



TANF **DATA**
COLLABORATIVE

Building and Sustaining Data Analytics Capacity

The TANF Data Collaborative Pilot Initiative Final Report

OPRE Report 2024-068

APRIL 2024

Funders

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APRIL 2024

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Overview

This report describes the Temporary Assistance for Needy Families (TANF) Data Collaborative (TDC), an innovative approach to increasing data analytics capacity at TANF agencies. TDC was part of the TANF Data Innovation (TDI) project, launched by the Administration for Children and Families within the U.S. Department of Health and Human Services to strengthen state agencies' use of TANF, employment, and other administrative data.

MDRC led the TDI project team in partnership with Actionable Intelligence for Social Policy at the University of Pennsylvania, Chapin Hall at the University of Chicago, and the Coleridge Initiative. Part of that effort was the TDC Pilot Initiative, a unique training and technical assistance (TA) project that focused on “learning by doing” to help state TANF agencies expand their data analytics knowledge and skills. Eight state TANF agencies were chosen through a rigorous selection process to participate in the 30-month pilot from February 2020–July 2022. Each pilot agency team conceived of and conducted a custom data analytics project, supported by the TDI team through monthly webinars, annual cross-pilot conferences, regular meetings with coaches, and intensive training.

Pilot agency teams began by identifying the research question or questions they wanted to answer during the pilot period and devised a project they felt was feasible and could be completed successfully. From there the pilot agency teams learned about the data and analytical methods they would use, implemented their projects, and finished with presentations and reports to share their findings with their TANF programs and agency leaders.

The pilot initiative consisted of the following components:

- direct funding to pilot agency teams to support participation in the pilot
- a TDC Applied Data Analytics course to build foundational skills
- dedicated TDC coaches for each pilot agency team and access to a technical bench of data experts
- peer learning
- strategically phased milestones and deliverables with corresponding training and technical assistance

TDC demonstrated that a combination of *learning* through training and TA as part of *doing* a data analytics project can lead to sustained, expanded data use: The eight pilot agency

teams were successful in expanding their routine use, integration, and analysis of TANF and employment data beyond the usual reporting requirements.

This report shares the insights gained by the TDI team from the TDC Pilot Initiative. It describes the policy context and origin of the TDC Pilot Initiative and outlines how to design and implement a sustainable approach to data use. It also highlights lessons and insights learned by the TDI team and the pilot agency teams during and after the pilot and outlines how to design and implement a sustainable approach to data use. Among those insights:

Pilot Design

- Deliberately hardwire sustainability objectives into the training and TA so that teams continue to use the skills, knowledge, and practices they have learned.
- Clearly establish an equity lens from the very beginning and remain an ongoing focus throughout a project.
- Build efforts to capture and maintain the attention of participants into the TA, so they engage enough in the project to absorb what they have learned.

Pilot Implementation

- It takes more than technical skills. Building agency data analytics capacity also requires developing strong communication and collaboration practices across units, such as forming cross-disciplinary teams that meet regularly, creating a shared vocabulary, and leveraging each staff member's knowledge and expertise.
- Flexibility is important. This was especially true for the TDC Pilot Initiative, the launch of which coincided with the beginning of the COVID-19 pandemic. But any team taking on a data analytics project should be prepared to pivot in response to such things as new information, shifting leadership priorities, and staff turnover.
- Engage all types of learners. Working across teams within an agency requires balancing customization and consistency throughout the project for staff members who have a wide range of skills and competencies. Tactics used by the TDI team to differentiate learning included organizing group discussions by staff role, adding new learning modes, and inviting other experts to offer guidance and instruction.

TDC offers a real-world model for federal agencies, policymakers, foundations, and other funders interested in investing in approaches to improve data analytics capacity among state agencies. The learning-by-doing method developed in the TDC Pilot Initiative and examined in this report may also be useful to researchers and staff members in a wide range of public sector agencies looking for a portable approach that can support the use of administrative data for learning and program improvement.

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We would also like to thank our partners—Actionable Intelligence for Social Policy, Chapin Hall, and the Coleridge Initiative—who together with MDRC formed the TANF Data Innovation team. The full TANF Data Innovation team informed and supported the development of this report. Particular thanks are due to Richard Hendra, Johanna Walter, and Sufiyan Syed of MDRC, Emma Monahan, Emily Weigand and Rose Geoghegan of Chapin Hall, and Nicole Deterding, Brett Brown, Siri Warkentien, Lauren Griffin, and Lauren Frohlich of the Administration for Children and Families in the U.S. Department of Health and Human Services, for reviewing and supporting the production of this report. Thanks also go to Jill Kirschenbaum for editing the report and to Carolyn Thomas for preparing the report for publication.

The Authors

CHAPTER 1

INTRODUCTION

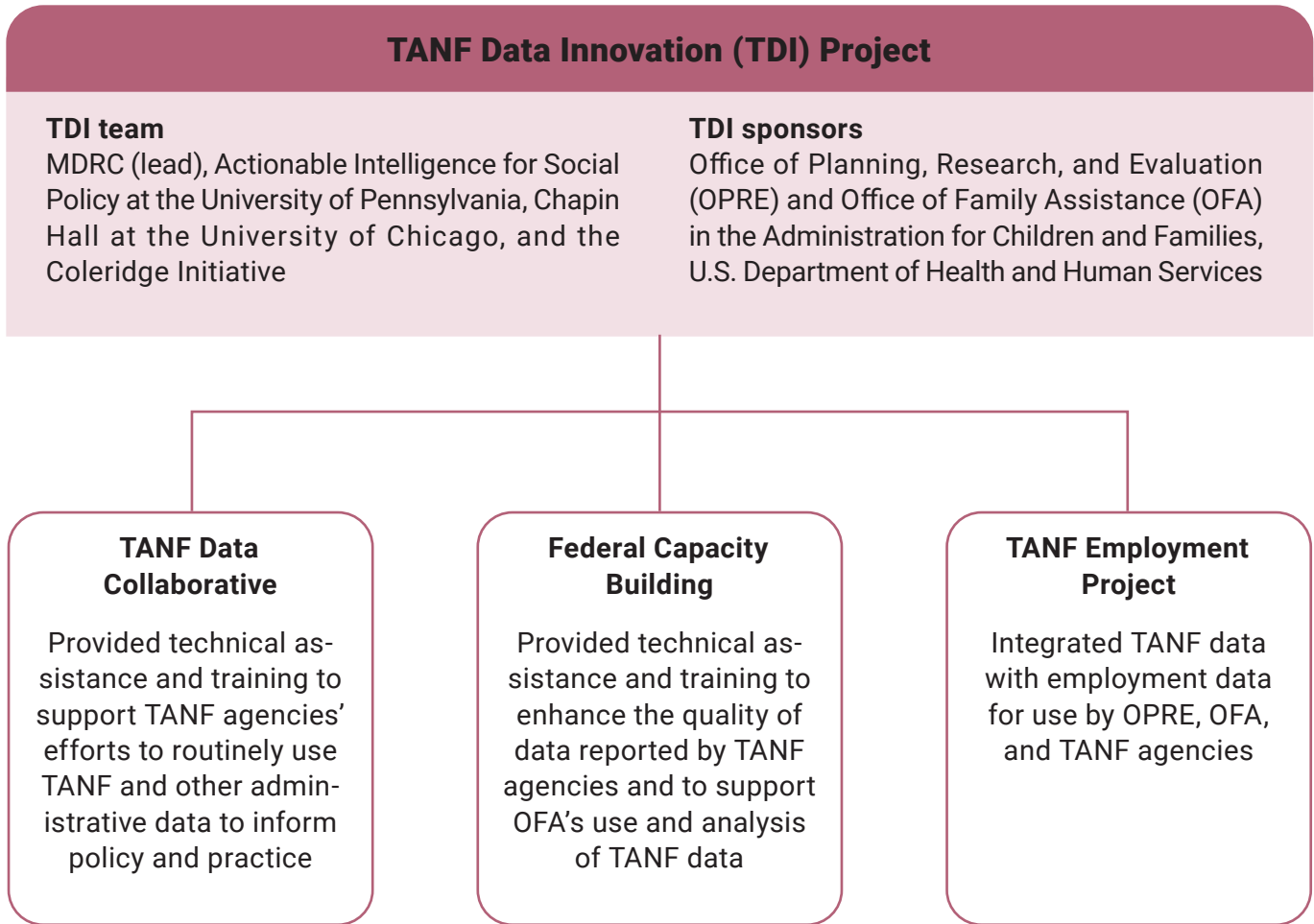
U.S. states, tribes, and territories regularly send the administrative data they collect from human services programs to federal agencies to meet compliance requirements. Administrative data, however, can be leveraged beyond reporting to gain a deeper understanding of program operations, participation, and performance. Federal agencies are interested in expanding the use of administrative data and are prioritizing investments in staff capacity and data infrastructure to align with the Foundations for Evidence-Based Policymaking Act of 2018.¹ Congress passed the act in 2018 to advance evidence-building in the federal government by improving access to data and expanding evaluation capacity. Accomplishing that requires changes to how federal agencies manage and use the information they collect.

In 2017, the Administration for Children and Families (ACF) within the U.S. Department of Health and Human Services launched the TANF Data Innovation (TDI) project. Its goal was to substantially expand TANF agencies' routine use, integration, and analysis of TANF administrative data and employment data to improve program services and outcomes for families with low incomes. The Office of Family Assistance (OFA) and the Office of Planning, Research and Evaluation (OPRE) within the ACF oversaw the request for proposals and selected MDRC in partnership with three other organizations to execute the project. As shown in Figure 1.1, MDRC led the TDI team in partnership with Actionable Intelligence for Social Policy at the University of Pennsylvania, Chapin Hall at the University of Chicago, and the Coleridge Initiative. The TDI project consisted of three components:

- The **TANF Data Collaborative** (TDC) provided technical assistance and training to support TANF agencies' efforts to routinely use TANF and employment data to inform policy and practice and concluded in July 2022.
- A component to **increase federal staff capacity** addressed the quality, use, and analysis of administrative data within OFA's TANF Data Division and concluded at the end of 2022.
- The **TANF Employment Project** (TEP), an ongoing project, integrates federally reported TANF data with employment data from the National Directory of New Hires, to allow for deeper analysis of the TANF program, including TANF participant outcomes by OPRE, OFA, TANF agencies, and other researchers. This project ends in 2024.

1 [Foundations for Evidence-Based Policymaking Act of 2018](#). H.R. 4174, 115th Congress (2017-2018).

Figure 1.1 Structure of the TANF Data Innovation Project



While TDI focused specifically on the TANF cash assistance program, the design and delivery of training and technical assistance (TA) across these three project components is relevant for any agency seeking to use its administrative data to answer key questions and improve services. This report focuses on the TDC component, which offered TA and learning opportunities to two TANF audiences: (1) all TANF agencies or entities that serve families who are receiving TANF cash assistance or who may become TANF-eligible, and (2) a select group of state and county TANF agencies that were chosen to participate in the TDC Pilot Initiative. Box 1.1 describes the TDC resources available to all TANF agencies to advance their use of administrative data.

The TDC Pilot Initiative used a unique TA approach that focused on “learning-by-doing” to help state and county TANF staff members expand their data analytics knowledge and skills. Eight pilot agency teams were selected to participate in the 30-month pilot, which ran from February 2020–July 2022. Each pilot agency team conceived of and conducted a data analytics project, supported by the TDI team through monthly webinars, annual cross-pilot conferences, regular meetings with coaches, and intensive training.

Box 1.1. TANF Data Collaborative Resources

A variety of resources were developed by the TANF Data Collaborative (TDC) to support sustainable data use. The resources outlined below were made available to all state TANF agencies, even those that were not selected to participate in the TDC Pilot Initiative.

- **The TDC Applied Data Analytics (ADA) course**, led by the Coleridge Initiative, focused on TANF and employment data and was used to train professionals at TANF and related human services agencies to develop key data analytics skills. The TDC course was adapted from the Coleridge Initiative’s original Applied Data Analytics curriculum and, notably, provided access to linked, individual-level administrative data from both TANF and workforce agencies.* The TDC ADA curriculum draws on best practices from both industry and government, including adherence to strict federal requirements for security and confidentiality. The TDC course was offered three times to different groups of TANF and related human services agency staff members.
- **Training and technical assistance on preparing federally reported TANF data** clarified federal reporting requirements and provided resources and individualized support to state and local TANF agencies to enhance the quality of the reported data. The TDI team also collaborated with the Office of Family Assistance on specialized analyses to help agencies gain further insights from the data.
- **The TANF Data Collaborative website** offered tools and tips that aligned with the TDC framework and provided on-demand support on topics related to completing a data analytics project. Examples included a tool to assist in assessing data readiness, blog posts with quick tips on common data quality challenges, and interactive caseload dynamics figures to explore how different variables could affect TANF caseloads over time.
- **Active dissemination of TDC findings and initial lessons** were shared at conferences hosted by federal agencies and national organizations, attended by TANF agency administrators and staff members from across the field. Dissemination activities generated exchanges between TANF agencies and other social service agencies that informed TDC project planning.
- **[A toolkit for linking TANF and employment data for analysis](#)** was created to help state and local TANF agencies access, link to, and analyze employment data from state unemployment insurance systems. The toolkit addresses a variety of common challenges that agencies face, such as overcoming real or perceived legal barriers to data access, selecting a data linkage method, and analyzing the linked data to gain actionable insights. It can be used by a range of state human services programs, such as the Supplemental Nutrition Assistance Program, Child Care Assistance, and Child Support, as well as state departments of labor.

(continued)

Box 1.1 (continued)

- [A toolkit for sustainable data use in government agencies](#) was developed to help TANF agencies build the culture and infrastructure needed to apply data analysis routinely, effectively, and accurately for sustainable data use. It covers a variety of issues—from staffing and technology needs to collaboration and funding—that can impact the longevity of analytics work in the public sector.
- **A toolkit of resources developed during the TDC Pilot Initiative** and expected to be completed in 2024 will provide some of the tools and resources used to support the pilot’s “learning-by-doing” approach. It will guide organizations interested in using administrative and other data to inform decision-making and program improvement and to achieve better outcomes for participants.

NOTES: *[Frauke, Ghani, and Lane \(2019\)](#).

The pilot agency teams began by identifying the research question or questions they wanted to answer during the pilot period and then devised a project they felt was feasible to undertake and could be completed successfully. From there they specified and learned about the data and analytical methods they would use, implemented the projects, and finished with presentations and reports to share their findings with their TANF programs and agency leaders.

The TDC Pilot Initiative offers a real-world example for federal agencies, foundations, and other funders interested in investing in approaches to improve data analytics capacity among state agencies. That capacity is key, given state agencies’ central role in administering programs, testing policy reforms through program improvement, and building evidence through performance information, program evaluations, and other research and analysis. This report outlines one way to design and implement a learning-by-doing approach to build data capacity. It highlights lessons and insights learned by the TDI team and the pilot agency teams during and after the pilot, including overcoming challenges caused by the COVID-19 pandemic. It is one in a series of TDI project-related publications, which are described in Appendix A.

CHAPTER 2

POLICY CONTEXT

The policy context in which the TANF Data Collaborative (TDC) operated is informed by (1) welfare reform legislation that makes family self-sufficiency paramount and (2) an emphasis on using data from states on federal program participation within the context of evidence-building.

The 1996 Personal Responsibility and Work Opportunity Act (PRWORA) shifted social benefits from cash assistance for families with low incomes to cash assistance with work requirements and time limits. The TANF program, which replaced the Aid to Families with Dependent Children program, became a block grant instead of an entitlement. States were given flexibility to establish eligibility rules as well as the latitude to decide which programs to fund to accomplish the purpose of the TANF program.

The flexibility provided by PRWORA resulted in a variety of state policies and differences in how the program is administered. Additionally, the specific state-level agency that administers the TANF program varies from state to state. This affects whether and how TANF program staff members can access data about program participants and any other services they may be receiving. For example, in nearly all instances, employment programs are not in the same state agency as the TANF program.

Although there was considerable activity following the passage of PRWORA to evaluate aspects of the new TANF program, those activities decreased over the decades. A needs assessment that was conducted at the beginning of the TANF Data Innovation (TDI) project captured a wide range of agency readiness to integrate and analyze data and produce evidence. It found that half of the state TANF agencies only used their data to perform routine reporting and only about a quarter of the states used data for rigorous analysis.¹ It also reflected that although some states improved data systems to determine TANF eligibility, there were considerable barriers still in place that prevented data sharing across programs, including restrictions around the use of wage and food assistance data. One step ACF took to mitigate this barrier was by providing guidance to states to address the inconsistent interpretations of legal restrictions around the analysis of TANF data.² (For more information on the needs assessment, see Chapter 3.)

1 [Goerge, Wiegand, and Gjertson \(2021\)](#).

2 [Golonka \(2016\)](#).

Another important part of the policy context is that much of the data managed by the federal government is gathered and reported to the federal government by state and local government agencies. For the TANF program, this presents an opportunity for states because they have the data in-house to analyze service provision in real time.

The Commission on Evidence-Based Policymaking invigorated discussions of how data could be meaningfully shared across federally funded, state-administered programs within existing federal and state legal requirements.³ The commission used the term *evidence* to be “information produced by ‘statistical activities’ with a ‘statistical purpose’ that is potentially useful when evaluating government programs and policies.”

