters among 5 programs; system shows potential matches and a match score) Provide case managers contact information of other case managers for matched clients Provide an automatic email template if you click the name of another case manager Contains current and upcoming milestones that have start and end dates and also completed milestones (only for Corrections and Voc Rehab)	Percent of client rosters matched among the 5 participating programs Accuracy of the matches Percentage of initial contacts with other case managers that are template emails, or phone calls Percentage of matched clients where the case managers do not communicate with the other case manager(s) (incorrect contact information, low percentage match, too busy)	Knowledge Case managers have a better understanding of clients receiving multiple services Behavior More communication among case managers from different programs Client plans/ goals are more focused Clients more easily comply with plans, activities, and requirements More efficient use of staff time (reduction in duplicative work, higher morale, and higher retention) Clients receive the services they need in the right amount at the right time (clients receive fewer/shorter services and/or do not return)	% of case managers describing increased knowledge of clients receiving multiple services % of case managers describing more communication with case managers from different programs % clients reporting that their plans/goals are more focused % of simultaneous and/or conflicting goals reduced % of clients not meeting activities, requirements, or goals on time reduced % of staff reporting increased efficiency of their time, higher morale, and increased desire to stay at their job Changes in length of time receiving services over time % of clients returning to the system % of clients feeling like they receive the right level of service at the right time	Improved outcomes for the client population Social services programs run in a coordinated manner Able to better meet the growing demand for services without an exponential increase in revenue Expanding successful interoperability endeavors to other areas of the state

Data Set & Descriptive Statistics

In this evaluation, we examine the Blueprint Solution and assess its usage and how well it is facilitating successful service coordination among the five programs. Prior to data collection, we held separate stakeholder meetings with the leadership of each participating agency, Department of Corrections, Department of Workforce Services, and Department of Health and Human Services, to inform them of the evaluation and give them an opportunity to provide feedback.

For this study, we collected original data through a survey we sent out to case managers in UDC, DCFS, JJYS, FEP, and VR. Along with measuring general usage of the tool, for the survey, we took the measures from our logic model and determined which of those measures could be assessed through a survey. Figure 2 below details each measure from the logic model and the survey question(s) we created for the measure.

FIGURE 2: Logic Model Measures and their Corresponding Survey Questions

Logic Model Measure	Survey Question(s)
Accuracy of matches	To what extent do you agree or disagree with the following statement: The matches Blueprint makes are accurate.
% of initial contacts with other case managers that are template emails, other emails, or phone calls	When you first reach out to the case manager listed with the potential match, what method of contact do you most often use?
% of matched clients where the case managers do not communicate with the other case manager(s) (incorrect contact information, low percentage match, too busy)	In situations where you are not communicating with other case managers about potential matches, what is the reason(s) for not doing so?
% of case managers describing increased knowledge of clients receiving multiple services	To what extent do you agree or disagree with the following statement: The Blueprint Solution tool has increased my knowledge of clients receiving multiple services.
% of case managers describing more communication with case managers from different programs	To what extent when you reach out to case managers do they respond to you? How do you feel your frequency of communication with case managers from different programs has changed since the Blueprint tool was implemented (August 2020)?
% of simultaneous and/or conflicting goals reduced	To what extent do you agree or disagree with the following statement: The Blueprint Solution tool has reduced my clients' overlapping goals.
% of clients not meeting activities, requirements, or goals on time reduced	To what extent do you agree or disagree with the following statement: The Blueprint Solution tool has increased the number of my clients meeting their plan requirements and goals.
% of staff reporting increased efficiency of their time, higher morale, and increased desire to stay at their job	To what extent do you agree or disagree with the following statement: The Blueprint Solution tool has enabled me to use my work time more efficiently.

We distributed the survey on April 3, 2023 using Qualtrics (the survey is available in Appendix B). Ahead of that initial distribution, we emailed case managers, their supervisors, and agency leadership from our state email letting them know the survey would be forthcoming to reduce nonresponse. We requested responses by April 21 allowing for three weeks of data collection. Through Qualtrics, we sent reminder emails on April 4; April 6; April 10; and April 18. We sent the survey to 1,280 case managers among the five participating programs. In total, we received 566 responses for a response rate of 44% including 20 individuals who are not currently case managers so they were excluded in Figure 3 below which contains the response rate by program. The rate ranged from 30% for the Department of Corrections to 74% for Juvenile Justice and Youth Services.

Case Manager Characteristics

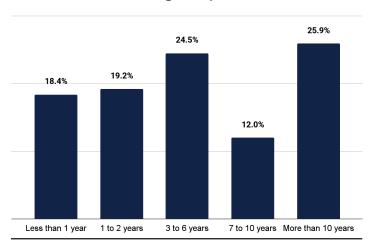
In addition to indicating their program affiliation, the survey included questions that give us insight into the responding case managers. These questions included their level of experience as a case manager, the frequency with which they telework, and their primary work location.

Key Points

- The survey captured case managers with a diverse range of experience levels.
- Most respondents, 79%, never or sometimes telework and only 5% report always teleworking. The remaining respondents telework about half the time or most of the time.
- In terms of primary work locations, 63% are centered in Davis, Salt Lake, Utah, or Weber counties, with approximately a quarter of respondents primarily working elsewhere.

Figure 4 illustrates the distribution of respondents' experience levels, showing a relatively even spread across most categories. Approximately 26% of respondents indicated having worked as case managers for over 10 years, while 18% reported less than one year of experience. Around 25% of individuals have held the position for three to six years, and 12% for 7 to 10 years, which represents the category with the fewest number of respondents.

FIGURE 4: Case Manager Experience



We asked respondents about how often they telework. As depicted in Figure 5, a significant portion, 43%, indicated that they never engage in telework, while 36% mentioned sometimes teleworking. Only 5% reported always teleworking, and 11% stated that they telework a majority of the time.

Figure 6 shows the primary work location of respondents with 63% working predominantly in Davis, Salt Lake, Utah, or Weber counties. The remaining participants indicated working in different locations.

FIGURE 3: Logic Survey Response Rate by Program

Program	Surveys Received (#)	Surveys Sent (#)	Percent
Department of Corrections	149	504	29.6
Division of Child and Family Services	261	539	48.4
Vocational Rehabilitation	66	120	55.0
Family Employment Program	34	48	70.8
Juvenile Justice and Youth Services	36	49	73.5
Total	546	1,260	43.3

FIGURE 5: Case Manager Telework Frequency

Category	Frequency	Percent
Never	225	42.8
Sometimes	188	35.7
About half the time	25	4.8
Most of the time	60	11.4
Always	28	5.3
Total	526	100.0

FIGURE 6: Predominate Work Location Is in Davis, Salt Lake, Utah, or Weber County

Category	Frequency	Percent
Yes	334	63.3
No	131	24.8
Other	63	11.9
Total	528	100.0

FIGURE 7: Familiarity with Blueprint Solution Tool

Category	Frequency	Percent
Yes	186	35.2
No	342	64.8
Total	528	100.0

Blueprint Solution Awareness and Usage

Prior to delving into our assessment of the Blueprint Solution tool's impact, we sought to understand respondents' level of familiarity with and utilization of the tool.

Kev Points

A majority of respondents, 65%, indicated that they were not familiar with the Blueprint Solution.

- Familiarity with the tool varies by years of experience with more experienced case managers reporting more familiarity with the tool compared to their less experienced counterparts. Even among case managers with over a decade of experience with the state, only 55% report being familiar with the tool.
- Only 10% of respondents reported using the tool frequently; about a quarter of respondents (24%) stated they never use the tool and 28% report occasional usage.
- For those using the tool, a majority, 54%, state

their usage has stayed the same. About 30% of respondents reported decreased usage of the tool and 16% reported increased tool usage.

As depicted in Figure 7, a majority of respondents, 65%, indicated that they were not familiar with the Blueprint Solution.

In digging deeper into the data, we find that familiarity with the tool varies by years of experience with more experienced case managers reporting more familiarity with the tool compared to their less experienced counterparts (Figure 8). Among our newest case managers, those who have been with the state for less than one year, only 8% report familiarity with the Blueprint Solution. Notably, even among case managers with over a decade of experience with the state, only 55% report being familiar with the tool.

Respondents indicating unfamiliarity with the Blueprint Solution were directed to the end of the survey. The remaining respondents were asked about their average frequency of tool usage. As depicted in

FIGURE 8: Familiarity with Blueprint Solution Tool by Years Experience

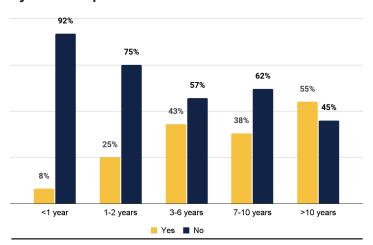


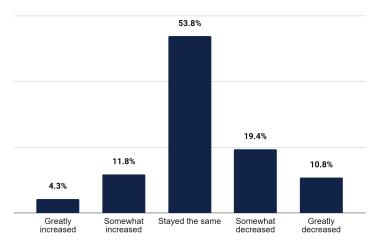
Figure 9, few respondents, only 10%, reported using the tool frequently. The highest percentage of individuals, 38%, reported rarely using the tool. About a quarter of respondents (24%) stated they never use the tool and 28% report occasional usage.

Of individuals who worked as a case manager prior to the Blueprint Solution implementation, a majority report that their usage of the tool stayed the same over time. About 30% of respondents reported decreased usage of the tool and 16% reported increased tool usage since its implementation (Figure 10).

FIGURE 9: Blueprint Solution Tool Usage

Category	Frequency	Percent
Frequently	18	9.7
Sometimes	52	28.1
Rarely	70	37.8
Never	45	24.3
Total	528	100.0

FIGURE 10: Change in Blueprint Solution Usage



Blueprint Solution Impact

Key Points

- A majority of respondents, 59%, believe the system is producing accurate matches.
- Most respondents, about 87%, report some level of responsiveness from other case managers when they try to make contact.
- The tool seems to have had a modest impact with 24% of individuals reporting an increase in communication among case managers from different programs. About 59% report their frequency of communication has stayed the same.
- When case managers choose not to communicate with other case managers the most common reasons are they were unaware of a match, the match confidence was too low, or they cited 'other' as their reason.
- In regard to most of the anticipated outcomes, many respondents were neutral in terms of the tool's impact. One exception is increased knowledge of clients receiving multiple services with 51% of respondents acknowledging this outcome.

Accuracy of Matches

The primary objective of the Blueprint Solution is to facilitate effective service coordination, which hinges on achieving accurate matches in the system. In the survey, 59% of respondents either agree or strongly agree that the system generates accurate matches, while 20% express disagreement or strong disagreement. Meanwhile, 21% maintain a neutral stance. Consequently, a majority of respondents believe the system is producing accurate matches.