The final report of the Commission on Evidence-Based Policymaking pointed to TANF along with Supplemental Nutrition Assistance Program and Unemployment Insurance as programs with “high-value administrative data” that could be used to measure the outcomes of government programs and policies if they were accessible for evidence building. A white paper completed for the commission by the Office of Management and Budget recognized that while state agencies oversee large stores of federal data, they often lack the access necessary to use that data to make critical decisions about program operations, policies, and regulations and “lack the capacity to use them and make them available to others.”⁴

The TDC was well-timed to put evidence-building principles into action. The TDC Pilot Initiative, specifically, was designed to help states expand their data analytics knowledge and skills and to improve their capacity to develop evidence. This, in turn, enhanced the federal government’s ability to compile evidence about the federally funded TANF program.

3 [Commission on Evidence-Based Policymaking \(2017\)](#).

4 [Office of Management and Budget \(2016\)](#).

CHAPTER 3

PROJECT BACKGROUND

This chapter briefly reviews the TANF Data Innovation (TDI) project proposed by the MDRC-led team of contractors to the Administration for Children and Families (ACF) and how the team organized itself to initiate the project in partnership with the ACF.

Although states can spend funds from TANF block grants on many different programs—everything from child welfare services to the promotion of healthy marriage—the focus of the TANF Data Collaborative (TDC), part of the TDI project, was on the families who received TANF cash assistance. According to the Center on Budget and Policy Priorities, in federal fiscal year 2020, states spent 22 percent of total TANF funding on cash assistance.¹ This limited scope helped clarify the focus of the technical assistance and training (TA) provided to state agencies by the TDI team.

What the TDI Team Proposed

A LEARNING COLLABORATIVE APPROACH COMBINED WITH TANF DATA INNOVATION.

The proposed technical approach to the TDI Pilot Initiative began with a needs assessment of the capacity of state TANF agencies to use data to drive program improvement. A key goal of the needs assessment as envisioned was to categorize states along a continuum of readiness to integrate and analyze data and produce evidence. The TDI team proposed a learning-by-doing approach combined with TANF data innovation, which included hands-on training around data use and analysis. The TDI team initially proposed working with two cohorts of agencies to complete data analytics projects.

EXPERIENCE THAT COVERED ALL NEEDED FUNCTIONALITIES. The four organizations that made up the TDI team brought broad and deep expertise to the project. All had previous experience working with many states and communities, providing both technical assistance and research for a variety of projects and initiatives supported by federal, state, and private funding. Specifically, they understood states' efforts integrating and preparing data for use by decision-makers. Kicking off the project with the delivery of the Applied Data Analytics training fostered team building by collaboratively conducting analyses using real TANF and employment wage data at the state level. Pilot agency teams also relied on the partners' experiences managing data governance issues, negotiating data sharing agreements, and

¹ [Center on Budget and Policy Priorities. \(2022\).](#)

building data analytics capacity among agency staff members. Together, these capacities were an important factor in the overall success of the project.

Early Project Activities

A considerable amount of planning and discussion with external organizations preceded the development of the specific TDC Pilot Initiative activities, some of which leveraged prior efforts of the Family Self-Sufficiency Data Center. The center was established by ACF to support states' use of administrative data and to increase the amount and quality of data available for research related to family well-being and self-sufficiency.² Conversations with current and former TANF program directors and administrators, statistical and computational experts, as well as communications consultants provided valuable insights and influenced project planning. For example, the importance of building multidisciplinary teams within states rather than working exclusively with data staff members arose out of these discussions.

The TDI team and ACF also spent some time early on adjusting the scope of the project. The original solicitation had discussed building integrated data systems (IDS) in states, an effort that would have required considerable time and resources to carry out. After conversations that illuminated a narrower priority related to TANF and employment outcomes, the TDI team and ACF decided to focus on linking Unemployment Insurance wage data to TANF data, rather than pursuing IDS work. As a result, a state agency's ability to access employment data became a core criterion in the pilot initiative selection process.

The TDI team and ACF also discussed the trade-offs between different TA approaches, such as the value of using a lighter touch approach aimed at reaching a large number of states compared with a more intensive approach focused on fewer states. Ultimately, the decision was made to narrow the scope of the pilot initiative to include a smaller cohort of states while still offering some TA that would be beneficial to a national audience.

How the Needs Assessment Informed Pilot Design and Implementation

The three components of the needs assessment informed the design of the TDC Pilot Initiative (described further in Chapter 4). The first component was an online survey of the 54 states and territories that operate TANF; 48 of 54 agencies responded. The second was a series of in-depth interviews with experts from federal and local government agencies as well as human services, research, and technology organizations. The third was a systematic review of online public reports and analyses that used TANF data.

2 [Office of Planning, Research and Evaluation. \(2019\).](#)

The TDI team, Chapin Hall in particular, made efforts to get a high response rate (48 of 54 agencies responded = 89 percent) to the online survey to capture a truly representative picture of the patterns of data use. This included collaborating with ACF's TANF regional offices to facilitate the administration of the needs assessment survey across state agencies and developing survey modules so that the burden of responding to the survey questions could be shouldered by multiple individuals within each TANF agency. Most TANF agency leaders chose to distribute the survey modules to staff members whose roles were best matched to answer the questions.³

The survey responses indicated that human and financial resource limitations create barriers to the use of data. Agency staff time is often prioritized to meet program administration responsibilities, federal compliance activities, and other efforts, leaving limited bandwidth for data analysis and evaluation. At the same time, agency leaders, policy makers, and advocates want to understand what parts of the TANF program work, which requires data analyses that show how TANF policies do or do not advance the goals of a program. In addition to a dearth of resources, survey respondents said insufficient staff skills and a lack of available technical and data tools are primary barriers to analytics work.

The TDC Pilot Initiative tried to address these limitations by providing the eight pilot agencies with funding (up to \$175,000 per pilot agency) to support staff time to plan and implement a data analytics project and to participate in pilot initiative activities. Some pilot agencies used these funds to hire data analysts to perform routine required activities, such as reporting, so that more experienced analysts could focus their time and attention on building capacity to conduct more advanced analytics. Pilot initiative training, instructional webinars, coaching, and peer learning were designed to upgrade staff skills and to foster learning about technical and data tools.

Interviews with experts from federal and local government agencies and human services, research, and technology organizations produced many valuable insights that informed the TA provided in the TDC Pilot Initiative. For example, the interviews highlighted the need for help dealing with data quality and data integration issues and with identifying research questions that could be answered using administrative data. In response, the TDC team offered instructional webinars and templates that pilot agency teams could use to address these needs. The interviews also identified common issues faced by TANF agencies related to staff capacity and turnover that helped reinforce the need for the pilot initiative TA to focus on sustainability and making clear to leadership the benefits of data analytics work.

3 Survey modules included TANF Data Use, Data Collection and Documentation, Data Infrastructure, Data Sharing, Research and Analytic Capacity, Federal Reporting, and Payment Integrity. See: [George, Wiegand, and Gjertson \(2021\)](#).

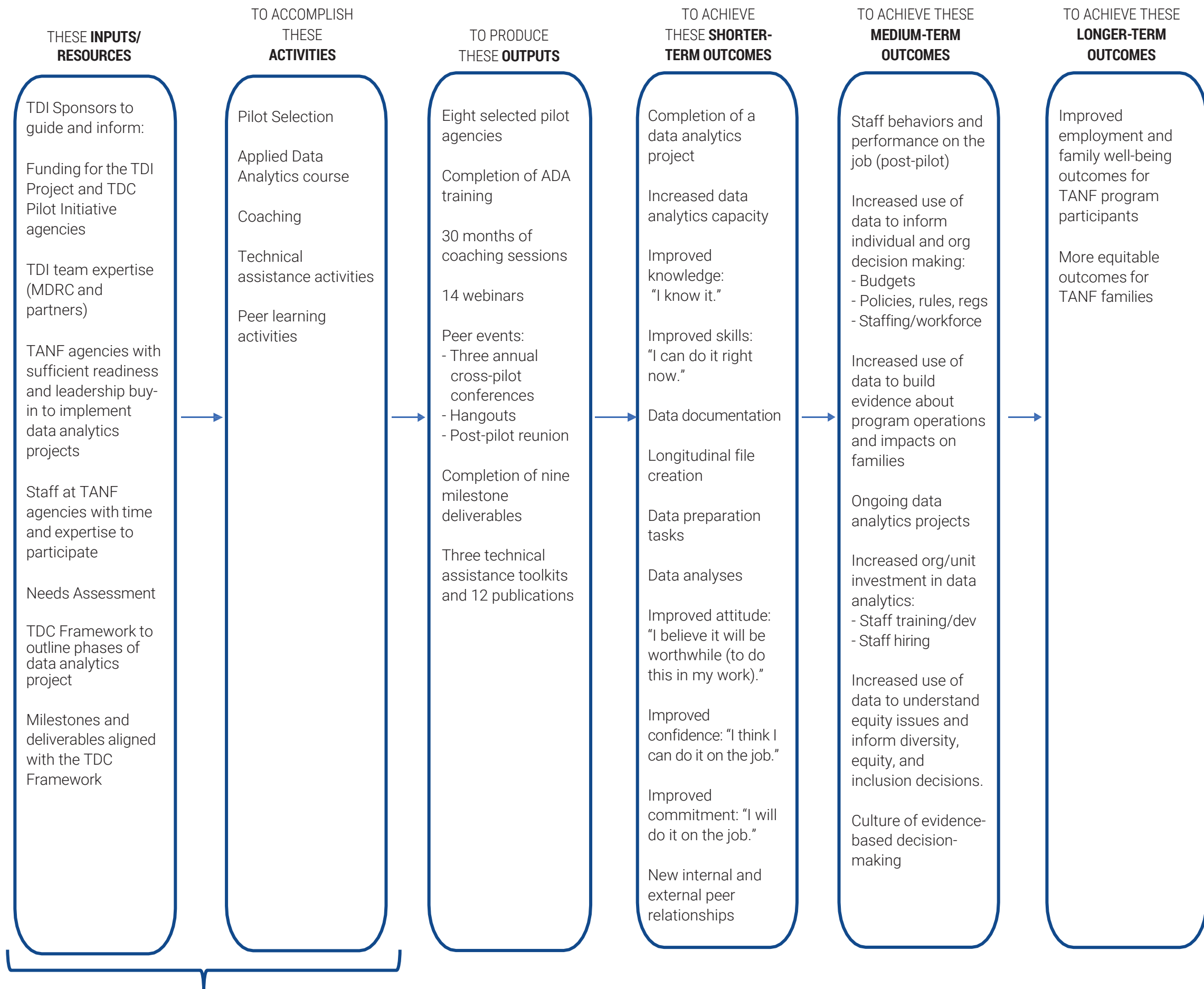
CHAPTER 4

TDC PILOT INITIATIVE TRAINING AND TECHNICAL ASSISTANCE

The TANF Data Innovation Project (TDI) was created to substantially expand the routine use, integration, and analysis of administrative data by TANF agencies. This chapter describes the design of a component of that project, the TANF Data Collaborative (TDC), including the training and technical assistance (TA) offered to the eight state TANF agencies participating in the TDC Pilot Initiative. The chapter examines the logic model for the TDC Pilot initiative, shown in Figure 4.1, including its corresponding inputs, activities, and outcomes, as well as its underlying principles.

The logic model is a blueprint for how to increase the data analytics capacity of public sector agencies. It describes the starting conditions (inputs) that set the stage for the range of training and technical assistance activities and deliverables (outputs) produced. The model outlines the anticipated short-term and medium-term agency outcomes in service to the ultimate and aspirational longer-term goal of improving employment and well-being outcomes for TANF families.

Figure 4.1. TDC Pilot Initiative Logic Model



Underlying Principles

- ➔ Value and leverage the expertise of TANF agency staff.
- ➔ Establish cross-disciplinary pilot agency teams to ground data analysis.
- ➔ Promote the application of a racial equity lens.
- ➔ Create training content that is responsive to pilot agencies' environments and operations.
- ➔ Embed sustainable processes and tools to accelerate data innovations and support transparent and reproducible research.

TDC Pilot Inputs

The following elements were essential foundations of the TDC Pilot Initiative:

SPONSORSHIP BY TWO FEDERAL OFFICES. TDI was sponsored by the Office of Planning, Research, and Evaluation (OPRE) and the Office of Family Assistance (OFA) in the Administration for Children and Families (ACF). Input from both offices was critical to shaping the TDC Pilot Initiative, and the flexibility of both offices enabled the TDI team to adjust the TA offered in response to the COVID-19 crisis as well as individual pilot agency needs. Dual sponsorship also provided a unique opportunity to leverage the expertise gained by OPRE's prior research and evaluation of ACF programs and by OFA's administration of the TANF federal grant program, and to apply what was learned from the TDI project in the future (described in Box 4.1).

Box 4.1. Government and Project Team Collaboration

The sponsorship of TDI by two federal offices in the Administration for Children and Families—the Office of Planning, Research, and Evaluation (OPRE) and the Office of Family Assistance (OFA)—provided opportunities to structure activities to maximize what was learned from the project. Both OPRE and OFA collaborated with the TDI team to provide input on TDI needs assessment survey questions; to help shape training and technical assistance (TA) based on the needs assessment analysis and findings; and to participate in TDC Pilot Initiative milestones events, such as the Pilot Kickoff and annual presentations by TDC pilot agency teams. Deep engagement by the TDI team, OPRE, and OFA enabled them to pivot TA content to address evolving needs based on ongoing pilot agency team input. This was key and necessary given that the COVID-19 pandemic coincided with the launch of the TDC pilot.

Active engagement of the project sponsors opened channels of communication across all involved groups (TDI sponsors, the TDI contractor team, and TDC pilot agency teams), which facilitated bi-directional learning opportunities. The pilot agency teams received support to execute their data analytics projects, and project sponsors and the TDI team gained real-time insights from the pilot agency teams on what it took to implement such projects, in addition to learning from the findings of the pilot projects themselves. These insights also enabled TDI sponsors and the TDI team to fine tune TA in the shorter term. Over the longer term, the involvement of both agencies contributed to a deeper understanding of how investments in enhanced TANF data analytics can be used to support program improvement and to build evidence on effective programs in service of fostering the economic security and well-being of TANF families.

FUNDING FOR THE TDC PILOT AGENCY TEAMS. The solicitation for the TDI project allocated funding to provide financial and other support directly to a select number of states to support improved quality, use, and sharing of TANF data. Resources included direct funding to cover staff time over the 30-month TDC Pilot Initiative to conceive and implement a data-driven project related to employment of TANF participants. Recognizing that most TANF agencies do not have a lot of extra capacity among their data analytic staff, direct funding for staff agencies is an important part of this model that allows pilot agencies to carve out dedicated staff time to focus on the project. It also signals the importance to pilot agencies of committing to the process.

MULTIDISCIPLINARY TDI TEAMS WITH TRAINING AND TA EXPERIENCE. The TDI team was comprised of partners with complementary areas of expertise related to the use, sharing, quality, and analysis of TANF data. Chapter 6 provides more details on the roles and responsibilities of the TDI team.

TANF AGENCIES WITH SUFFICIENT READINESS AND LEADERSHIP SUPPORT. The TDC Pilot Initiative would not have been possible without interest from a large number of TANF agencies in increasing their data analytics capacity. Twenty-two TANF agencies applied to the TDC Pilot Initiative and eight TANF agencies were selected to participate. Chapter 5 provides more details on the pilot selection process.

A NEEDS ASSESSMENT TO DOCUMENT DATA USE AND DATA NEEDS ACROSS TANF AGENCIES. The project was launched with a needs assessment to capture how TANF agencies used data and to solicit input on various TA topics and opportunities for continued improvement. The most common topic states identified as a high or medium priority was the need for help structuring data for analysis.¹ This topic, among others, was highlighted in the TA provided to TDC Pilot agency teams.

TECHNICAL ASSISTANCE GROUNDED IN REAL-WORLD APPLICATIONS OF DATA ANALYTICS. Training and TA content was organized according to the TANF Data Collaborative Framework, aligning TA with five key phases of data analytics (as shown in Figure 4.2). The phases included laying the groundwork for data analytics projects, accessing data, preparing data, analyzing data, and communicating data and findings. In practice, as the figure shows, these phases are iterative and overlap, and the framework highlights questions and issues to address and revisit throughout a data analytics project.

MILESTONES TO ENCOURAGE AND DOCUMENT PROGRESS. The TDI team designated milestones for the pilot agency teams to achieve (see Figure 4.3), which mapped to the TDC Framework phases. Each milestone consisted of a deliverable for pilot agency teams to complete over the course of the 30-month pilot toward implementation of their data analytics projects. This also enabled the TDI team to synchronize learning and peer events, resources, and coaching topics to the applicable milestone to provide relevant and timely support. Chapter six provides more detail on each of these milestones.

1 [Goerge, Wiegand, and Gjertson \(2021\)](#).

Figure 4.2 TANF Data Collaborative Framework

The five key phases of data analytics projects, described below, informed the TDC Framework for training and technical assistance.