Case Manager Communication

The Blueprint Solution aims to enhance communication among case managers from different programs who may be supporting the same clients. Most respondents, about 87%, report some level of responsiveness from other case managers when they try to make contact. Only 13% indicated that they never hear from the other case manager (Figure 11). Thirty respondents (excluded from the below figure) reported never reaching out to other case managers.

Of individuals who worked as a case manager prior to the Blueprint Solution implementation, a majority report that the frequency of their communication with case managers from different programs has stayed the same. As illustrated in Figure 12, about 24%

FIGURE 11: Other Case Manager Responsiveness

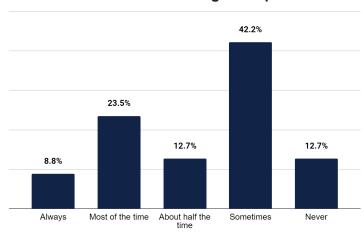
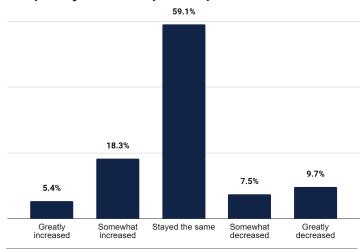


FIGURE 12: Change in Communication Frequency after Blueprint Implementation



reported an increase and 17% reported a decrease in communication with other case managers. Overall, the tool seems to have had a modest impact on increasing communication among case managers from different programs.

When case managers choose not to communicate with other case managers there are several reasons for doing so. About 28% of respondents stated that they were unaware of a match as why they did not communicate with other case managers and 26% cited that the match confidence was too low to

warrant reaching out. About 19% stated they were too busy to communicate with other case managers and 27% cited 'other' as their reason (Figure 13). For individuals responding with 'other,' many respondents stated it was not needed e.g. there was a low need to coordinate, they already were communicating with other case managers, or it was not relevant to the work they were doing with their client. Another common reason cited was that the system provided inaccurate or outdated information.

Blueprint Solution Outcomes

In the interest of successful service coordination, the Blueprint Solution was designed to increase case managers' knowledge and influence the behavior of case managers and clients. Specifically, respondents were asked to what extent the Blueprint Solution accomplished the following objectives:

- Increased their knowledge of clients receiving multiple service
- Increased the number of clients meeting plan requirements or goals
- Reduced clients' overlapping goals
- Enabled case managers to use their work time more effectively
- · Improved case managers morale at work

In regard to most of the expected outcomes, many respondents were neutral in terms of the tool's impact. One exception is increased knowledge of clients receiving multiple services with 51% of respondents acknowledging this outcome. This result indicates that the tool is achieving one of its core objectives which is increasing case managers' awareness of clients receiving multiple services. Conversely, the category with the largest percentage of respondents who strongly disagreed, at 30%, is whether the tool improved their morale at work. Thus, as illustrated in Figure 14, aside from increasing case managers' knowledge of clients receiving multiple services, most individuals were neutral or disagreed that the Blueprint Solution achieved the desired outcomes.

FIGURE 13: Reasons for Not Communicating with Other Case Managers Usage

Category	Frequency	Percent
Unaware of a match	36	27.7
Other	35	26.9
Low percentage match	34	26.2
Too busy	25	19.2
Incorrect contact information for the other case manager	15	11.5
Total	93	100.0

FIGURE 14: Respondents' Perceptions of Blueprint Solution Outcomes

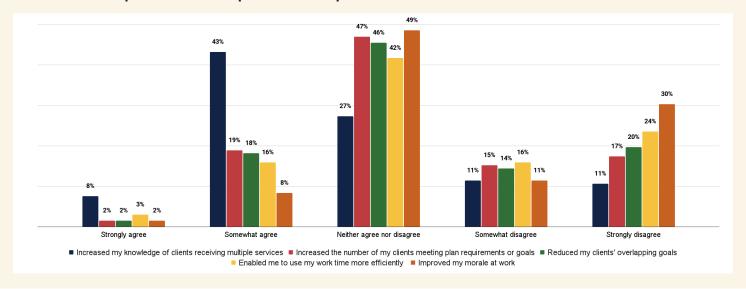


FIGURE 15: Reasons for Not Using the Blueprint Solution

Category	Frequency	Percent
Other	16	36.4
Low volume of matches	14	31.8
Thought the tool was discontinued/no longer in use	14	31.8
Too busy	9	20.5
Unaware of (or never had) a match	9	20.5
Lack of response from other case managers	7	15.9
Low percentage match	5	11.4
Inaccurate matches	3	6.8
Incorrect contact information for other case managers	3	6.8
Never heard of the tool	1	2.3
Total	44	100.0

Blueprint Solution Non-Use

Key Points

- The most common reasons provided by case managers for not using the tool are 'other,' low volume of matches, or they thought the tool was discontinued.
- Most respondents indicating 'other' stated that the tool was unnecessary or unhelpful for their work.

When case managers do not use the Blueprint Solution, there are several reasons behind their decision. As depicted in Figure 15, about 36% of respondents offered an alternative reason for not using the tool. Among them, most indicated they perceived the tool as unnecessary or unhelpful.

Another frequently cited reason by multiple respondents responding with 'other' was a lack of training, instructions, or uncertainty about how to use the tool. After 'other,' 32% of respondents pointed to a low volume of matches, while another 32% believed the tool was no longer in use. Further explanations for non-use included respondents being too busy (21%) or having no knowledge of, or never having, a match (21%). Lastly, 11% of the respondents attributed their decision not to use the tool to low percentage matches, 7% reported concerns about match accuracy while another 7% cited incorrect contact information.

Methodology

To analyze what factors significantly impact case managers' familiarity and frequency of usage of the Blueprint Solution, we conducted two separate analyses using binary logistic regression because both of these outcomes are dichotomous in nature meaning they only have two possible values each. For tool familiarity, respondents are either familiar or not familiar with the tool. For frequency of tool usage, individuals either frequently/somewhat or rarely/ never use it. In addition to tool familiarity and usage, we evaluated the impact of the Blueprint Solution on frequency of communication among case managers from different programs.

Blueprint Solution Familiarity

Along with the measure of Blueprint familiarity, we have four indicators theorized to affect tool familiarity including the case managers' agency; level of experience; and the degree to which they telework. The indicators are defined below.

Department of Health and Human Services (DHHS) is whether the case manager works within this department. The Department of Workforce Services (DWS) is excluded so it serves as the baseline comparison group.

Department of Corrections (UDC) is whether the case manager works within this department. DWS is excluded so it serves as the baseline comparison group.

Case manager experience is how many years a case manager has worked for the state of Utah including time spent as a case manager in different programs for the state if applicable. The categories for this indicator are: less than 1 year; 1 to 2 years; 3 to 6 years; 7 to 10 years; and more than 10 years.

Telework is a dichotomous measure of teleworking with individuals who report never teleworking in one group and individuals who report any level of teleworking in the other group.

We expect that the agency a case manager works for may impact their familiarity with the tool because, from our pre-evaluation stakeholder meetings, it was clear that communication about the Blueprint Solution varied across agencies. Concurrently, we expect that case managers with more experience are more likely to be familiar with the tool. Lastly, case managers who report any degree of teleworking will be more likely to be familiar with Blueprint because, as a digital tool, it is well-positioned to support employees who are working remotely compared to employees on-site who have more access to other means of coordinating with case managers.

Figure 16 presents the results of our analysis of familiarity with the Blueprint Solution. All four indicators are statistically significant. As expected, the case manager's agency impacts their likelihood of being familiar with the tool, with DHHS and UDC case managers less likely to be familiar with Blueprint compared to DWS case managers. Also, as expected, the more experience a case manager has the more likely they are to be familiar with the tool. Contrary to our expectations, case managers who report any degree of teleworking are less likely to be familiar with the tool.

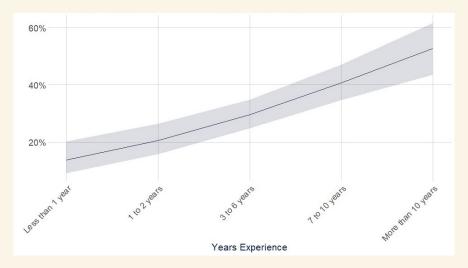
FIGURE 16: Assessing Familiarity with the **Blueprint Solution**

Category	Frequency	Percent
DHHSa	-2.881***	0.327
UDC ^a	-1.834***	0.340
Case manager experience	0.486***	0.087
Telework	-0.856**	0.262
AIC	488.41	
N	484	

Notes: **p<0.001; ***p<0.0001; two-tailed tests. Coefficients derived from binary logistic regression. ^aDWS is the baseline comparison group.

Because the log-odds ratio estimates from the regression can be difficult to interpret, we calculated the predicted probabilities for each indicator holding all of the other measures at their observed values to better understand the size of each impact. The largest impacts are with agency affiliation. On average, being

FIGURE 17: Predicted Probability of Tool Familiarity by Years of Experience



a case manager in DHHS is associated with a 43 percentage point decrease in the likelihood of being familiar with the Blueprint Solution tool compared to DWS. Similarly, being a case manager in UDC is associated with a 27 percentage point decrease in the probability of being familiar with the Blueprint Solution tool compared to DWS.

Depicted in Figure 17, a one unit (category) increase in years experience as a case manager is associated with a 7 percentage point increase in the probability of being familiar with the Blueprint Solution tool on average. Overall, there is a 39 percentage point difference in the probability of being familiar with the tool for case managers with more than 10 years of experience compared to case managers with less than 1 year of experience.

Teleworking has a more modest impact and in the opposite direction from what we hypothesized. Holding all other measures at their observed values, on average, case managers who report teleworking are associated with a 13 percentage point decrease in the probability of being familiar with the Blueprint Solution tool. It may be the case that case managers who never telework have had more opportunities to learn about, and become familiar with, the tool through their in-person work compared to their counterparts who report some degree of teleworking.

Blueprint Solution Usage

For our second analysis, we examined the use of the Blueprint Solution tool. Along with our measure of Blueprint **usage**, we have nine indicators we think may affect tool usage including the case managers' agency; level of experience; and the degree to which they telework, which are defined in the first model above, and the remaining measures which are described below. All of the indicators below are measured on a scale of strongly disagree to strongly agree).

Match accuracy is the extent to which respondents think the Blueprint Solution matches are accurate.

Increased knowledge of clients receiving multiple services is whether individuals think the tool has increased their awareness of their clients who are receiving services from multiple programs.

Increased number of clients meeting their plan requirements or goals measures the degree to which case managers think the Blueprint Solution has led to more of their clients meeting plan requirements or goals.

Reduced clients' overlapping goals is whether respondents think the tool has led to fewer overlapping goals for their clients.