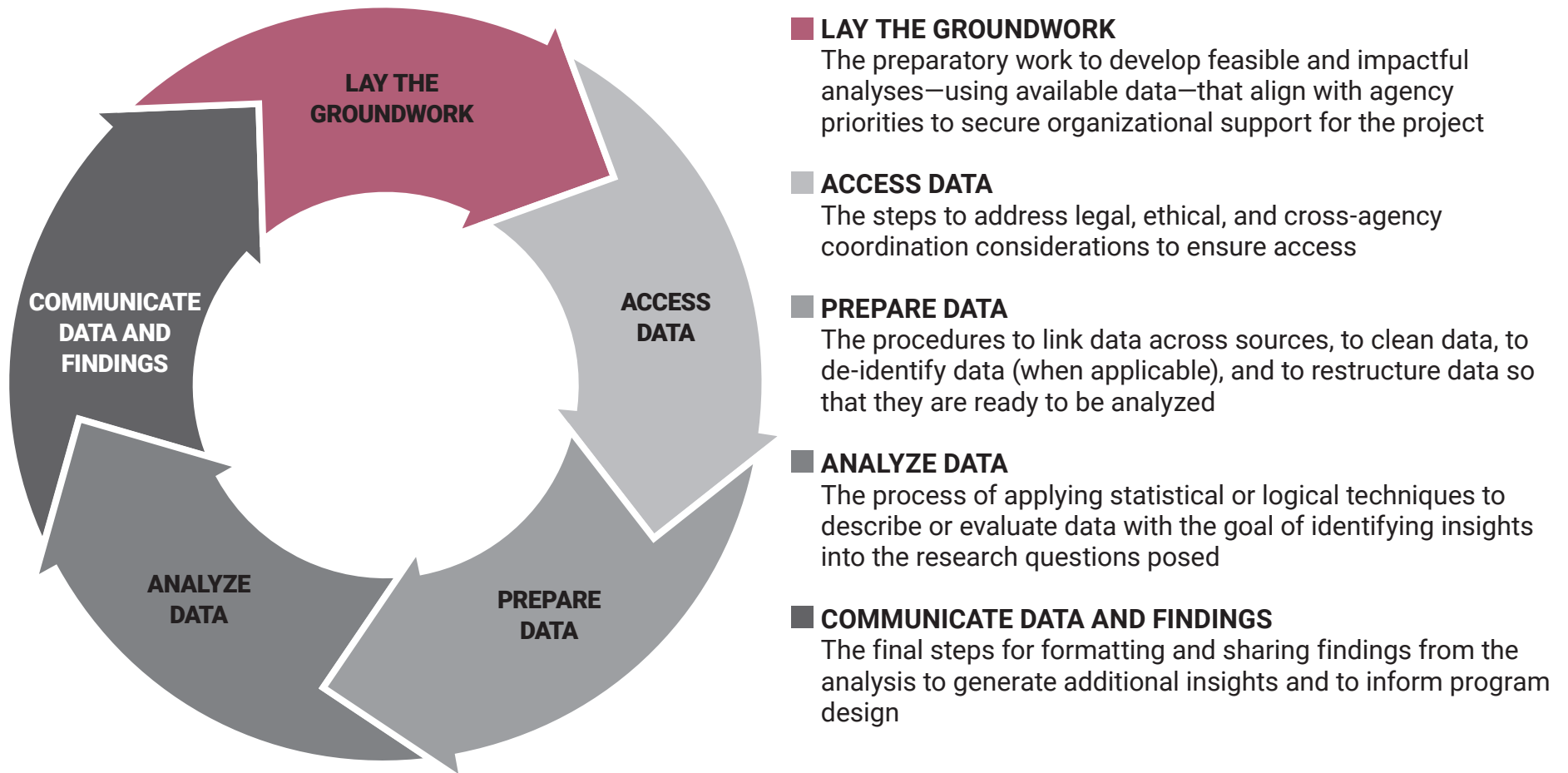
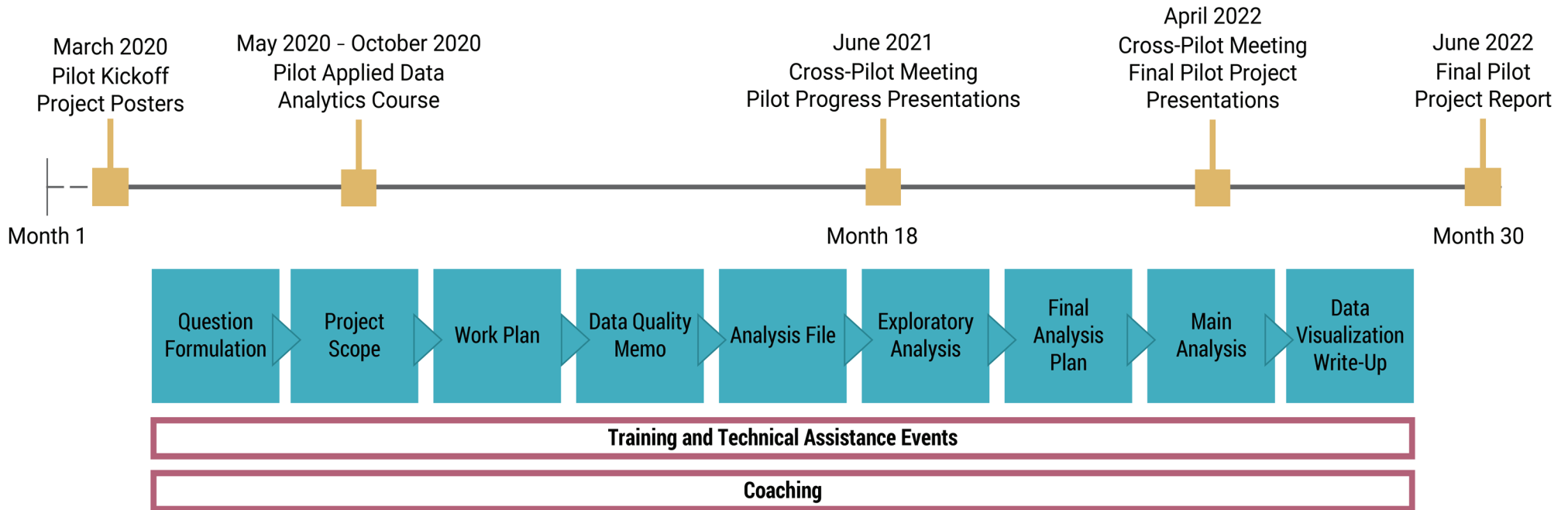


Figure 4.3. TANF Data Collaborative Pilot Initiative Timeline and Milestones

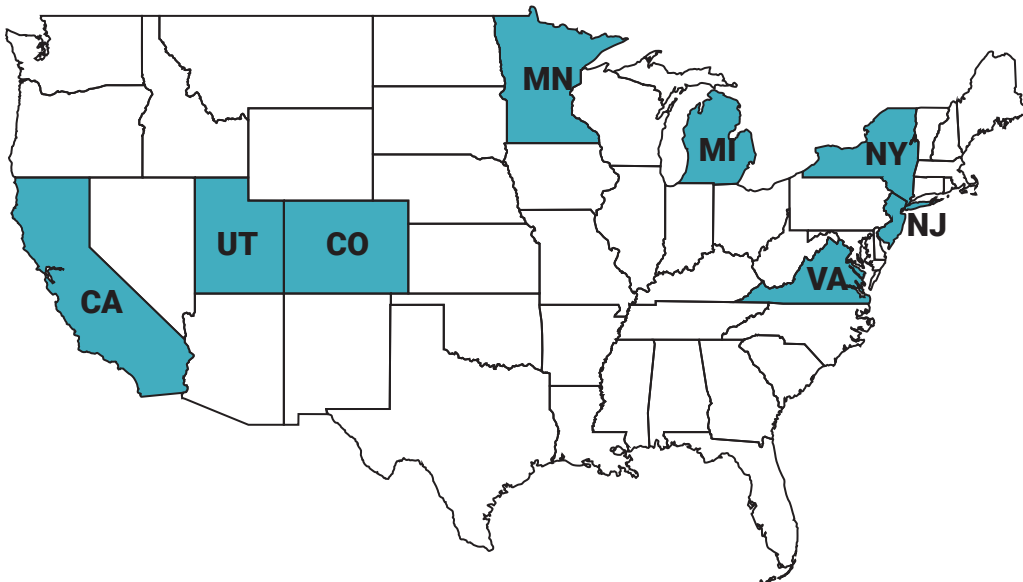


TDC Pilot Activities and Outputs

Initial activities included selection of the pilot agencies (described in Chapter 5), followed by implementation of the TDC Pilot Initiative. That included delivery of the Applied Data Analytics course, coaching, facilitation of TA, and peer learning events (described further in Chapter 6). These activities produced multiple outputs.

First, eight TANF agencies were selected for the pilot initiative. They reflected a range of project types and data analytics capacities as well as geographic diversity (as shown in Figure 4.4)

Figure 4.4 TANF Data Collaborative Pilot Agencies



- CA** California Work Opportunity and Responsibility to Kids (CalWORKs) and Family Resilience Branch
- CO** Colorado Department of Human Services, Division of Employment and Benefits
- MI** Michigan Department of Health and Human Services
- MN** Minnesota Department of Human Services, Economic Assistance and Employment Supports Division with Dakota and Olmsted Counties
- NJ** New Jersey Department of Human Services, Division of Family Development
- NY** New York State Office of Temporary and Disability Assistance
- UT** Utah Department of Workforce Services
- VA** Virginia Department of Social Services

The TDI team also customized and implemented the Applied Data Analytics course, offered 30 months of coaching, and facilitated an array of TA activities including 14 webinars, three cross-pilot-agency conferences, and three “hangouts”—opportunities for pilot agency teams to gather informally online to share their experiences. In addition, a Pilot Reunion was held nine months after the end of the pilot. In all, each TDC pilot agency team produced nine deliverables as part of achieving each milestone in the TDC Framework, described above. Chapter 6 provides more details on these activities.

The TDI team has also produced TA resources available for any organization that collects program data. For example, the team has produced a toolkit for use in building data analytics capacity beyond a single project, with tools and guidance for TANF agencies and other human services staff.² The TDI team also developed a toolkit to guide state and local TANF agencies on how to access, link, and analyze employment data from unemployment insurance (UI) systems for program monitoring, reporting, and evaluation. It may also be useful to other state human services agencies that want to expand their data use, as well as to policymakers interested in supporting improved workforce outcomes.³ A third includes resources that were developed to support TDC Pilot agencies as they implemented their data analytics projects. These resources can also guide other agencies that are exploring or initiating their own data projects.

TDC Pilot Outcomes

The outcomes noted in the TDC logic model described above are progressive, starting with increases in the data analytics capacities of individual pilot agency team members (short-term outcomes) leading to expanded data use by the TDC pilot agencies at the organizational level (medium-term outcomes) and resulting, ideally, in improved employment and well-being outcomes for TANF families (longer-term outcomes).

In the short term, the TDC Pilot Initiative aimed to enhance the data analytics capacity of state and county staff members responsible for administering and improving the TANF program during the 30-month pilot period. Achievement of this goal was reflected in the completion of each pilot agency team’s data analytics project and the increased data analytics capacity of pilot participants. Individual project descriptions are described further in Chapter 6.⁴ Increased individual data analytics capacity, or each pilot agency participant’s learning, can be measured by improved knowledge, improved attitude, and improved confidence of pilot agency participants, and by the development and strengthening of peer relationships among pilot agency teams.⁵

2 [Wiegand et al. \(2023\)](#).

3 [Yang et al. \(2022\)](#).

4 [Office of Planning, Research and Evaluation \(2023b\)](#).

5 [J. Kirkpatrick and W. Kirkpatrick \(n.d.\)](#).

Medium-term outcomes are focused on organizational-level outcomes of TDC pilot agency teams, as reflected in the behaviors and job performance of the teams during and after completion of the TDC pilot. Outcomes could include increased use of data to inform decision-making (including use of data to understand issues of equity) and increased use of data to improve program operations and to build evidence about program outcomes. It could also include ongoing investment to support increased data capacity, such as professional development of existing staff and hiring dedicated analytics staff members. Chapter 7 describes the TDI team's approach to evaluating TA, with a focus on shorter-term outcomes. It also identifies some promising indicators of organizational practices that suggest pilot agency teams are on a path to attaining medium-term outcomes such as sustained data use.

Underlying Principles

The TDI team developed training and technical assistance based on the following principles to support each pilot agency team's learning process in the short term (during the 30-month pilot period) and to contribute to sustained learning in the long term (after the pilot period ended).

- **VALUE AND LEVERAGE THE EXPERTISE OF TANF AGENCY STAFF.** The TDC Pilot Initiative was centered on the skills, interests, and organizational priorities of the participating state TANF agencies. Pilot agency teams conceived of, conducted, and presented their data analyses. Pilot agency team members also served as experts for each other in monthly webinars. The TDI team prioritized creating opportunities for peer exchange.
- **ESTABLISH CROSS-DISCIPLINARY PILOT AGENCY TEAMS TO GROUND DATA ANALYSIS.** Each pilot agency team consisted of staff members from different units in the state's TANF program, such as program, policy, data analysis, and reporting, and across the pilot agency's organizational hierarchy, such as administrators, mid-level managers, and analysts. The intentional mixing of technical (data) staff members with nontechnical (program) staff members yielded an exchange of insights that could contribute to more accurate data analyses and actionable interpretations of results.
- **PROMOTE THE APPLICATION OF A RACIAL EQUITY LENS.** Events in 2020 and the January 2021 Executive Order On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government drew renewed attention to longstanding economic and racial disparities, including within state TANF programs, prompting increased attention to these concerns in program evaluation and program improvement efforts during the TDC pilot.⁶ For example, the TDI team hosted a webinar that featured Actionable Intelligence for Social Policy's Toolkit for Centering Racial Equity and explored positive and problematic practices for using administrative data through small-group discussions and activities.⁷ The goal was to develop actionable strategies to consider

6 [Executive Office of the President \(2021\)](#).

7 [Hawn Nelson et al. \(2020\)](#).

racial equity in each pilot agency team’s day-to-day work and their TDC Pilot Initiative projects. Box 4.2 describes an example of an approach implemented by one pilot agency.

Box 4.2. Pilot Spotlight: Minnesota Pilot Team Examines Racial Equity

Staff members from the TANF program in Olmsted and Dakota counties in southeastern Minnesota, in collaboration with the Minnesota Department of Human Services (DHS), analyzed data about TANF benefit sanctions and the notices that agencies sent to participants who were at risk of receiving a sanction (that is, the withholding of aid or the termination of benefits). Notices of intent to sanction (NOITS) are sent to TANF participants to nudge them into following the program rules.

The pilot team sought to better understand the relationship between NOITS rates and sanction rates and then to explore how NOITS and sanctions are associated with race, language, age, and immigration status. Sanctions cause real hardships to families, and past research has uncovered significant racial variation in women’s likelihood of experiencing sanctions. By focusing on these questions, the Minnesota pilot agency team sought to bring together insights from both state and county TANF agencies and to build on recent efforts in Olmsted and Dakota counties to test new service delivery practices.

In the pilot agency team’s initial analyses, one finding showed that statewide, African American, multiple-race, and American Indian TANF participants were most likely to receive NOITS, accounting for program participation and other demographic factors. In addition, American Indian participants were the only group to consistently receive more sanctions than White participants, regardless of whether participants received a NOITS. After the pilot ended, the pilot agency team planned to complete these same analyses with more recent data. Read more about the Minnesota pilot in Appendix A.

- **CREATE TRAINING CONTENT THAT IS RESPONSIVE TO EACH PILOT AGENCY’S ENVIRONMENT AND OPERATIONS.** During the training, participants applied what they learned to a data analytics project that incorporated actual TANF and employment data rather than generic or synthetic data. Further, the content was adjusted for technical and nontechnical staff. Pilot agency teams shaped the TA via ongoing feedback solicited by the TDI team.
- **EMBED SUSTAINABLE PROCESSES AND TOOLS TO ACCELERATE DATA INNOVATIONS AND SUPPORT TRANSPARENT AND REPRODUCIBLE RESEARCH.** The TDI team created data analytics tools, including detailed instructional code notebooks for key data-processing steps to serve as on-demand resources to be consulted later. They also regularly promoted strategies related to data documentation, staff training, and

communication and dissemination, to help pilot agency teams retain what they had learned and to sustain its application.

Pilot agency teams brought these principles to life during their pilot projects. The pilot initiative was an opportunity for some agencies to shift from business as usual and form different kinds of teams for the purposes of their pilot data analytics projects. Several drew on staff across units, functions, and disciplines to engage in the pilot initiative.

The New York pilot agency team, for example, as described in Box 4.3, formed a cross-functional group that included 14 staff members from four different departments.

The Minnesota pilot agency team applied an equity lens to one part of its process in the TANF program, described in Box 4.2, to explore how sanctions are associated with race, language, age, and immigration status.

Box 4.3. Pilot Spotlight: New York's Interdisciplinary Pilot Team

Typically, teams in the New York State Office of Temporary Disability Assistance collaborated across functions in an ad hoc way and teams with distinct types of expertise usually worked independently. For participation in the TDC Pilot Initiative, the office formed a cross-functional team that included 14 staff members from four different departments. That team included researchers, programmers, employment experts, and operational staff members who worked regularly with counties.* The NY pilot agency team established clear roles and goals, met monthly, and encouraged communication and cooperation, which built trust and allowed them to ask deeper questions about the pilot project data and analysis. The approach also presented challenges, such as the need to communicate more often and openly; different perspectives sometimes led to slower decision-making. Nevertheless, the pilot agency team recognized that incorporating different perspectives also led to better decisions.†

NOTES: *[Office of Planning, Research, and Evaluation \(2023b\)](#).