More efficient use of work time measures the degree to which individuals think the tool has enabled them to use their work time more efficiently.

Improved job morale measures respondents' perception of the impact of the tool on their morale at work.

As with Blueprint Solution familiarity, we anticipate that the agency a case manager works for may impact their frequency of tool usage, again, because our preevaluation meetings revealed that communication and information about the tool varied across agencies. Additionally, we expect that individuals who telework will use the tool more frequently than individuals who do not, and case managers with more experience will likely use the tool more frequently than their less experienced counterparts. Concurrently, we think that individuals who perceive the system as producing accurate matches will be more likely to use the tool. Lastly, case managers who agree that the tool is achieving its intended outcomes—increased knowledge of clients receiving multiple services, increased number of clients meeting plan goals, reduction in clients' overlapping goals, more efficient use of case manager work time, and improved job morale—are more likely to use the tool.

The full results from this analysis are in Appendix C. Only one indicator reaches statistical significance, our UDC indicator. To further test Blueprint usage, we ran this analysis with multiple combinations of our predictive indicators and using a variety of models including ordinary least squares and ordinal logistic regressions. Notably, the only consistently statistically significant effect was for the UDC measure. As in our familiarity model, the estimate is negative meaning that UDC case managers are less likely to use Blueprint compared to DWS case managers.

Similar to our familiarity model, because the log-odds ratio estimates from the regression can be difficult to

interpret, we calculated the predicted probability for the UDC indicator holding all of the other measures at their observed values to better understand the size of the impact. As illustrated in Figure 18, being a case manager in UDC is associated with, on average, a 39 percentage point decrease in the probability of using the Blueprint Solution tool compared to case managers in DWS. This finding further supports the idea that Blueprint Solution usage varies by agency.

In examining differences among agencies, we analyzed the change in Blueprint usage across agencies over time using descriptive statistics. We find that, while a majority of case managers in each agency report their usage has stayed the same, only 3% of UDC case managers report increased usage compared to 25% of DWS case managers and 12% of DHHS case managers. Conversely, while 19% of DWS and DHHS case managers, respectively, report a decrease in tool usage over time, 41% of UDC case managers report a decline in their use of the tool (Figure 19).

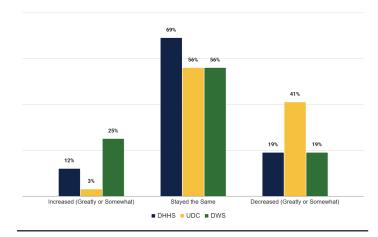
Blueprint Solution Communication

In addition to tool familiarity and usage, we evaluated the impact of the Blueprint Solution on frequency of communication among case managers from different programs. We have four indicators theorized to affect communication among case managers including the case managers' agency; level of experience; the degree to which they telework; and their belief about whether the Blueprint Solution has increased their





FIGURE 19: Change in Blueprint Usage over Time by Agency



knowledge of clients who are receiving services from multiple programs. The four indicators are defined in the above analyses and the **communication** measure is described below.

Frequency of communication among case managers is a measure of respondents' perceptions of whether their communication with case managers from different programs has increased, stayed the same, or decreased since Blueprint was implemented (measured on a scale of strongly disagree to strongly agree).

We anticipate that the case manager's agency may influence their level of communication with their peers from other programs, again, because our preevaluation meetings revealed that communication and information about the tool varied across agencies. Additionally, we expect that individuals who telework will use the tool more frequently, resulting in increased communication with case managers from other programs. Case managers with more experience are expected to use the tool more frequently, leading to increased levels of communication. Concurrently, we think that case managers who agree that the tool is increasing their knowledge of clients receiving multiple services will report an increase in communication with other case managers.

Figure 20 presents the results of our analysis of frequency of communication among case managers. Two of our indicators are statistically significant. UDC case managers do not report an increase in communication with case managers from other programs. Compared to DWS, our baseline group,

Corrections case managers rank 0.5 (or half a category) higher on the communication frequency scale, on average, holding the other measures constant. This finding means that UDC case managers are more likely to report decreased levels of communication with other case managers after Blueprint was implemented.

Individuals who think that Blueprint has increased their knowledge of clients receiving services from different programs report more communication with case managers from other programs. Individuals reporting increased knowledge rank 0.4 (or about half a category) lower on the communication frequency scale, on average, holding the other indicators constant. This finding means that individuals who report increased knowledge are more likely to report increased levels of communication with other case managers after Blueprint was implemented. None of the remaining indicators are statistically significant.

FIGURE 20: Assessing Blueprint Solution Impact on Change in Communication Among Case **Managers**

Category	Change in Communication Among Case Managers	Standard Error
DHHSa	-0.029	0.285
UDCa	0.456*	0.197
Case manager experience	0.126	0.088
Telework	0.069	0.178
Increased knowledge of clients receiving multiple services	-0.385***	0.503
Constant	3.523***	
N	92	
Adjusted R ²	0.264	

Notes: *p<0.01; **p<0.001; ***p<0.0001; two-tailed tests. Coefficients derived from ordinary least squares regression. aDWS is the baseline comparison group.

Major Findings & Recommendations

Finding 1: Familiarity with the Blueprint Solution is low and varies significantly by agency and case manager experience.

On average, DWS case managers are more likely to be familiar with the tool compared to DHHS and UDC case managers. Being a case manager in DHHS is associated with a 43 percentage point decrease in the likelihood of being familiar with Blueprint Solution and being a case manager in UDC is associated with a 27 percentage point decrease in the probability of being familiar with the tool compared to DWS.