†[Yang \(2022\)](#).

CHAPTER 5

PILOT SELECTION PROCESS

The TANF Data Collaborative (TDC) Pilot Initiative engaged eight pilot agency teams for the 30-month initiative. The pilot agency teams took part in all TDC training and technical assistance activities (TA) and successfully completed all of the project milestones, culminating in a data analytics project or projects, a presentation, and a written report. Key aspects of the selection process (as detailed below) were crucial to ensuring that participants were well positioned to be successful. This section describes that process in detail and may be helpful for agencies and others interested in learning how to select organizations that are well positioned to benefit from a pilot experience.

At the beginning of the pilot initiative, the TANF Data Innovation (TDI) team that led it anticipated several potential challenges that could limit its success: (1) it could be difficult to keep pilot agency teams engaged given their other priorities, (2) pilot agency teams might not have access to the data they needed and might spend the whole 30 months trying to access data, and (3) pilot agencies might not have other pieces in place that would allow them to fully take advantage of the pilot TA (such as achievable projects, a baseline level of data analytical capacity and support from leadership). Considerable effort went into designing a rigorous pilot selection process to ensure that pilot agencies were set up for success.

The pilot selection process consisted of the following steps: (1) development of selection criteria and creation of a self-nomination package, (2) promotion of the pilot initiative and opportunity, (3) review of nomination packages, and (4) follow-up discussions with nominees.

Developing Selection Criteria

The TDI team identified four desired qualifications for potential pilot agencies, with the goal of finding agencies at the right level of readiness so they could fully participate in an intensive pilot experience:

- **GOALS AND POSSIBLE PROJECTS WELL ALIGNED WITH INITIATIVE GOALS.** This criterion was meant to ensure that the pilot agencies were seeking to answer questions that could be answered with administrative TANF and employment data, with the goal of improving program operations and ultimately improving the lives of families participating in TANF.

- **ACCESS OR NEAR ACCESS TO TANF AND EMPLOYMENT DATA.** Gaining access to data can take many months or longer. This criterion was meant to ensure that most of the pilot initiative could focus on other key stages of each pilot agency's data analytics project, rather than solely on the process of accessing data.
- **DEMONSTRATED INTEREST AND COMMITMENT.** Given all the priorities that TANF agencies manage, the TDI team wanted to make sure that the pilot agency teams understood the commitment they were being asked to make and would make the pilot initiative a priority. Therefore, prospective pilot agency teams were asked to demonstrate that they had support from agency leadership; an appropriate team identified to work on the project, including a designated pilot coordinator with significant time to devote to the project; and a demonstrated commitment to using data. Self-nominated agencies could demonstrate their commitment to using data in several different ways. For example, an agency could (1) include references to its current data use (such as dashboards or research efforts), (2) demonstrate that agency staff members have time to devote to accessing, processing, and analyzing data, or (3) have staff members attend relevant in-house or external trainings, such as the TDC Applied Data Analytics course.
- **MEDIUM TO HIGH DATA ANALYTICS CAPACITY.** This criterion was meant to ensure that pilot agency teams would have enough baseline capacity to complete a data analytics project and benefit from the types of TA that were offered through the pilot initiative.

Creating a Self-Nomination Process and Promotion of Pilot Initiative and Opportunity

The TDI team and the Administration for Children and Families (ACF) developed a nomination process that any interested state, territory, or county TANF agency could complete to be considered for the 30-month pilot initiative. It was important to make the process (1) transparent—that is, easy for people to understand what the opportunity was (and the commitment required from them); (2) low-burden—that is relatively easy to apply via a structure that was simplified and flexible; and (3) accessible—that is that people knew about the opportunity. The call for nominations described the TDC Pilot Initiative, including the benefits of participation, recommendations for pilot agency staffing, planned pilot activities, and the level of commitment required. The goal was to be transparent and to communicate shared expectations so that prospective pilot agency teams could make informed decisions before committing to participate.

To reduce the burden on interested agencies, a uniform application package was not required. ACF circulated a general call for nominations, including self-nominations, to identify interested agencies. Nomination letters included information about organizations' proposed projects and capacity to participate.

The TDI team advertised the pilot initiative widely to encourage TANF agencies that might be a good fit to apply. The TDI team created a variety of promotional materials, including content for the TDI project website, a video, a two-page flyer, and a postcard, to inform people about and promote the opportunity provided by the TDC Pilot Initiative. (See Appendix B for some examples of the promotional materials.)

Information about the pilot initiative was distributed in several ways. In addition to being posted on the TDI project website, promotional materials were disseminated by email to a wide audience through TDI partner email lists. In addition, the director of the Office of Family Assistance, one of the federal sponsors of TDI, sent out a “Dear Colleague” letter to state administrators, to alert them about the call for nominations. The TDI team also presented the pilot initiative, its benefits, and expectations in various venues (webinar and conferences) throughout the summer and fall of 2019.

As a result of these promotional efforts, twenty-two agencies (nineteen states, one territory, and two counties) submitted nomination packages.

Review of Nomination Packages

A six-member review team made up of TDI project leadership and senior researchers evaluated the nominations. Each nomination package had two reviewers, and each reviewer ranked a given nomination package along a low, medium, and high rating scale on each selection criterion. The six-member team discussed the criteria and ratings scale in advance to ensure a shared understanding and inter-rater reliability. Out of this process, 11 pilot agencies with medium to high ratings were selected to move on to follow-up discussions. The goal was to ultimately select and engage eight agency teams during the 30-month pilot period.

Follow-Up Discussions

The review team held follow-up discussions with the 11 finalist pilot agencies. To allow the review team to make final determinations while minimizing the burden for potential sites, these discussions focused on clarifying any areas of confusion from the review of nomination packages, rather than on producing uniform information on project choice, scope, budget assumptions, and proposed staff. For example, determining whether agencies had access to employment data was one of the most difficult criteria to assess. The follow-up discussions were also a means to further assess fit for the pilot.

Final Pilot Selection

After an intensive, three-month review process, the review team selected eight pilot agency teams and two alternates in December 2019. As described in Chapter 4, the agencies reflected geographic diversity as well as a range of project types and data analytics capacities.

CHAPTER 6

PILOT INITIATIVE IMPLEMENTATION

This chapter describes the structure for managing and staffing the TANF Data Collaborative (TDC) Pilot Initiative and how the TANF Data Innovation (TDI) team leading the pilot designed and implemented a variety of learning strategies that were reinforced by milestones and tools.

TDC Pilot Initiative Components

The pilot initiative consisted of four interdependent components—including direct funding, training and technical assistance (TA), coaching, and peer-to-peer learning—that supported TANF pilot agencies in their efforts to create and execute data analytics projects. While each component described below could independently build data analytics capacity, the TDI team intentionally integrated the four into the pilot initiative to accelerate pilot agency team members' learning.¹

Direct Funding

Each pilot agency team received payments totaling up to \$175,000 from the TDI team to support staff time to plan and implement a data analytics project and to participate in TDC Pilot Initiative activities such as webinars and annual cross-pilot conferences. The payments were made in three to four installments that corresponded with each pilot agency team's achievement of pilot milestones.

In reflection conversations with pilot initiative participants in January 2022, the TDI team learned that each pilot agency team used its funding differently.² For some, it was critical to pay for staff members (whether new or existing) who made it possible for the team to complete the project work and participate in the TA activities. Other teams had originally planned to use the funds to pay for travel across their states to discuss and display what they were doing (for example, their research questions, analytic methods or model development, and preliminary findings), but those plans were cancelled due to the

1 [Wavelet, Rubino, Morris, and Garner \(2022\)](#).

2 Throughout the pilot, feedback from participants was collected using OMB approval under OMB Control Number: 0970-0401 (Generic Clearance for the Collection of Routine Customer Feedback).

pandemic. A few pilot agency teams noted that it wasn't necessarily the amount of funding they received or the costs the funding covered that mattered. As one participant put it, the funding "conveyed seriousness and commitment" and reinforced the agency's commitment to developing its research and evaluation capacity.

Training

One of the first learning opportunities for the eight pilot agency teams was the TDC Applied Data Analytics (ADA) course. The ADA course laid the foundation for each pilot agency team to design and conduct its own data analytics project. The training provided hands-on instruction for using microdata in SQL and R for the following tasks: data management, record linkage, data visualization, and machine learning. In keeping with the pilot initiative's learning-by-doing approach, the training provided an opportunity for hands-on, real-world practice with TANF and employment data. This included defining and completing a project with course participants from other pilot agency teams while building peer relationships. The ADA course gave the pilot initiative credibility because it was an "off the shelf" product that had been used previously by many state and federal agencies.

The TDI team recognized that competing pressures on pilot agency team members' attention and time could affect their ability to fully participate in the pilot (for example, during the pandemic, the need to balance work/life adjustments and staff furloughs with virtual attendance at ADA training sessions and other pilot milestone requirements). To mitigate these tensions, project managers on the TDI team set clear expectations for pilot agency teams across roles and units, so interactions with each team were coordinated and customized.

Training and Technical Assistance

The pilot consisted of a variety of training and TA activities to promote learning. The specific TA activities and the mode in which they were delivered were customized to each pilot agency team's interests, learning styles, and needs. Delivery modes ranged from large and small group settings across pilot agency teams to one-on-one meetings with individual pilot teams.

Monthly interactive, instructional webinars, mapped to the TDC Framework, were central to the learning-by-doing approach (detailed further in Appendix C), with agendas that combined instructional content with small group discussions, problem-solving exercises, and other activities. The TDI team also collected feedback from participants on webinar topics and content and used their input to adjust the design and delivery of subsequent events. For example, one design change was to designate breakout groups by type of role on a pilot agency team, so participants could choose topics that fit their needs and interests, such as a discussion of technical issues or management issues. This enabled learning that was customized to all webinar participants.

In addition to formal webinars, the TDI team hosted online office hours that were open to any pilot agency team members interested in learning the R programming language and

basic statistics. These exchanges were informal, driven by the questions of attendees that were often related to the specific pilot data analytics project they were working on.

The content in the webinars and office hours was reinforced by coaches from the TDI team who were assigned to support each pilot agency team. The coaches brought expertise and experience in conducting data analytics projects and using insights to inform decision making. See below for more details on this instrumental TDI team role.

Peer-to-Peer Learning

The TDI team also provided formal and informal opportunities for pilot agency team members to connect with each other, grow their professional networks, and learn. Formal events included the annual cross-pilot conferences, at which participants could meet and discuss their experiences with data analytics. (Two of the conferences were held virtually after the in-person March 2020 Project Kickoff in Washington, DC, due to the COVID-19 pandemic.) In addition to hosting formal virtual events for learning and networking, the TDI team created virtual spaces called “pilot hangouts” for pilot agency team members to get to know each other professionally and personally. These meetings offered a time and space for pilot agency team members to have a little fun, drive the agenda, and discuss what mattered to them. In addition to hosting events, the TDI team provided access to an online messaging application that pilot team members could use to share ideas, ask each other questions, and learn from each other. Although it was not as popular as anticipated and was used occasionally, mostly for discrete coding-related questions, it remained available to all pilot agency team members throughout the pilot as a complement to the pilot peer exchanges.

During and after peer-to-peer events, pilot agency team members expressed how valuable it was to have the opportunity to learn from each other. A Michigan pilot team member shared what she learned by talking to the Colorado pilot agency team at the 2020 Project Kickoff:

We were telling [them] about our high application denial rates. And they asked us what our symbol was on the application: “Do you use the cash sign, or do you use the family sign?” We did have a cash sign, and they said a few years ago, they changed their cash sign to a sign of a family and a handicap symbol.... If you’re looking at an application, and you don’t know anything about the [TANF] program, and you see a cash sign, and you need help, why wouldn’t you apply, right? You think it’s just cash, versus it’s cash for families, or pregnant women, or people with disabilities. [Colorado] said they saw a double digit decrease in the number of applications that were denied when they put this measure in place. So, we came right back [to Michigan] and we asked if we could do it ... and we were allowed to make that change. And that was directly related to the conversation we had with Colorado.

A Virginia pilot agency leader described similar sentiments:

There’s a lot of satisfaction in finding that you’re not the only one that does this [work]. You know, there are fifty other states that all have the same challenges, have the same issues that they have to deal with. Talking with them about how they deal with some of those challenges is really useful.

Management and Staffing of the Pilot Initiative

Designing and implementing a learning-by-doing approach required the time and attention of TDI team members serving in several roles. As described in Table 6.1, that included a steering committee, coaches, a technical bench of experts, and ADA course instructors.

Table 6.1. TDC Pilot Initiative Staff Resources

RESOURCE	PURPOSE
Steering Committee	To provide regular executive oversight of pilot design and implementation
Coaches	To be a source of expertise and experience in conducting data analytics projects and using insights to inform decision-making
Technical Bench	To provide on-demand advice on topics related to data, research methods, and equity to pilot agency teams
Applied Data Analytics course instructors	To teach the ADA course and offer support to the pilot agency teams as they completed their course assignments and projects.

MDRC convened the TDC Pilot Steering Committee to ensure oversight of the pilot initiative. The steering committee, made up of executive leaders from Chapin Hall and MDRC as well as the four pilot coaches from the TDI team, set the tone and expectations of learning by doing. Notably, the committee made the decision to have the pilot agency teams handle, clean, prepare, and analyze their data, rather than sharing those tasks with the coaches. The committee used the TDC Framework to organize the topics and instructional content included in the monthly webinars, and it informed the design and use of the nine project milestones, which broke the data analytics process into small, manageable steps.

Starting in March 2020, the steering committee met monthly to discuss strategy and ideas to support continuous improvement and learning by the pilot agency teams as well as by the steering committee itself. The committee used an internally developed monthly dashboard to report the progress of the pilot agency teams to the project’s federal funders and to keep the teams’ activities and needs at the center of committee meetings.

Discussion topics included staffing issues, such as pilot agency team makeup, team members' availability, and their level of engagement. For example, the steering committee discussed and developed a solution to one pilot agency team's staffing challenge caused by the COVID-19 pandemic (described in Box 6.1).

Box 6.1. Creative Solution to Staffing Challenge

While the TDI team followed a formula for training, staffing, and implementing the TDC Pilot Initiative, each pilot agency was different so the project benefited from being flexible. For example, the COVID-19 pandemic caused a hiring freeze in Michigan, which meant the pilot agency team was unable to hire staff members to complete its data analytics project. The TDC Pilot Steering Committee helped devise a staffing solution: Graduate students from the Harris School of Public Policy at the University of Chicago were invited to join the pilot agency team and create code that the team would be able to use moving forward. This staffing innovation made it possible for the necessary data work to be completed so that when the hiring freeze was lifted and the pilot agency team *could* hire, a foundation existed for them to build on.

While the steering committee provided overall direction for the pilot initiative, staff members across the TDI team who directly interacted with the eight pilot agency teams were responsible for implementing the TA activities. This included some TDI team members who served as the ADA course instructors and supported training participants as they applied what they learned to their course projects.

As noted earlier, each pilot team had a dedicated coach from the TDI team who brought considerable experience and expertise in managing and conducting data analytics projects and using the results to inform decision-making. Coaches were mid- to senior-level staff members who guided the individuals on the pilot agency teams who were responsible for completing the data analytics project work. In early 2020, after the pilot agencies were selected, the TDI team assigned coaches based on the nature of each pilot agency team's proposed project and learning agenda and how it aligned with a coach's expertise. Matching coaches and pilot agency teams increased the likelihood of shared learning.

Pilot agency teams met regularly with their coaches in video calls, during which they could ask questions about their project work. Coaches also reinforced what pilot agency teams learned from other activities such as the ADA course and the monthly TA webinars. The relationships coaches developed with their pilot agency teams facilitated further individualized support as the teams made progress toward each pilot milestone.

In addition to the steering committee, the TDI team launched the Coaches Corner in February 2020, a monthly meeting of the four coaches supporting the eight pilot agency teams. Similar to case conference calls used in human services, the Coaches Corner provided a dedicated space where coaches could exchange insights, jointly solve problems,

and strategize together. For example, they shared ideas on how to effectively support pilot agency teams with mixed levels of knowledge and skills, particularly in R programming, which led to the creation of R office hours for beginning R users. The Coaches Corner also fostered a sense of camaraderie among the coaches and ensured consistent communications and expectations across all pilot agency teams.

When a pilot agency team had questions or interests related to more technical or advanced analytics or evaluation methods, they also had on-demand access to a Technical Bench of staff members from the TDI team with expertise in such things as how to create a longitudinal file, define a cohort, and conduct analyses ranging from linear regression to predictive modeling and propensity score analysis. The Technical Bench collaborated with the pilot agency teams to leverage each team's strengths, address any barriers, and help pilot agency teams maintain momentum to complete their pilot projects.