The more experience a case manager has the more likely they are to be familiar with the Blueprint Solution tool. In our analysis we found, on average, a 7 percentage point increase in the likelihood of being familiar with the tool moving from one experience category to the next. Overall, there is a 39 percentage point difference in the probability of being familiar with the tool for case managers with more than 10 years of experience compared to case managers with less than one year of experience. However, even for case managers with more than 10 years of experience, their likelihood of being familiar with Blueprint is only 52%.

Action Item 1: To some degree, the impact of agency and experience on Blueprint familiarity makes sense in that variation among agencies was evident from our pre-evaluation meetings and, potentially due to that variation, it is unlikely that agencies have communicated consistently about the tool to newer case managers leading to less awareness on the part of less experienced case managers. What is interesting though is that even for individuals who have been working as case managers since before Blueprint was implemented, levels of awareness are relatively low. As stated above, on average, holding all of the other measures at their observed values, even for case managers with more than 10 years of experience, their likelihood of being familiar with Blueprint is 52%. In order to enhance usage and effectiveness of the Blueprint Solution, we recommend raising awareness about it among case managers from participating programs.

Finding 2: Even when using different combinations of measures and multiple analytical methods, only one measure significantly affects usage of the Blueprint Solution. Being a case manager in UDC is associated with, on average, a 39 percentage point decrease in the probability of using the tool compared to case managers in DWS.

Action Item 2: This finding is in line with the agency-related findings for Blueprint familiarity so it is not surprising to find usage significantly varies by agency at least for UDC case managers. However, what really stands out is the lack of statistically significant results in predicting tool usage. In other words, in general we do not find statistically significant relationships between the measures we described and use of the Blueprint Solution. Thus, except for our UDC indicator, our model suggests that the use of Blueprint is likely due to random chance. As discussed in the Caveats, Limitations, and Further Research Opportunities section, this finding should be weighed carefully due to limitations in the analysis. In future research, this finding should be further evaluated by alternative research methods and additional data, if available.

Finding 3: Only two indicators are statistically significant when analyzing the impact of the Blueprint Solution on changes in the frequency of case manager communication over time. Individuals who think that Blueprint has increased their knowledge of clients receiving services from different programs report more communication with case managers from other programs. UDC case managers are more likely to report decreased levels of communication with other case managers after Blueprint was implemented. The size of the impact is modest; about half a category increase or decrease on a scale of strongly disagree to strongly agree. As with our descriptive analysis, the tool seems to have had some impact on increasing communication among case managers from different programs.

Action Item 3: The number of cases we could include in this model is relatively small at

92 respondents. Future research should further investigate this finding by targeting data collection at Blueprint Solution users in order to evaluate a larger number of individuals.

Finding 4: Based on our descriptive statistics, most case managers are neutral about whether the Blueprint Solution has achieved its other intended outcomes—increased number of clients meeting plan goals, reduction in clients' overlapping goals, more efficient use of case manager work time, and improved job morale.

Action Item 4: Future research should evaluate this finding using more robust statistical techniques by targeting data collection at Blueprint Solution users to evaluate a larger number of users. Also, future research should further explore case managers' perspectives on whether Blueprint is achieving its intended outcomes through open-ended survey questions or interviews to gather more in-depth information and allow for a more complex understanding of the impact of the tool.

Caveats, Limitations, & Further Research Opportunities

This evaluation finds that **familiarity** with the Blueprint Solution is relatively low and significantly impacted by a case manager's agency, experience, and, to a lesser degree, whether or not they telework. Also, this evaluation finds that, in general, usage of the Blueprint tool is not significantly impacted by a case manager's experience, engagement in telework, or feelings about whether the tool is achieving its intended outcomes. Lastly, the evaluation finds that implementation of the Blueprint Solution has resulted in moderate changes in communication among case managers mainly impacted by the case manager's agency and whether the case manager thinks the tool has increased their knowledge of clients receiving services from different programs. Interpretations of these results should be made carefully due to the below limitations and caveats. Rather than viewing these findings as conclusive, results should be used to inform future conversations about the Blueprint Solution and its effect on enhancing service coordination.

Data: Analyses are only as good as the data that inform them. Because these data were part of an original data collection effort, we were able to control that collection and shape the data specifically for this evaluation. However, there are still potential flaws in the data that may have impacted the evaluation. A primary limitation to these data is that it assumes we were accurately provided a comprehensive list of all case managers in each agency for whom the Blueprint Solution is applicable. Based on some of the survey responses and emails received during data collection, we know that there are instances where supervisors (not case managers) were included. Also, we have no way of knowing whether any case managers who should have been included were not on the distribution lists. Thus, it could be the case that our sample of respondents is not fully representative of the population of case managers in which we were interested in studying. It is possible that the inclusion of missing cases would alter the results of the analysis.

Methods: This study utilizes binary logistic regression. As with all maximum likelihood estimation

techniques, they perform better (are more accurate) with larger sample sizes. As discussed in Long (1997), the changes that occur when maximum likelihood estimation is used with small sample sizes is largely unknown and "it is risky to use ML [maximum likelihood] with samples smaller than 100, while samples over 500 seem adequate" (p. 54). While our model of Blueprint familiarity includes 484 cases, our model of Blueprint usage only has 111 cases so it teeters on the edge of having an adequate sample size and consequently its results should be considered tentative.