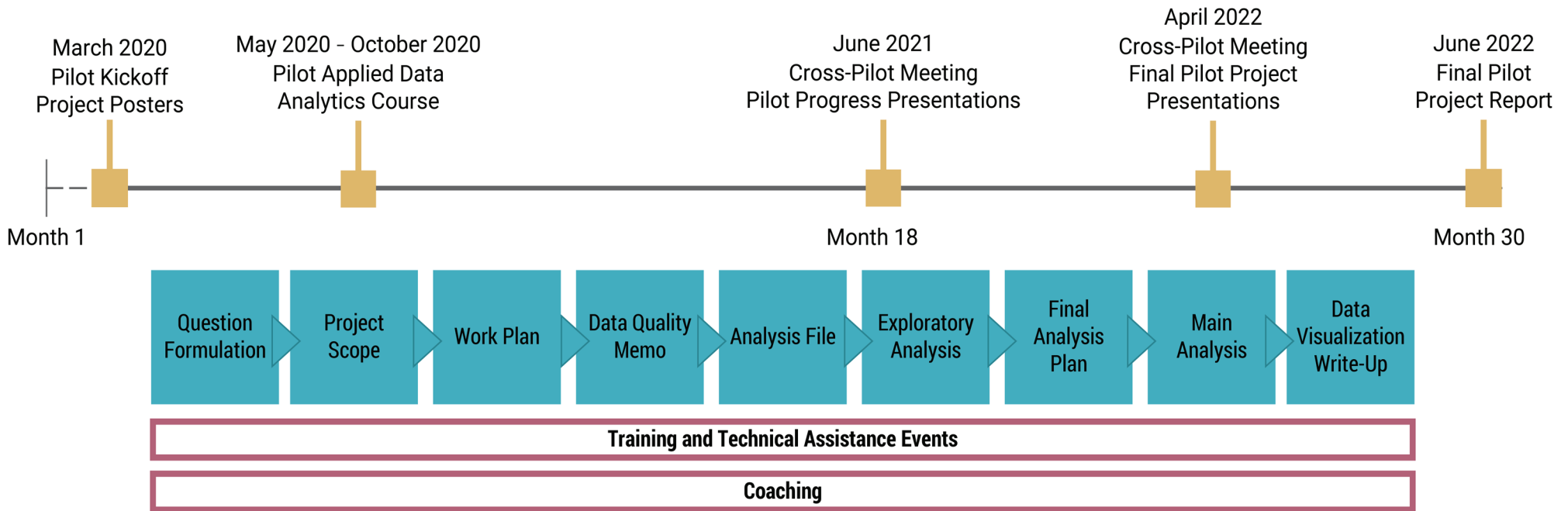
Strategically Timed Milestones and Deliverables

Regardless of a pilot agency team's capacity or research questions at the beginning of the 30-month pilot period, each team demonstrated learning by reaching common project milestones and completing project deliverables over the course of the pilot. Described in Figure 6.1, the pilot milestones and deliverables included goals and outlined expectations for each pilot agency teams' work.

All eight pilot agency teams completed all nine milestones despite the pandemic and its disruptions to pilot agency team members' professional and personal lives. And with a few exceptions, the deliverables were submitted on time. The strategically timed milestones offered several benefits. They broke down the data analytics process into small, accessible steps. Milestone 2, for example, described in Box 6.2, helped teams define the scope of their projects. Having milestones also helped teams generate momentum as they worked toward completing their deliverables and meeting the deadlines on the same schedule. Hitting each milestone also fostered a sense of accountability among pilot agency teams, who were often pulled in many directions due to competing job priorities. Milestones also offered key moments for pilot agency teams to pause, take stock, and reflect on their progress, as well as to document their work. Achieving these milestones marked each team's progress across the five phases of the TDC Framework, as pilot agency teams demonstrated what they were learning and doing.

By the end of the TDC Pilot Initiative, pilot agency teams had deepened their analyses of their research questions, documented their work, and examined how they had answered their research questions. The final milestone, along with the Final Summary Report and Briefing Plan (outlined in Appendix C), offered pilot agency teams an opportunity to synthesize what they had learned and why it would matter for a variety of audiences. Teams were expected to produce three final deliverables, each customized to a different audience: a narrative summary report with visualizations, a one-page executive summary with graphics and limited text, and a presentation of report results that each team presented at the April 2022 cross-pilot conference.

Figure 6.1. TANF Data Collaborative Pilot Initiative Timeline and Milestones



Box 6.2. Milestone 2: Defining Project Scope

Articulating the research question or questions that would be the focus of each pilot agency team’s data analytics project was one of the earliest milestones in the TDC Pilot Initiative. Several pilot agency teams were interested in answering ambitious—sometimes causal—questions that could not be answered using the identified analysis methods and data. Pilot agency teams, coaches, and members of the TDC Technical Bench spent several months during and after the TDC Applied Data Analytics course in the summer of 2020 trying to reach a shared understanding of which research questions could be answered. Together, they either adjusted project questions to be ones that could be answered more easily, or they identified and implemented methods that were more appropriate for a particular question. Identifying the question to answer (*what*) using which methods (*how*) was an ongoing and iterative effort throughout the 30-month pilot period.

Learning Tools and Materials

The TDI team provided a variety of resources such as checklists, guides, and templates to assist pilot agency teams as they completed their data analytics projects. The TDI team leveraged its professional experiences, education, and understanding of the pilot agency teams’ needs to develop and use these resources throughout the pilot period. For example, the TDI team created detailed instructional code notebooks for key data-processing steps, which could serve as an on-demand resource during and after the pilot. These notebooks also demonstrated documentation best practices that pilot agency teams could incorporate into their projects. A slide deck and accompanying handouts for each webinar provided additional instructional content, glossaries, and activities for future reference. Some of these resources are publicly available in the TDC Pilot Resources Toolkit.

Pilot Descriptions

The pilot agency teams all started their projects based on what they had proposed during the selection process. Some teams had more experience manipulating and analyzing administrative data than others, as well as deeper skill sets and larger data teams. Even so, at the beginning of the 30-month pilot, the TDI team started working with each pilot agency team wherever they were in the data analytics process. As a result of having different starting points, pilot agency teams reached different ending points, as described briefly in Table 6.2. As described in Box 6.3, more information about each pilot agency team’s experience during the pilot initiative and their projects is available.

Table 6.2. TDC Pilot Project Descriptions

PILOT	DATA ANALYTICS PROJECT
California	<p><i>To integrate TANF program and analytics staff to investigate questions about the role of place in TANF participation and outcomes.</i></p> <p>The team successfully advanced work that created a linked TANF and wage analytics file and ran fixed and random effect models to understand the relationship between TANF participation and stable wage outcomes, while controlling for group-specific and individual-specific effects.</p>
Colorado	<p><i>To understand whether providing supportive payments to address employment barriers could increase employment among TANF participants within a year after leaving the TANF program.</i></p> <p>The team successfully used an approach called “propensity score matching” and found a positive and statistically significant relationship between receiving a supportive payment in the last period before a participant leaves the TANF program and two employment outcomes.</p>
Michigan	<p><i>To bring TANF analytics work inside the state department and understand why the TANF application denial rate was higher in Michigan than in other states.</i></p> <p>The team succeeded in hiring an internal data analyst, uploading their TANF program data to a secure, cloud-based computing platform, and answered many of their initial questions about the most common denial reasons and how denials vary by county.</p>
Minnesota	<p><i>To forge a county/state collaboration focused on answering questions related to TANF benefit sanctions and the notices that county agencies send to participants who are at risk of receiving a sanction (that is, the withholding of aid or the termination of benefits).</i></p> <p>The team successfully generated a specially crafted data set that was repeatedly analyzed to better understand the relationship between race or ethnic identity and the chance of being sent a warning of potential sanction and the likelihood of receiving a sanction.</p>

(continued)

Table 6.2 (continued)

PILOT	DATA ANALYTICS PROJECT
New Jersey	<p data-bbox="479 378 1404 514"><i>To understand families moving from emergency placements (in shelters or motels) to Temporary Rental Assistance, which provides a monthly housing voucher and assistance with move-in costs such as a security deposit and first month's rent.</i></p> <p data-bbox="479 535 1404 640">The team successfully built a longitudinal dataset to analyze the percentage of families who took up Emergency Assistance services in the months following emergency shelter placement.</p>
New York	<p data-bbox="479 682 1404 787"><i>To create a flexible platform for providing access to longitudinal data for evidence-building, program analysis, and program planning for TANF and other programs.</i></p> <p data-bbox="479 808 1404 913">The team successfully developed a statistical model to predict who would be a long-term participant in their TANF program and continued to refine the model by removing sources of bias.</p>
Utah	<p data-bbox="479 955 1404 1018"><i>To understand characteristics associated with individuals returning to the TANF program after having left the program.</i></p> <p data-bbox="479 1039 1404 1144">The team successfully created three cohorts of families but noticed some of the cohorts had missing data, so the team identified strategies to address data missingness to continue their efforts.</p>
Virginia	<p data-bbox="479 1186 1404 1291"><i>To develop analytical tools to help TANF case workers customize education- and employment-related services to increase the likelihood of participants' labor market success after they leave the program.</i></p> <p data-bbox="479 1312 1404 1480">The team successfully investigated which demographic characteristics, household compositions, receipt of other public benefits, and past education- and employment-related activities could predict success, and how to construct an unbiased predictive tool using such variables.</p>

SOURCE: [Office of Planning, Research, and Evaluation \(2023b\)](#).

Box 6.3. TDC Pilot Projects and Experiences

MDRC co-authored [profiles of each project](#) in the TANF Data Collaborative Pilot Initiative, in partnership with the eight participating pilot agency teams. Each profile summarizes the data analytics projects undertaken by participating agencies. The two-page abstracts provide project-specific details for each pilot, including the research questions, data landscape, approach and research methods, and initial findings and next steps. Each profile also includes an overview of the state TANF program.*

In addition, a [nine-minute video](#) features staff members from the California, Colorado, Minnesota, and Virginia TANF agencies reflecting on their challenges, accomplishments, and general experiences during the pilot initiative. In particular, they describe their research questions and discuss building data capacity, integrating datasets, networking with other states, increasing collaboration between state and county agencies, learning new technical skills, and the benefits of being able to draw from diverse skillsets, all within the context of the TDC Pilot Initiative.†

NOTES: *[Office of Planning, Research, and Evaluation \(2023b\)](#).

†[Office of Planning, Research, and Evaluation \(2023a\)](#).

CHAPTER 7

REFLECTIONS ON EFFECTIVENESS

The primary goal of the TANF Data Collaborative (TDC) Pilot Initiative, a component of the TANF Data Innovation (TDI) project, was to build the data analytics capacity of state and county staff members responsible for administering and improving the TANF program. This chapter examines if and how pilot agency teams said they benefited from the training and technical assistance (TA) that formed the initiative’s learning-by-doing approach.

An early decision was made by the TDI team not to conduct a rigorous evaluation of the impact or implementation of the TDC pilot. To reliably measure the impact would have required the diversion of significant project resources to an evaluation with a low degree of assurance that the results would be reliable because of (1) the difficulty of developing a rigorous counterfactual research design, and (2) the lack of good measures or data to assess outcomes. (This was before the TANF program needs assessment had developed validated measures.) Instead, resources were directed to more intensive technical assistance. Nevertheless, the TDI team collected information to understand what the pilot agency teams learned and used both during the pilot initiative project period and since it ended in 2022.

Evaluation Framework

While there are various evaluation frameworks for understanding the effectiveness of trainings, the TDI team used the Kirkpatrick Model, the most well-known and utilized model for evaluating training programs and one that is often the basis for other models.¹ The Kirkpatrick Model provides a framework with which to conceptualize the effects of an investment in TA.² It consists of four levels of evaluation that the TDI team applied to the TDC Pilot Initiative.

- Level 1: Reaction. Did pilot agency teams find the TA favorable, engaging, and relevant to their jobs?

1 [Allinger and Janak \(1989\)](#); [D. Kirkpatrick and J. Kirkpatrick \(2006\)](#); [Bomberger \(2003\)](#).

2 [J. Kirkpatrick and W. Kirkpatrick \(n.d.\)](#).

- Level 2: Learning. Did pilot agency teams acquire the intended knowledge, skills, attitude, confidence, and commitment based on their participation in the TA?
- Level 3: Behavior. Did pilot agency teams apply what they learned from the TA when they returned to their jobs? Since TA typically aims to influence or change the behavior of the participants, this level is of considerable importance to understanding effectiveness. Did the pilot initiative TA contribute to the culture of evidence-informed decision-making in the pilot agencies?
- Level 4: Results. Did pilot agency teams achieve targeted, longer-term outcomes (improved employment and family well-being of TANF participants) as a result of the TA through sustained use and ongoing investment in data analytics?

Within the project scope, budget, and available data, the TDI team was able to examine the first three of the four levels of the model. Given the time and resources available within the pilot period, the TDC Pilot Initiative was not intended to rigorously examine whether the TA provided improved longer-term outcomes (level four results). During and after the pilot initiative, the leader of each pilot agency team (the pilot coordinator) and team members provided feedback to the TDI team in a variety of ways. Given people’s natural inclination to give positive feedback to individuals they have worked with, the TDI team made efforts to invite constructive criticism and feedback on areas for improvement. However, these insights are all derived from self-reports that can be biased.³ Pilot feedback, insights, behaviors, and achievements are described below corresponding to the appropriate level from the Kirkpatrick framework.

Level One: Reaction

To understand the pilot team members’ **reactions** to the TA, the TDI team solicited feedback in surveys and interviews during and after learning activities.⁴ For example, the Applied Data Analytics (ADA) course trainers solicited daily feedback from participants on both the conceptual and applied content. These surveys provided real-time feedback that was largely positive and enabled immediate course adjustments. The most common constructive comment was that ADA participants wanted more time on specific topics and more time to go through the programming code—a sign that they were engaged. To complete the course, all pilot agency teams made presentations that demonstrated what content from the course they expected to use in their pilot projects. The most applied concepts were the simpler ones: fundamentals such as how to design cohorts and how to create measures.

³ [Fisher \(1993\)](#); [Colon, Robles, and Sahai \(2001\)](#).

⁴ Throughout the pilot, feedback from pilots and participants was collected using OMB approval under OMB Control Number: 0970-0401 (Generic Clearance for the Collection of Routine Customer Feedback).

Online surveys were used to collect participant feedback after the ADA course, the monthly webinars, and the annual cross-pilot meetings. The survey questions were structured to obtain performance-focused feedback rather than only level of satisfaction.⁵

For example, after monthly webinars, participants answered questions related to the concept or skill that was being discussed. (Appendix C outlines the variety of topics discussed across the 14 webinars.) These questions included whether participants learned something new about the concept or skill, whether they were motivated to use the concept or skill, which aspect of the webinar helped them the most in learning what was taught, and what could have been done better or done differently to maximize their learning experience. While attendance ranged from 20 to 30 attendees for each webinar, the survey response rates were low, and it is not clear whether the responses were representative of all attendees.

Participant feedback was collected from 11 of the 12 webinars and is displayed below. To understand webinar participants' reactions to the content, they were asked, "How well did the training raise your awareness of the topic?" As Figure 7.1 shows, the majority of respondents indicated that the webinar raised their awareness of the specific topic very well.

To understand how likely webinar participants would be to use the content discussed in the webinar, they were asked, "How motivated are you to use concepts/strategies/skills?" As Figure 7.2 shows, the majority of respondents indicated using what they learned in the webinar would be a moderate to high priority.

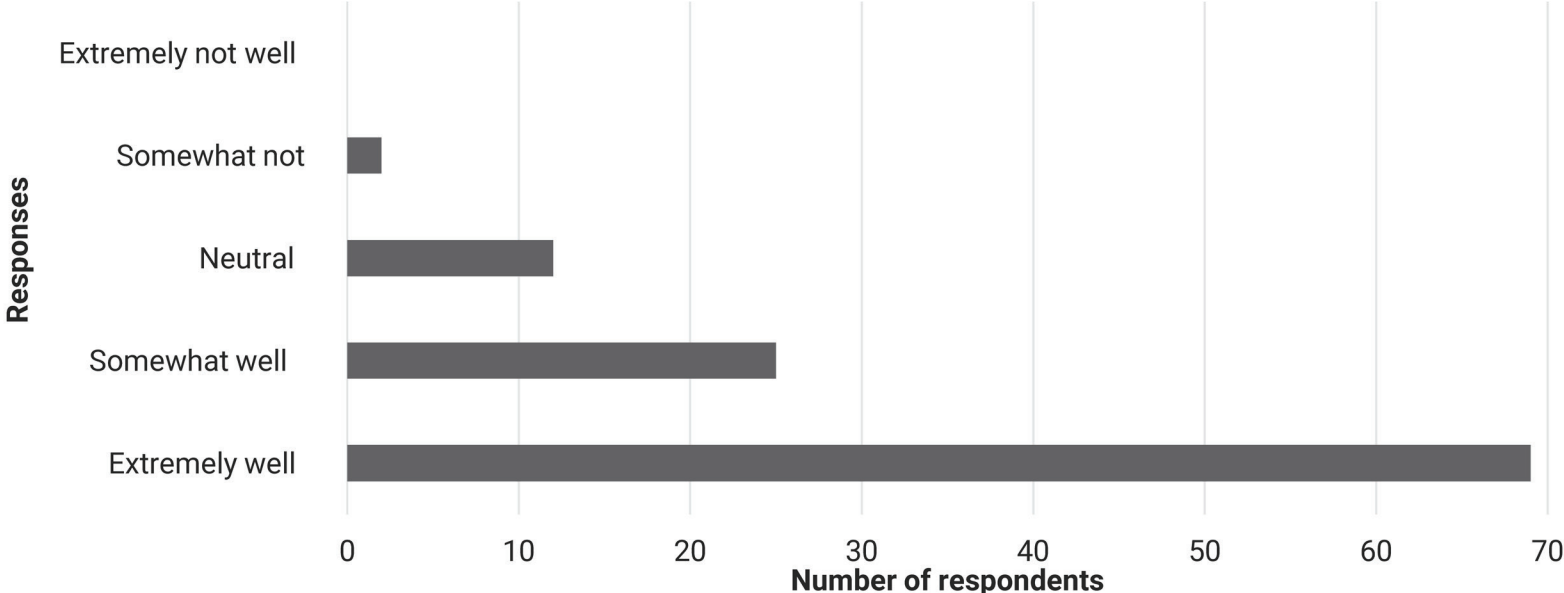
In addition to soliciting feedback immediately following each learning event, select members from all eight pilot teams were interviewed at the end of the pilot in the summer of 2022, and all pilot coordinators were interviewed six months after the pilot initiative ended in January 2023. These interviews provided additional insights into pilot agency team's reactions to the various pilot components.

While each pilot agency team ranked the various pilot components differently, the majority pointed to coaching as the most important component to advance their learning. Pilot coordinators mentioned how the dedicated coaches were "critical," "offered guidance," and "hands-on troubleshooting with coding, assumptions and analysis." Said one pilot agency team member in Michigan, "It was the coach who really kept us moving forward. [We] would not have gone this far."

Second to the coaching support, five pilot agency teams said the opportunity to connect with and learn from peers was most valuable. A Virginia team member described an example of how they learned from other states: "When we were going to do the survey, we learned that Colorado also had a TANF exit survey and they shared that with us. And we got some insights from them about what worked well and what didn't work well and those sorts of things."

5 [Thalheimer \(2016\)](#).

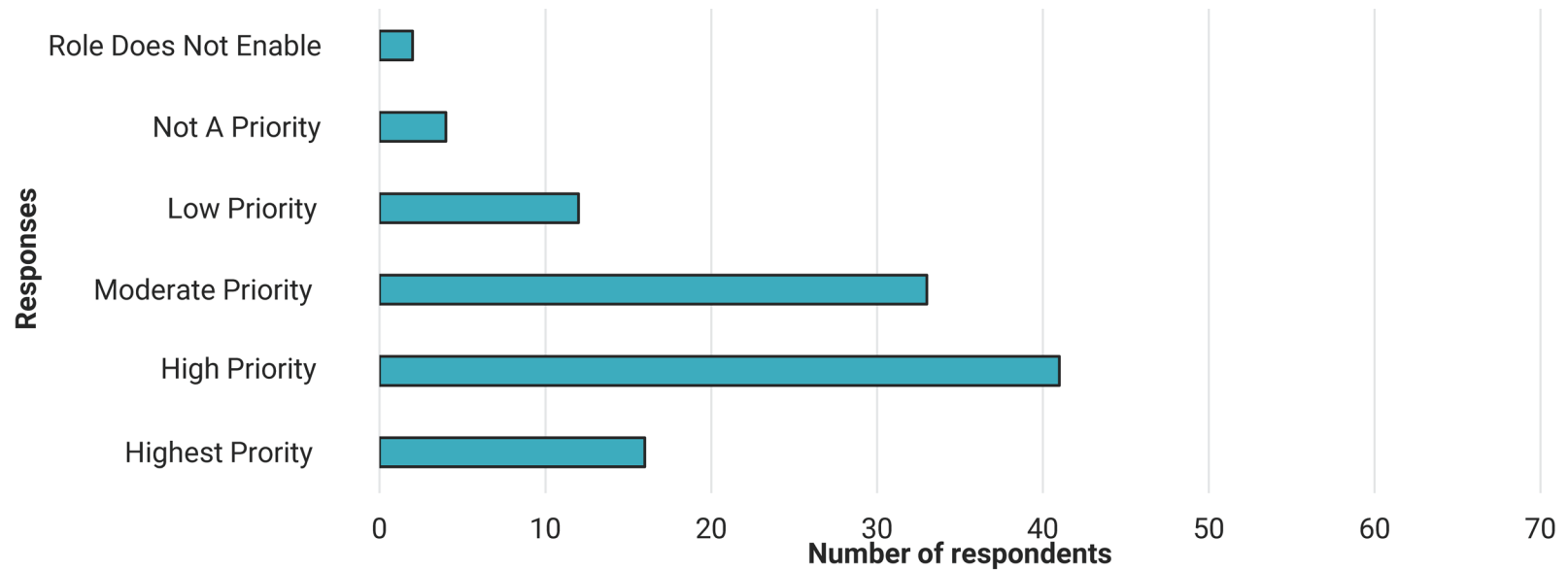
Figure 7.1. Webinar Feedback Survey: Participant Reactions



SOURCE: MDRC calculations based on feedback surveys administered after 11 of the 12 webinars.

NOTES: 108 total respondents out of 440 total invited. Responses reflect 11 of the 12 total webinars. Full Question: “How well did this training raise awareness about [concept]?”

Figure 7.2. Webinar Feedback Survey: Participant Motivations



SOURCE: MDRC calculations based on feedback surveys administered after 11 of the 12 webinars.

NOTES: 108 total respondents out of 440 total invited. Responses reflect 11 of the 12 total webinars. Full Question: “In regard to the [concept] taught, how motivated will you be to use or encourage use of these concepts/skills in your work?”

After coaching support and peer learning, each pilot agency team had different preferences. For some, the on-demand assistance from the experts on the Technical Bench mattered. “It was helpful to get advice on model-building, troubleshooting,” one team member said. For others, the office hours were a plus—providing a space to drop in and learn the basics of statistics and R programming. “We benefited immensely from the R office hours. They were very practical,” one team member noted.

Level Two: Learning

The same online feedback surveys and two rounds of interviews were used to understand what the pilot agency team members were **learning** from the variety of TA activities during the pilot initiative. These questions focused on whether pilot agency team members were acquiring the intended knowledge, skills, attitude, and confidence from their participation in the TA.

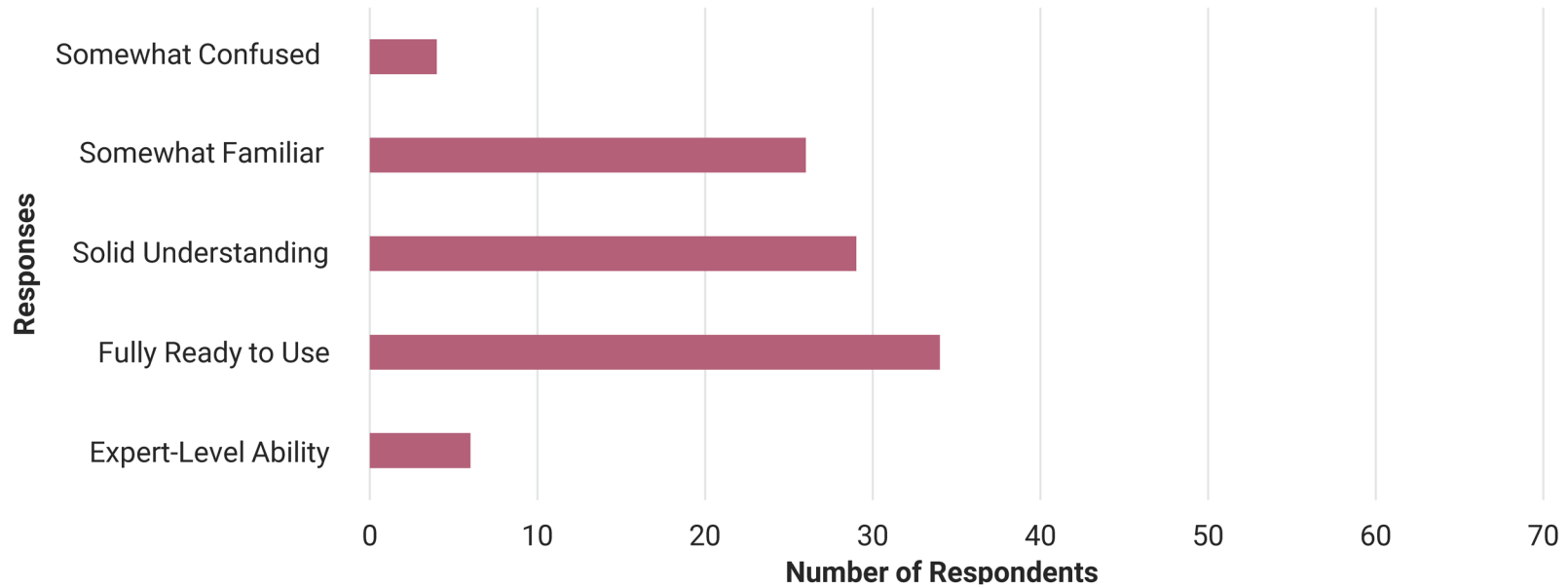
Webinar participants were asked, “After completing this webinar, how well do you feel you understand the concepts of [topic]?” Figure 7.3 shows that the majority of respondents indicated they were “somewhat familiar” or had a “solid understanding” or were “fully ready to use” the webinar content. The distribution of responses across all five answers signals that participants genuinely reflected on their understanding of the topic for each webinar. Participants’ responses to the same question for individual webinars revealed that their understanding varied by webinar topic. For example, 54 percent of respondents indicated being “expert-level” or “fully ready to use” or had a “solid understanding” after a webinar on more complex topics such as propensity score matching, compared with 78 percent after other less complex webinar topics such as understanding data quality practices. These responses align with webinar objectives: *Raise awareness* and highlight use cases for the techniques on complex topics and share best practices that pilot agency teams could *begin using* immediately on less complex topics.

During the interviews, most pilot agency teams mentioned the important foundation that the Applied Data Analytics course provided. Some team members commented on how they continued to reuse the code from the course to help them answer questions or run analyses after the pilot ended.

Another factor that pilot coordinators pointed to was having the confidence to use what they learned. A Virginia team member said doing the pilot project boosted the team’s knowledge and confidence when working with longitudinal data. A Colorado team member said, “We did a really hard project [during the pilot]. Seeing they could do it gave [the team] confidence” and made them “willing to take on more challenging projects.” For one California team member, the hands-on data analytics skills learned during the pilot initiative led to a new career path focused on coding in R and conducting internal research efforts.

In addition to the interviews, the coaches—who interacted most frequently and intensively with their assigned pilot agency teams—offered insights. During monthly Coaches Corner and steering committee meetings, coaches described the status of the pilot agency teams’

Figure 7.3. Webinar Feedback Survey: Participant Understanding



SOURCE: MDRC calculations based on feedback surveys administered after 9 of the 12 webinars.

NOTES: 99 total respondents out of 360 total invited. Responses reflect 9 of the 12 total webinars. Full Question: “After completing this webinar, how well do you feel you understand the [concept]?”

learning and doing, whether they were making progress or not, and any barriers they faced. The discussions included developing strategies for providing additional support, resources, instruction, and if needed, motivation. Some examples of what pilot agency teams shared with their coaches throughout the pilot are described in Table 7.1.

Table 7.1. Examples of Pilot Lessons Learned

WHAT WAS LEARNED?	HOW WAS THIS INFORMATION USED?
How to customize a definition of wage progression	Pilot team used this to develop its definition of wage progression for its pilot project
A useful definition of employment stability	Pilot team applied this to its pilot project
The importance of examining employer context in addition to the TANF participant experience	Helped pilot team recognize some shortcomings in its data file so the team tried to get additional data
How to define cohorts to examine leaver dynamics	Informed the pilot team’s coding approach and analysis
How to create a longitudinal file and define a cohort	Pilot team used this to understand participant dynamics over time
How to use a “What if” tool to allow exploration of model predictions for different subgroups	Pilot team used this to produce a version in R using a flexdashboard package to communicate performance and influencing factors to counties

Level Three: Behaviors

While behavior change is a medium-term outcome, the TDI team was able to observe some demonstration of whether and how pilot agency team members’ **behaviors** changed, and whether they applied what they learned from the TA. Behaviors included the use of information or findings from each pilot agency team’s data analytics project in decision-making related to policies, program operations, or budget; and the continued investment in data analytics in the TANF program or more broadly within the state pilot agency. By applying what they have learned to other programs in their agencies such as SNAP or workforce development programs, pilot agency teams are generating an appreciation for data analytics more broadly. The TDI team again relied on pilot coordinator interviews, discussions at a pilot reunion in April 2023, and coaches’ reflections.

While there was some variation in staffing and level of effort across pilot agency teams, the majority of teams completed the pilot project work themselves and all teams achieved each of the nine milestones. Although pilot agency teams faced challenges and made pivots during the 30-month pilot period, achieving the milestones and other accomplishments demonstrate how they were able to apply the knowledge and skills they had acquired during the pilot period. In addition to the coaches' reflections on each pilot team's performance, pilot coordinators shared how pilot team members have continued to use the skills, knowledge and practices learned during the pilot. In interviews conducted in January 2023, all eight pilot agency teams reported the ongoing use of what they learned from the pilot initiative in the TANF program as well as in other programs at their agencies.

Maintaining New Staffing Configurations

Several pilot agency teams regularly convened configurations of staff members during the pilot project and those meetings have continued since the pilot ended. Before the pilot initiative, the New Jersey pilot agency had just formed a new unit called the Data, Analytics and Research Team (DART), dedicated to data analytics. The aim was to shift the agency's program improvement efforts from relying just on experience to relying on a combination of experience, data analytics, and experts. The TDC Pilot Initiative "help[ed] us catapult our trajectory and lift the DART team off the ground," one team member reported. The DART team members continue to check in with each other weekly to prioritize the workload, given new demands. Additionally, the larger multidisciplinary team of staff members from data, program operations, evaluation and research, and policy continues to collaborate.

A member of the Colorado team said participation in the pilot initiative changed their decision-making process regarding how data is used.

"I think one of the most exciting changes we've made is involving different people in the process of constructing the variables, defining the different levels of the variables, deciding what to do with outliers, deciding what to do with missing data.... All of these decision points that may have been handled just by one person on our team in the past, we've learned through the TDC pilot that it's really beneficial to have more people in the room making those decisions together.... So that is a practice that we've carried into further projects that we're doing now."

In Minnesota, the pilot team consisted of staff members from two county TANF agencies as well as the state agency. Not only have they continued working together, but a colleague from a third county has joined the group.

Ongoing Investment in Staff Skills

To continue to invest in staff skills after the pilot ended, the California pilot agency decided to deliver the ADA course to all research staff members across the state, as described by one pilot agency team member:

"[We are] taking what they learned and spreading it out across the whole state because of the ADA course. [We] will plan on doing this every year from now on. [I]

really feel like it is a great value for the state itself, and shows they are committed to building their staff's skills."

In Minnesota, county staff members have begun to attend the state Department of Human Services R users group, to build on the knowledge that began during the pilot.

Continued Use of Practices, Skills and Knowledge Learned During the Pilot

Based on pilot coordinator interviews, discussions at a pilot reunion in April 2023, and coaches' reflections, most pilot agency teams have continued to use the knowledge, skills, and practices they developed during the pilot. They have adopted new practices and made changes to processes related to conducting a data analytics project. For example, members of the Virginia pilot agency team continue to use the Virginia Longitudinal Data System (VLDS) to answer questions related to TANF benefit effects on participant education levels and to expand their use of the Asset Limited, Income Constrained, Employed (ALICE) threshold to better understand poverty in the state. Additionally, Virginia state researchers now have direct access to the VLDS as a result of changes made during the pilot initiative. This access is expected to facilitate future research.⁶

A New Jersey pilot agency leader said his team now produces one-to-three-page internal white papers to document their data analytics projects. "Every time we do a project, we are building capacity for the future, and we have a methodology of how to express that to other team members." A Michigan pilot agency team member reported ongoing use of the data dictionaries that were built during the pilot. He said the data dictionaries are "instrumental for moving forward."

For the Colorado pilot agency team, some process changes were externally driven. A new state policy required the TANF program to organize new data for reports due in the fall of 2023. In response, one team member explained:

"So, [we are] applying some of what we have learned about how we clean our datasets and prepare data for reports.... One of the reports required answering a causal question, so we applied what we learned from TDC and realized we could not answer it from the quality of data we had. So we started implementing a plan to answer that question in about 4 years."

In addition to conversations with pilot coordinators after the pilot initiative ended, the TDI team hosted a virtual pilot reunion in April 2023. The one-hour reunion gave pilot agency teams a chance to learn what others had been doing since the last time they gathered in June 2022. All eight pilot agency teams were represented across 20 pilot attendees, along with TDI team partners and the project's federal sponsors. The results from a poll taken during the reunion, shown in Table 7.2, demonstrate what they continue to use from the pilot initiative.

⁶ An alternative to the Federal Poverty Measure, ALICE measures the cost of a basic household budget in each county in each state, and to show how many households are struggling to afford it. [United For Alice \(n.d.\)](#).