Another analytical concern is omitted variable bias. While our analysis of Blueprint familiarity likely included an adequately-sized sample, the cost of analyzing a larger sample was that the predictive measures included in the model were limited because individuals who responded that they were unfamiliar with the tool were directed to the end of the survey so the data we have on those case managers is more limited. Thus, there could be other factors that may impact familiarity with the tool that were not included in this analysis. The research findings in this report may have been different if measures that were omitted because of unavailable data were included as independent controls.

Endnotes

- Stone, R. Social Services Blueprint Solution Synchronization Project Charter. Governor's Office of Planning & Budget. Published February 24, 2020. Accessed October 3, 2023. https://docs.google.com/document/d/1ER4usmCMhSpitRGJGx_tPJmdVyLhbnDXKh5jkA9MYaw/edit
- 2. Stone, R. Social Services Blueprint Solution April 2022 Action Plan. Governor's Office of Planning & Budget. Published April 2022. Accessed October 3, 2023. https://gopb.utah.gov/wp-content/uploads/2022/05/Blueprint-Solution-One-Pager-_-2022-Actions.pdf
- 3. Stone, R. Social Services Blueprint Solution Synchronization Project Charter.
- 4. The individual managing and overseeing client progress according to the content agreed upon by clients in the client plan (DCFS = case manager; JJYS = plan manager; FEP & VR = counselor; and UDC = correctional case manager or AP&P agent).
- 5. Stone, R. Social Services Blueprint Solution Synchronization Project Charter.
- 6. Social Services Blueprint Solution Tool Guide. Governor's Office of Planning & Budget. Published 2020. Accessed October 3, 2023. https://gopb.utah.gov/wp-content/uploads/2020/10/Social-Services-Blueprint-Solution-Tool-Guide-Final.pdf
- 7. Stone, R. Social Services Blueprint Solution April 2022 Action Plan.
- 8. Social Services Blueprint Solution Tool Guide.
- 9. Smith M. Building an Interoperable Human Services System. Stewards of Change; 2008. Accessed October 3, 2023. https://www.alleghenycountyanalytics.us/wp-content/uploads/2016/05/Building-an-Interoperable-Human-Services-System-How-Allegheny-County-Transformed-Systems-Services-and-Outcomes-for-Vulnerable-Children-and-Families.pdf
- 10. History of the SLDS Grant Program. Institute of Education Sciences; 2018. Accessed October 3, 2023. https://nces.ed.gov/programs/slds/pdf/History of the SLDS Grant Program May2018.pdf
- 11. Fantuzzo, J., Henderson, C., Coe, K., Culhane, D. (2017). The Integrated Data System Approach: A Vehicle to More Effective and Efficient Data-Driven Solutions in Government. https://aisp.upenn.edu/wp-content/uploads/2017/09/The-IDS-Approach_Fantuzzo-et-al.-2017_Final.pdf
- 12. Womer, Jonathan and Stack, Kathy, Blending and Braiding Funds: Opportunities to Strengthen State and Local Data and Evaluation Capacity in Human Services (March 28, 2023). Available at SSRN: https://dx.doi.org/10.2139/ssrn.4403532
- 13. Centers for Disease Control and Prevention. Framework for program evaluation in public health. MMWR 1999;48 (No. RR-11): 4, 7. Accessed October 3, 2023. https://www.cdc.gov/evaluation/framework/index.htm.
- 14. Long, J. S. (1997). Regression Models for Categorical and Limited Dependent Variables. Sage

Appendix A-C

Appendix A: Evaluation Framework



<u>Evaluation Framework</u> from the Centers for Disease Control and Prevention Framework for Program Evaluation in Public Health

Appendix B: Blueprint Solution Case Manager Survey

Blueprint Survey

Start of Block: Introduction

Thank you for your willingness to participate in the Blueprint survey. The Governor's Office of Planning and Budget (GOPB) is conducting an evaluation of the Blueprint Solution in order to better understand its impact. The information you provide will inform other state initiatives to improve data sharing, collaboration, and customer experience more broadly.

This survey is completely voluntary and you can stop at any time. Your responses will be kept confidential. Your complete honesty will help guide the state in future coordination efforts. We anticipate that this survey will take about 5-10 minutes to complete.

End of Block: Introduction

Start of Block: Experience



Which of the following best describes the program in which you work currently as a case manager? For simplicity's sake, a "case manager" also refers to a caseworker, counselor, plan manager, or AP&P officer.

O Department of Corrections (1)
O Division of Child and Family Services (DHHS) (2)
○ Juvenile Justice and Youth Services (DHHS) (3)
○ Family Employment Program (DWS) (4)
O Vocational Rehabilitation (DWS) (5)
Other (6)
Lam not currently a case manager (7)

Skip To: End of Survey If Which of the following best describes the program in which you work currently as a case manager?... = I am not currently a case manager

(If applicable, you may include time as a case manager in multiple programs for the state of Utah)
O Less than 1 year (1)
O 1 to 2 years (2)
○ 3 to 6 years (3)
○ 7 to 10 years (4)
O More than 10 years (5)
About how often do you telework?
O Never (1)
O Sometimes (2)
O About half the time (3)
O Most of the time (4)
O Always (5)
Is your predominate work location in Davis, Salt Lake, Utah, or Weber county?
O No (1)
○ Yes (2)
Other (3)
End of Block: Experience
Start of Plack: Plack 9

As of today, about how many years have you worked as a case manager for the state of Utah?