Table 7.2. Post-Pilot Reunion Feedback

POLL QUESTION	PERCENTAGE OF RESPONDENTS
Briefed agency leaders or managers on your data analytics projects or project findings?	100
Used some documentation tips or practices learned during the pilot?	90
Reached out to other pilot team members with questions or to keep in contact?	80
Used some of the templates or checklists provided during the pilot (project scope, defining research questions, etc.)?	60
Used any of the coding provided during the pilot (from the Applied Data Analytics course, coaching, or monthly webinars)?	55

The use of data analyses during decision-making can depend as much on the timing of the decision as on the timing of the available results. For example, the Virginia and New York teams completed the preliminary development of a model during the pilot and anticipated engaging the users of those models for further refinement after the pilot ended. For one pilot agency, the timing of its analytics coincided with interest from the governor’s office and the legislature in a debate about TANF benefits sanction reform. The preliminary analysis that pilot agency team completed informed the debate. Another pilot team considered what it learned from the TDC Pilot Initiative as it pursues a new program called “Upward Mobility.” This program will help TANF cash participants pay for rent and utilities while they are enrolled full-time in school and pursuing a degree or certificate that is expected to lead to a median wage of \$22.00 per hour.

While it was clear that pilot agency teams were using what they learned for improving the TANF programs in their states, they also described using their data skills and knowledge for other programs inside their agencies. The expansion of data use beyond the TANF program can contribute to an organizational culture that increasingly looks to data for insights and answers during decision-making.

For example, some pilot agency teams described how they are expanding their use of data analytics to programs beyond TANF. Said one Colorado pilot team member:

[We are] creating dashboards to provide updates on one key performance metric this year, which is increasing education credentials for clients across all of our programs, not just TANF, so that staff is using visualization in R and creating dashboards.

A Utah pilot team member described a similar scenario:

“[We are] taking what we have learned from the TDC project to look at everything we touch—not just TANF since it is not the only program we have—and apply the same principles from TDC to...[workforce development programs].”

Others have described how what they learned during the pilot has facilitated their pursuit of other data analytics-related grant opportunities. For example, one team reported using its knowledge of creating a longitudinal infrastructure that outlined spells from the pilot to apply for and win a grant from the U.S. Department of Agriculture/U.S. Census Bureau Supplemental Nutrition Assistance Program (SNAP) Longitudinal Data Project. The team’s new project will involve creating a longitudinal file using food assistance data. Another pilot agency team also successfully applied and won this same grant, which has the potential to benefit TANF recipients who often also receive SNAP benefits.

Maintaining Peer Relationships

One mode of the learning-by-doing approach throughout the pilot was to create spaces for pilot agency teams to engage with their peer teams in formal, structured interactions and informal, casual interactions. A Minnesota pilot team member noted:

“I sat in on California’s team meetings.... On our weekly team coding meetings with Minnesota, we had somebody from California join. We actually still have somebody from Michigan join us. I’ve had conversations with folks from Utah and New Jersey and New York I’m not just saying like we got to chat here and there, but we’ve set up times to talk and really work together. Not on the same problems, but really try to learn from each other and feel like we are part of the collaborative together.”

Since the pilot ended, several pilot agency teams report that they have stayed connected with their peers from the pilot initiative in other ways. They reach out via email with questions and requests for resources or guidance as they continue working on their data analytics projects.

Barriers to Continuing Data Analytics Practices, Skills and Knowledge

While pilot agency teams report ongoing use of their skills, knowledge, and continued interest in the use of data analytics, challenges and barriers still exist. One pilot coordinator in New York, noting the challenge of sustained data analytics, said, “[It’s] not a one and done thing. We have to keep convincing people, explaining the tasks involved with creating value from data.”

Staff availability remains the most common ongoing barrier experienced by the pilot agency teams (an issue that had been noted prominently in the needs assessment). Some pilot agency teams reported that staff members don’t have enough time to spend on data analytics, given their growing workloads, competing priorities, and without a corresponding growth in the number of staff. One pilot agency team faces staff turnover that has implications for knowledge retention. Another team, which had a small number of staff

members dedicated to data analytics during the pilot, hasn't grown as expected since the pilot ended. The research analysis staff members on one pilot agency team were moved to another state agency due to state legislation.

Some pilot agency staff members also report that ongoing skill development remains a constraining factor for making advances in data analytics work. Staff members need to continue to refine their skills in R, SQL, and tools like GitHub to become proficient enough to conduct more analyses.

Other pilot agency staff members reported a variety of challenges that are not unique to their situation. For example, some pilot agency teams lack direct access to their own TANF program data system, while another continues to learn how to load its data into a usable platform. One pilot agency team has access to its data warehouse but the absence of documentation, such as detailed data dictionaries, has slowed its analysis capabilities. Other pilot agencies have experienced major transitions, such as to a new management information system, or to new leadership with different priorities for data use that might pause the current analytics work. Even though pilot agency teams reported barriers to sustaining their data analytics efforts, they also reported the strides they have made since the pilot ended.

Level Four: Results

According to the Kirkpatrick model, level four outcomes are the ultimate goal of the program. The goal of the TANF program is improved employment and family well-being outcomes for TANF participants. Although these are the outcomes for which the effectiveness of the TA delivery should eventually be measured, the TDC Pilot Initiative was not intended to rigorously examine whether the TA provided improved longer-term outcomes given the time and resources available within the pilot period.

Insights and Lessons

- **Combine *learning* through training and TA by *doing* through a pilot initiative to support sustained learning.**

Despite increased government interest in using data analytics for program improvement, TANF agencies continue to face challenges in their efforts to build staff data analytics capacity, including dedicating adequate staff time, accounting for different levels of staff skills and knowledge, and translating training from a classroom environment into daily practice. The TDC Pilot Initiative is a case study in navigating those challenges. Rigorous skills training like the ADA course focused on the fundamentals and offered participants a foundation from which to learn more advanced concepts and skills. But a training course alone would not have been sufficient for the learning to stick. The training, combined with a wide range of TA activities in the context of a pilot, brought the learning-by-doing approach to life. The pilot period, with its schedule of milestones and deliverables, created not only the space but the motivation for pilot agency teams to complete their data analytics

projects because they used their own data to answer questions that mattered to them. The coaches and the technical bench supported pilot agency teams with different learning styles and needs. Custom and advanced statistical approaches were provided on demand using just-in-time methods like one-to-one coaching and access to other experts during the office hours.

■ **Hardwire sustainability objectives into the TA design from the start.**

The TDI team was committed to addressing how pilot agency teams could continue to use the skills and knowledge they learned during the TDC pilot after it ended. From the beginning of the pilot initiative, the TDI team designed and implemented the TA so the eight pilot agency teams would be better equipped to routinely, effectively, and accurately analyze data on their own. This thinking and approach also aligned with the TDC Framework (described in Chapter 4), which illustrates that future data analytics projects emerge from current projects or analyses.

First, the TDI team defined sustainable data use by outlining what knowledge, practices, policies, and infrastructure would be needed for the pilot agency teams (or others) to continue conducting data analytics within their agencies. A toolkit on sustainable data use compiles strategies and tools for government agencies that are building the culture and infrastructure needed to routinely, effectively, and accurately apply data analysis.⁷ It focuses on the sustainable use of quantitative administrative data, with topics ranging from staffing and technology to collaboration and funding.

Second, the team promoted those strategies throughout the TA activities, materials, and coaching. Strategies included data documentation, staff training, and communications with internal program and agency leaders who are decision makers and play a pivotal role in the support of sustained data use. Engaging agency leaders during the pilot data analytics projects was encouraged. In fact, briefing leaders or champions of data use was a milestone each pilot agency team completed at the end of the pilot. Box 7.1 describes the New Jersey pilot agency team's approach to briefing decision makers.

■ **Anticipate and leverage the need to be flexible.**

Just as the pilot agency teams returned home from the project kickoff in March 2020, the COVID-19 pandemic began. As a result, the TDI team had to pivot quickly and redesign all subsequent training and TA activities so they could be delivered virtually through July 2022. The shift to an entirely virtual platform was challenging and had design, implementation, and timeline implications. But there were noteworthy benefits as well.

The timeline for the delivery of the ADA course, for example, shifted from a two week, in-person schedule to two online modules delivered months apart and with curriculum and materials reconfigured accordingly. Implementing those changes took time not originally planned for, as did the need to ensure that pilot agency teams could get access

7 [Weigand et al. \(2023\)](#).

Box 7.1. Pilot Spotlight: New Jersey's Approach to Briefing Decision Makers

With Rutgers University as its partner, the newly created Data Analytics and Research Team (DART) in the Division of Family Development at the New Jersey Department of Human Services regularly convened staff members across a variety of roles to discuss the TDC Pilot Initiative data analytics project. In March 2022 the team discussed the preliminary findings from its analyses as documented in its final TDC Pilot Report. This included presenting policy-relevant insights about the state's Emergency Assistance program (EAP) and the experiences of EAP participants. The pilot agency team noted that the work it did to complete the briefing plan (part of the final milestone) prepared it for the discussion, which strengthened support among key stakeholders for DART's data analytics work and generated ideas and support for the next set of questions or project. Read more about the New Jersey pilot in Appendix A.

to computers with the necessary video and audio technology, sufficient internet bandwidth, and appropriate security in their homes. There was an upside, however. Attending the course remotely offered participants flexibility and the ability to balance the competing demands of their work and home lives.

Similarly, all the pilot coaching sessions and various TA activities had to be delivered virtually during the entire 30-month pilot period. To counter the very real dynamic known as "zoom fatigue" (the inevitable dread of hours spent interacting on a computer screen), the TDI team deliberately created time and space for informal, interpersonal exchanges that were more about connecting with each other than about the instructional content. The virtual approach also broadened the reach of the TA, since more staff members from the pilot agencies could join the virtual events and gain exposure to the activities and the topics discussed. This also helped build support internally for the projects.

COVID-19 travel restrictions also prevented pilot agency teams from presenting in person on panels with their peers at national conferences. But when the teams presented their project reports at virtual cross-pilot conferences, more leaders, managers, and staff members beyond the pilot agency teams could tune in to learn about the projects. And they did, further cementing support for the pilot initiative while expanding their own understanding and appreciation of what more robust analytics capacity could accomplish.

- **Promote equity in data analytics with a strong plan from the beginning, and with an ongoing, deliberate focus.**

As racial equity received more attention across the country in 2020, the scope of the pilot projects had already been largely established, making it challenging to fully incorporate equity concerns. To be sure, some of the analyses pilot agency teams conducted were already exploring equity dynamics. For example, the Minnesota pilot agency team examined

how different racial and ethnic groups experienced their TANF program and specific policies, as described in Chapter 4. Other pilot agency teams' projects offered foundations for future equity-related analyses. For example, the California pilot agency team's efforts to understand the relationship between TANF participation and stable wage outcomes could be expanded to understand wage growth by race and ethnicity.

Although the TDI team hosted TA activities to understand equity issues as described earlier, the team recognizes that there is more work to be done to promote the application of an equity lens in data analytics. For example, equity topics and issues should be part of the training curriculum and TA activities by design and from the beginning of a data analytics capacity building initiative. This means describing the equity focus when the opportunity is being promoted and setting clear expectations: that the research question will be equity-related, that the data necessary to answer that question can be accessed, and that the organization or program can demonstrate its readiness to discuss equity topics and concerns.

■ **Design to enhance participation and engagement.**

At every stage in the design process, from pilot agency team selection to planning peer interactions, the TDI team focused on clearly communicating and setting expectations, building trust with the pilot agency team members, and creating events designed to encourage participation. These strategies made it easier for pilot agency teams to see the benefits of participating, which in turn contributed to their ongoing engagement in the process.

From the first announcement of the pilot initiative, the expectations for participation were plainly outlined. Materials such as flyers and postcards promoting the pilot initiative were distributed and TDI team members presented at several conferences in 2019 to talk to prospective pilot agency teams. The materials described the benefits of participating and expected commitment, and even recommended the composition of an agency's pilot team to maximize learning and deepen strategic partnerships within the agency. Transparent and repetitive communication of this information attracted motivated agency teams to submit their self-nominations.

Regardless of the activity (for example, monthly webinars, office hours, or hangouts), the TDI team considered how to get attendees to interact with each other. This began at the in-person 2020 kickoff event, with a variety of activities that encouraged pilot agency teams to begin sharing with their peers their experiences with data analytics. One activity was a "gallery walk," where kickoff participants looked at posters depicting each pilot agency team's proposed data analytics project including the research question, the data, and the methods for completing it. The walk enabled pilot agency teams to discover how their peers were approaching similar issues (for example, the intersection of TANF and housing or childcare). Teams were able to ask questions and offer feedback, which helped establish the foundation for peer-to-peer learning.

Active participation was encouraged throughout the pilot period via large or small group discussions, polls, or Q&As in the webinar chat. Coaches were often facilitators of events and since they were more familiar with their pilot team members, they could invite individuals by name to join the discussion or share relevant examples or their experiences.

The fact that all the pilot agency teams were conducting real-world data analytics projects also influenced how much they participated and made the effort more than just a learning exercise. The pilot agency teams did the data work themselves, such as cleaning the data, organizing the data file, and conducting the analyses. Pilot agency team members reported being excited and motivated to be part of the pilot initiative. Reasons included interest in the project itself, working with co-workers in new ways, and working with different co-workers.

All eight pilot teams demonstrated their level of interest in and commitment to making data-informed improvements in their TANF programs by completing the full array of milestones, despite other job responsibilities and the COVID-19 pandemic. Most of the teams remained engaged throughout the 30 months, with few exceptions. These exceptions included the need to prioritize the state legislative session and the need to redeploy staff members to handle a pandemic-related surge in demand for other agency services. Despite shifts in pilot agency team structures, each pilot agency team was able to retain at least one to two core team members for the duration of the pilot initiative, which contributed to the success of the pilot.

■ **Building data analytics capacity is not just about learning data or analysis skills. Strong communication and collaboration practices are key.**

As described in the Pilot Profiles (see Appendix A), pilot agency teams established new practices for communicating and collaborating across their agencies. They consistently reported that these practices were critical to the progress that they made during and after the pilot. This was a focus of the pilot initiative from the outset. It provided the pilot agency teams with designated space and time to discuss analytics across departments and disciplines within their organizations. It also helped them recognize the importance of this type of communication and collaboration and provided a foundation on which to continue building these practices.

The pilot agency team's experiences align with the findings from the needs assessment: TANF agencies that stood out for exemplary data use relied on strong collaboration and communication among teams, with other state agencies, and with external partners.⁸

■ **Balancing customization and consistency throughout for all learners.**

As expected, there was variation in knowledge, skills, and comfort levels with doing an analytics project within and across pilot agency teams. To advance all pilot team members' learning, the TDI team designed technical assistance activities that balanced consistency

8 [Goerge, Wiegand, Monohan, and Gjertson \(2022\)](#).

and customization. Some tactics that differentiated learning so that no individual was left behind included:

- *Organizing small group discussions* during monthly events by role, by topic, or by question of interest to encourage participant choice. This allowed for deeper and more meaningful discussions among smaller groups of participants, who could self-select into their preferred breakout room. This design tactic was informed by pilot team feedback and by the experiences of some TDI team members who had used differentiated learning approaches in university settings.
- *Adding new learning modes* such as office hours on topics that were of particular interest across several pilot teams. Through regular interactions with pilot agency teams, coaches discovered that some team members were new users of the R programming software and wanted more hands-on instruction and practice coding in R. Members of the Technical Bench began hosting regular office hours for pilot team members over a six-month period. Basic statistical concepts and their use was another topic that was offered to pilot agency teams through drop-in office hours.
- *Inviting experts from the Technical Bench* to offer instruction and guidance during regular meetings between the coach and pilot agency teams. Topics included building predictive models, propensity score matching, and applying equity lens to data analyses.

CHAPTER 8

CONCLUSION

Federal government agencies are increasingly interested in expanding the use of administrative data and are prioritizing investments in staff capacity and data infrastructure. In particular, they are recognizing that expanding the data analytics capacity of state agencies is essential, given the central role these agencies play in testing policy reforms through program improvement and in building evidence through program evaluation. State administrative data can provide valuable insights to inform federal decision-making, and federal agencies can adopt best practices modeled by the states. Most importantly, both state and federal agencies can use enhanced data analytics capacity to improve the well-being and employment outcomes of families in the TANF program.

The TANF Data Collaborative (TDC) Pilot Initiative offers a real-world model for federal agencies, foundations, and other funders interested in investing in approaches to improve data analytics capacity among state agencies. The eight pilot agency teams that participated in the pilot initiative were successful in expanding their routine use, integration, and analysis of TANF and employment data beyond reporting requirements. Part of the success of the pilot initiative, a component of the TANF Data Innovation (TDI) project, was its unique formula—the combination of learning-by-doing activities and training and technical assistance (TA) reinforced by milestones throughout the 30-month pilot period. For the TDC pilot, the focus was on TANF and employment data. But the portable nature of the pilot design makes it adaptable to projects using other types of data and in other agencies. Variations that could be considered in future capacity-building efforts include the use of qualitative data, developing strategies to regularly engage program participants so their voices are part of the analyses, and developing training and TA content that offers added support for agencies that lack access to the data they need. In summary, TDI established a foundation to build on for other federal and state agencies seeking to enhance their use of administrative data beyond routine reporting requirements.

APPENDIX A

TDI PUBLICATIONS

Collection: [State Pilot Profiles](#)

A Collection of Data Analytics Projects from State and County TANF Agencies

The 30-month TANF Data Collaborative (TDC) Pilot Initiative offered technical assistance and training to support cross-disciplinary teams of staff members at eight state TANF agencies in the routine use of TANF and other administrative data to inform policy and practice. These profiles summarize the work undertaken by participating agencies, including the research questions, data landscape, approach and research methods, initial findings, and next steps.