Are you familiar with the Blueprint Solution tool?
○ Yes (1)
O No (2)
Skip To: End of Survey If Are you familiar with the Blueprint Solution tool? = No
End of Block: Block 8
Start of Block: Blueprint Solution Tool Frequency
On average, about how often do you use the Blueprint Solution tool?
O Never (1)
O Rarely (2)
O Sometimes (3)
○ Frequently (4)
End of Block: Blueprint Solution Tool Frequency
Start of Block: Blueprint Solution Tool Non-Users
Display This Question:
If On average, about how often do you use the Blueprint Solution tool? = Never

Why do you	not use the Blueprint Solution tool? (select all that apply)		
	Never heard of the tool (1)		
	Inaccurate matches (2)		
	Too busy (3)		
	Unaware of (or never had) a match (4)		
	Low percentage match (5)		
	Lack of response from other case managers (6)		
	Incorrect contact information for other case managers (7)		
	Low volume of matches (8)		
	Thought the tool was discontinued/no longer in use (10)		
	Other (9)		
End of Bloo	ck: Blueprint Solution Tool Non-Users		
Start of Block: Blueprint Solution Tool Feedback			
•	additional feedback you would like to provide about the Blueprint Solution Tool? if you do not have additional comments)		
End of Bloc	ck: Blueprint Solution Tool Feedback		

Start of Bloc	k: Demographic Questions
With which ge	ender do you most closely identify?
O Male	(1)
O Femal	e (2)
O Non-b	inary / third gender (3)
OPrefer	not to say (4)
×	
With which gr	oup(s) do you most closely identify? (select all that apply)
	White (1)
	Black or African American (2)
	American Indian or Alaska Native (3)
	Asian (4)
	Native Hawaiian or Pacific Islander (5)
	Hispanic or Latino(a) (6)

Other (7) _____

Which category captures your age as of today?
O Under 25 (1)
O 25 - 34 (2)
O 35 - 44 (3)
O 45 - 54 (4)
○ 55 or older (5)
End of Block: Demographic Questions
Start of Block: Blueprint Solution Tool Usage
To what extent do you agree or disagree with the following statement: The matches Blueprint makes are accurate.
O Strongly disagree (1)
O Somewhat disagree (2)
Somewhat disagree (2)Neither agree nor disagree (3)
O Neither agree nor disagree (3)

contact do you most often use?
O Pre-written email generated by the tool (1)
○ Email (not pre-written) (2)
O Phone call (3)
O I don't reach out to other case managers first (4)
Other (5)
To what extent when you reach out to case managers do they respond to you?
O Never (1)
O Sometimes (2)
O About half the time (3)
O Most of the time (4)
O Always (5)
I never reach out to the other case managers (6)

	where you are not communicating with other case managers about potential at is the reason(s) for not doing so?			
	Incorrect contact information for the other case manager (1)			
	Low percentage match (2)			
	Too busy (3)			
	Unaware of a match (4)			
	Other (5)			
Did you work	as a case manager prior to August 2020?			
○ No (1)			
O Yes (2)			
	f Did you work as a case manager prior to August 2020? = Yes f Did you work as a case manager prior to August 2020? = No			
•	eel your usage of the Blueprint tool has changed over time since it was (August 2020)?			
O Great	y Increased (1)			
O Somewhat Increased (2)				
○ Stayed the Same (3)				
O Somewhat Decreased (4)				
Greatly Decreased (5)				

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If Did you work as a case manager prior to August 2020? = Yes

How do you feel your frequency of communication with case managers from different programs has changed since the Blueprint tool was implemented (August 2020)?

○ Greatly Increased (1)
○ Somewhat Increased (2)
○ Stayed the Same (3)
○ Somewhat Decreased (4)
○ Greatly Decreased (5)
Display This Question:
If Did you work as a case manager prior to August 2020? = No
How do you feel your usage of the Blueprint tool has changed over time since you began working as a case manager?
○ Greatly Increased (1)
○ Somewhat Increased (2)
○ Stayed the Same (3)
○ Somewhat Decreased (4)
○ Greatly Decreased (5)
End of Block: Blueprint Solution Tool Usage

Start of Block: Blueprint Solution Tool Impact

To what extent do you agree or disagree with the following statements. The Blueprint Solution tool has:

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
Increased my knowledge of clients receiving multiple services. (1)	0	0	0	0	0
Increased the number of my clients meeting their plan requirements or goals. (2)	0	0	0	0	0
Reduced my clients' overlapping goals (3)	0	0	0	0	0
Enabled me to use my work time more efficiently (4)	0	0	0	0	0
Improved my morale at work. (5)	0	\circ	\circ	0	0
Do you have any additional thoughts on how our Office can better embody these values? End of Block: Blueprint Solution Tool Impact					
End of Block: Blueprint Solution Tool Impact					

Appendix C: Assessing Blueprint Solution Usage

	Estimate (log-odds ratio)	Standard Error
DHHSa	-0.821	0.558
UDC ^a	-1.714**	0.547
Case manager experience	0.026	0.159
Telework	0.234	0.414
Accurate matches	0.002	0.235
Increased knowledge of clients receiving multiple services	0.220	0.261
Increased number of clients meeting plan requirements or goals	0.507	0.322
Reduced clients' overlapping goals	0.275	0.288
Increased work efficiency	-0.168	0.311
Improved job morale	-0.382	0.298
AIC	178.05	
N	111	

Notes: **p<0.001; two-tailed tests. Coefficients derived from binary logistic regression. aDWS is the baseline comparison group.

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