Toolkit: [Expanding TANF Program Insights](#)

A Toolkit for State and Local Agencies on How to Access, Link, and Analyze Unemployment Insurance Wage Data

This toolkit was created to help TANF professionals develop more robust, data-driven practices using administrative data on earnings. Whether you are a frontline case worker, a data analyst, or an administrator, the toolkit is designed to help you explore strategies to access and use earnings data for program improvement purposes.

Brief: [Increasing Data Analytics Capacity in State TANF Agencies](#)

The TANF Data Collaborative Approach

TDC was part of the TANF Data Innovation (TDI) project, launched by the Administration for Children and Families within the U.S. Department of Health and Human Services, to strengthen agencies' use of TANF, employment, and other administrative data. The brief shares the TDC framework and guiding principles, as well as the components of a pilot initiative, to inform similar and future efforts.

Brief: [Unpacking Data Use in State TANF Agencies](#)

Insights from the TANF Data Innovation Needs Assessment

This brief summarizes results from a 2019 needs assessment of the capacity of TANF programs in 54 U.S. states and territories to analyze data used for the purposes of program improvement, monitoring, and evidence-building. It highlights areas of strength and success in how these agencies use data, as well as areas for growth. It also includes suggested strategies that may improve data use by TANF agencies.

Brief: [Exemplary Data Use by State TANF Agencies](#)

Beyond Routine Reports and Analyses

This brief describes findings from an analysis of patterns of data use by state TANF agencies and is aimed at understanding what characterizes exemplary data use. The findings highlight the importance of collaboration and communication, both internally and externally, around data and how it is used. Technical and data infrastructure (in particular, the age of a state's primary TANF data system) appeared to have no relationship with the quality of analytic data use.

Toolkit: [Strengthening Analytics in Government Agencies: A Toolkit for Sustainable Data Use](#)

This toolkit offers strategies and tools to help agencies build the culture and infrastructure needed to apply data analysis routinely, effectively, and accurately for sustainable data use.

It covers a variety of issues—from staffing and technology to collaboration and funding—that can impact the longevity of analytics work in the public sector.

Video: [Improving Outcomes for Families through Better Use of Data: The TANF Data Collaborative](#)

In this video, staff members from four of the eight pilot agency teams reflected on their challenges, accomplishments, and general experiences during the TDC Pilot Initiative.

Toolkit: The Five Phases of Successful Data Analytics: TANF Data Collaborative Pilot Resources Toolkit

This toolkit offers resources developed during the TDC Pilot Initiative and will provide some of the tools and resources used to support the pilot’s “learning-by-doing” approach. It will guide organizations interested in using administrative and other data to inform decision-making and program improvement and to achieve better outcomes for participants.

APPENDIX B

MATERIALS TO PROMOTE THE TDC PILOT INITIATIVE

To raise awareness among state and county TANF programs and encourage any that might be a good fit to apply for the TANF Data Collaborative Pilot Initiative, the TDI team advertised the opportunity. The two-page flyer and postcard below are two examples of promotional materials developed and disseminated to advertise the opportunity provided by the TDC Pilot Initiative.

Two-Page Flyer

Page 1



Using Data to Improve Family Outcomes

DATA IS EVERYWHERE IN OUR MODERN WORLD, but it is seldom harnessed to its fullest potential to improve programs and participant outcomes. Sponsored by the Administration for Children and Families, the TANF Data Collaborative (TDC), an initiative of the TANF Data Innovation project launched in late 2017, will improve the capacity of TANF agencies to routinely use data to inform policy and practice in order to improve employment and well-being outcomes for individuals and families. TDC will provide training and technical assistance to people who work with TANF data and fund pilots to support TANF agencies working on operational data-driven projects.

WHAT WILL THE TDC DO?

The TDC will provide three years of data-related training and technical assistance on how to:

- Integrate TANF data with employment and other data
- Ask the right, data-answerable questions
- Visualize TANF and employment data
- Understand caseloads and employment patterns
- Improve targeting to those who most need services
- Understand TANF recipients' labor market opportunities
- Test improvements to services and practices
- Derive insights on how to better serve clients
- Ease data reporting

HOW WILL TRAINING BE OFFERED?

TANF Data training will be offered in interactive and engaging formats:

- Learning labs
- Funded pilots
- Micro-lectures
- Peer-to-peer learning
- Tools and templates
- Case studies
- Hands-on training
- Code notebooks

JOIN THE TANF DATA COLLABORATIVE!

Visit our website at tanfdata.org

Sign up for our email list by emailing info@tanfdata.org

*Visit us at NAWRS
MDRC booth
JULY 28TH - 31ST
NEW ORLEANS*

TANF DATA COLLABORATIVE LAUNCHING IN EARLY 2019

PRIMARY GOAL

TDC's aim is to support routine and sustainable use of TANF and other administrative data so that agencies can make informed decisions about how to best serve their clients.

TO THAT END, TDC WILL

- **Work** more intensely with a group of pilot states so that their agencies can build and use new TANF data models, analytic tools, data visualization tools, program evidence, and policy insights to improve employment outcomes;
- **Nurture** a peer learning collaborative so that TANF agency staff and other stakeholders can learn from each other's challenges and successes;
- **Ease** the burden and improve the quality of TANF agencies' federal reporting;
- **Promote** integration of TANF data with other relevant data sources so that TANF agencies can better understand their client's backgrounds and cross-domain outcomes;
- **Deliver** agency-focused contextualized technical assistance, training, and tools so that states can sustainably apply learning; and
- **Provide** a wide range of resources to help TANF agencies - at all levels of readiness - better harness data.

HELP US UNDERSTAND YOUR NEEDS. In the coming months, we will use stakeholder discussions and needs assessment surveys to collect information on the capacities and needs of federal, state, and local TANF agencies so that current and future data investments can be maximized. We aim to meet TANF agencies where they are, leverage state use cases, and address topics that matter to states and localities. Email us at info@tanfdata.org to share your thoughts and learn more.

KEY COMPONENTS:



TDC Pilots: Up to 8 state/local agencies will be selected as TDC Pilots to receive resources and address programmatic questions with intensive technical consultation, data use workshops, and peer-to-peer learning groups.



Data Analytics Course: An intensive, multi-day course on advanced analytics using real-world social program data and open-source, interactive coding tools. Priority registration for TDC Pilot sites.



TDC Website: A one-stop portal to TDC activities, including announcements of training or events; links to tools and other time-saving supports; information about annual convenings; and on-demand access to all training and technical assistance materials.

OFFICE OF FAMILY ASSISTANCE
An Office of the Administration for Children & Families

OPRE

ACTIONABLE INTELLIGENCE
FOR SOCIAL POLICY

CDI MDCRC CENTER FOR DATA INSIGHTS

CHAPIN HALL
AT THE UNIVERSITY OF CHICAGO

NEW YORK UNIVERSITY

Postcard

Front



Using Data to Improve Family Outcomes


TDC is enhancing the capacity of human services agencies to use data analysis to improve the employment and well-being of individuals and families. Our website is a one-stop portal to TDC activities, including announcements of trainings or events; links to tools and other time-saving supports; information about annual convenings; and on-demand access to all training and technical assistance materials.

VISIT [TANFDATA.ORG](https://tanfdata.org) TO LEARN MORE ABOUT:

 Laying the Groundwork for Data	 Accessing Data	 Preparing Data	 Analyzing Data	 Communicating Data + Findings
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Back


UPCOMING OPPORTUNITIES



Data Analytics Course - Fall 2019:

An intensive, multi-day course on advanced analytics using TANF and wage data and open-source, interactive coding tools.

The course will train TANF agency staff and their partners in rigorous and modern computational data analysis methods and tools. It is designed for both technical and less technical subject matter experts and leadership.



TDC Pilots:

Up to 8 state/local agencies will be selected as TDC Pilots to receive resources and build analytic capacity while completing projects, receiving intensive technical consultation, attending data use workshops and participating in peer-to-peer learning.

Visit [TANFData.org](https://tanfdata.org) for more information and to submit Pilot nominations.

APPENDIX C

SCHEDULE OF TDC PILOT INITIATIVE EVENTS AND MILESTONES

Definitions for this appendix:

- **Webinar:** Includes both virtual presentations and workshops hosted by TDI Team partners for all pilot team members.
- **Milestone:** Required deliverables that all pilot agency teams submitted and that corresponded to steps to complete a data analytics project.
- **Internal convening:** Multiday, cross-pilot events, either in person or online, offering spaces for teams to present their projects, network with each other, and learn best practices for conducting data analytics projects.
- **External conference:** Presentation of pilot projects on panels at public conferences.
- **Hangout:** Dedicated, unstructured time for members of different pilot teams to network and interact with each other, online.
- **Office hours:** Informal online discussion and Q&A sessions about using “R” for coding, statistics and data analysis, hosted by MDRC staff members.

Schedule Legend

Beige	Indicates a webinar , may be interactive or not
Purple	Indicates a milestone (required deliverable)
Yellow	Indicates an internal convening
Orange	Indicates an external conference
Green	Indicates unstructured time, either a hangout or office hours

Schedule begins on next page. All items listed chronologically, starting with the earliest.

INTERNAL CONVENING 2020 Mar 9 Mar 10 Mar 11	<p>Kickoff (in-person)</p> <p>A mix of cross-pilot plenary sessions (for example, developing an effective project scope); learning sessions (for example, measuring employment outcomes, navigating data sharing, access and integration to improve outcomes, and the TANF Needs Assessment Survey); pilot team-only breakout sessions to meet their coaches and begin drafting their project work plans, plus time for peer-to-peer networking and learning.</p> <p>9:30 a.m. – 5:30 p.m. EST 9:00 a.m. – 5:00 p.m. EST 8:30 a.m. – 1:00 p.m. EST</p> <p>Milestone: Pilot Project Poster of research question, data, and methods</p>
WEBINAR 2020 Dec 18	<p>Data Quality Control, Part I</p> <p>Identification of data quality errors, prevention of errors, the effects of data quality issues on analysis, and policy implications.</p> <p>3:00 p.m. – 4:00 p.m. EST</p>
WEBINAR 2021 Jan 27	<p>Employment Measures and Characteristics</p> <p>Measuring employment stability, measuring advancement, and creating firm outcome measures. How to use employment data to improve program outcomes.</p> <p>1:00 p.m. – 2:00 p.m. EST</p>
HANGOUT 2021 Feb 10	<p>Unstructured Time</p> <p>12:00 p.m. – 1:00 p.m. EST</p>
WEBINAR 2021 Feb 24	<p>Data Quality Control, Part II</p> <p>Interactive workshop. Reviewing a data QC memo template, using R markdown to write a well-documented data QC program, and working with unemployment insurance data.</p> <p>1:00 p.m. – 2:30 p.m. EST</p>
WEBINAR 2021 Mar 25	<p>Interpreting Study Results</p> <p>Common research designs for use in pilot projects; challenges in identifying causation; building confidence in findings; and terminology, references, and key concepts in evaluation literature.</p> <p>1:00 p.m. – 2:00 p.m. EDT</p>
HANGOUT 2021 Apr 7	<p>Unstructured Time</p> <p>12:00 p.m. – 1:00 p.m. EDT</p>

(continued)

WEBINAR 2021 Apr 29	Analyzing Trajectories of TANF Families Cohort definition, structuring analytic data, measuring patterns, and visualizing patterns. 2:30 p.m. – 4:00 p.m. EDT
MILESTONE 2021 May 21	Draft Interim Pilot Project Reports Due
MILESTONE 2021 Jun 7 Jun 11	Pilot Presentation Dress Rehearsals
INTERNAL CONVENING 2021 Jun 15 Jun 16 Jun 17	TDC Cross-Pilot Convening (virtual) Milestone: Interim Pilot Presentations Presentations by all pilot teams. Sessions on discussing effective communication between technical and nontechnical teams, how to share knowledge, and how to sustain data analysis practices. 1:00 p.m. – 3:30 p.m. EDT
EXTERNAL CONFERENCE 2021 Aug 23	Economic Mobility and Well-Being Conference Hosted by American Public Human Services Association (APHSA) and National Association for Welfare Research and Statistics (NAWRS). MDRC moderated, with presentations by the Michigan and Minnesota pilot agency teams.
EXTERNAL CONFERENCE 2021 Sep 20 Sep 21 Sep 22	OPRE TANF Directors' Meeting Hosted by the Office of Planning, Research, and Evaluation (OPRE). TDI partners made three presentations: "How States Are Building Data Analytics Capacity," moderated by MDRC, with presentations by California, New York, and Utah pilot agency teams; "Sustaining Data Analytic Capacity"; and "Accessing, Linking, and Analyzing Wage Records."
WEBINAR 2021 Sep 30	Centering Racial Equity Throughout the Data Life Cycle AISP's toolkit for Centering Racial Equity, positive practices for using administrative data, problematic practices, and actionable strategies to center racial equity in TANF work and TDC pilot projects. 2:30 p.m. – 4:00 p.m. EDT
MILESTONE 2021 Oct 1	Pilot Analysis Plans Due

(continued)

WEBINAR 2021 Oct 29	Statistics 101 Interactive workshop. The basics of statistical interference: hypothesis testing, p-values, sample size, variation, and effect sizes. 12:00 p.m. – 1:30 p.m. EDT
OFFICE HOURS 2021 Nov 10	Unstructured Time 11:00 a.m. – 12:00 p.m. EST
OFFICE HOURS 2021 Dec 8	Unstructured Time 11:00 a.m. – 12:00 p.m. EST
WEBINAR 2021 Dec 17	Propensity Score Matching Interactive workshop. Overview of propensity score matching, considerations, and how it can be applied to TANF data. 11:30 a.m. – 1:00 p.m. EST
WEBINAR 2021 Dec 20	End of Year Celebration Presentation and opportunities to network and celebrate work completed during 2021. 3:00 p.m. – 4:00 p.m. EST
OFFICE HOURS 2022 Jan 13	Unstructured Time 12:00 p.m. – 1:00 p.m. EST
WEBINAR 2022 Jan 26	Visualizing and Clustering Trajectories of TANF Families Interactive workshop. Approaches to visualizing and grouping trajectories, discrete sequence analysis plots, alluvial plots, Sankey plots, clustered time series analyses, drawing out patterns from trajectories, and identifying the prevalence of certain experiences. 1:00 p.m. – 2:30 p.m. EST
OFFICE HOURS 2022 Feb 11	Unstructured Time 12:00 p.m. – 1:00 p.m. EST
HANGOUT 2022 Feb 25	Unstructured Time 12:00 p.m. – 1:00 p.m. EST
WEBINAR 2022 Feb 17	Research Methods: A/B Testing Interactive workshop. Introducing A/B testing and providing examples specific to TANF and other human services agencies. 12:00 p.m. – 1:30 p.m. EST

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WEBINAR 2022 Apr 1	Translating Analyses and Findings into Visualizations, Memos, and Reports Interactive workshop. Good practices for production of written deliverables, examples of deliverables, and preparation for stakeholder briefings, final reports, and presentations. 1:30 p.m. – 3:00 p.m. EST
MILESTONE 2022 Apr 4 Apr 11	Presentation Dress Rehearsals
INTERNAL CONVENING 2022 Apr 25 Apr 26 Apr 27	TDC Cross-Pilot Conference (virtual) Milestone: Final Presentations 1:00 p.m. – 4:00 p.m. EST each day
WEBINAR 2022 May 19	Using Data to Understand Performance and TANF Exiters Showcasing work from the Minnesota and Virginia pilot agency teams regarding measuring county performance and reviewing people who leave the TANF program, respectively. 2:00 p.m. – 3:30 p.m. EST
MILESTONE 2022 May 20	Draft Project Summary Report Due
EXTERNAL CONFERENCE 2022 Jun 1	OPRE Research and Evaluation Conference on Self-Sufficiency Hosted by OPRE. Evaluating performance of human services and employment programs. MDRC moderated panel, “How States are Building Data Analytics Capacity,” with presentations by the California, Minnesota, and New York pilot agency teams.
MILESTONE 2022 Jun 3	Reviews Due from Coaches and Others
MILESTONE 2022 Jun 24	Final Summary Report Due
MILESTONE 2022 Jun 24	Stakeholder Briefing and Briefing Plan Due
WEBINAR 2022 Jun 30	Sustainability and End of Project Celebration Instructional content on how to sustain data analytics, a preview of the “Sustainability Toolkit” publication, and a celebration of completed 30-month pilot program. 3:00 p.m. – 4:00 p.m. EST

(continued)

**EXTERNAL
CONFERENCE
2022 Nov 17
Nov 18
Nov 19**

APPAM 2022 Fall Research Conference

Hosted by the Association for Public Policy Analysis and Management. MDRC moderated the panel, “The TANF Data Collaborative: How States Are Building Data Analytics Capacity,” with presentations by the Colorado, New Jersey, and Virginia pilot agency teams and the OPRE contract officer as the discussant.

**EXTERNAL
CONFERENCE
2023 Aug 27
Aug 28
Aug 29**

APHS A Economic Mobility and Well-Being Conference

Hosted by the American Public Human Services Association. MDRC moderated the panel, “Unlocking Your Administrative Data’s Potential: The TANF Data Collaborative Pilot,” with presentations by the Colorado and Virginia pilot agency teams.

**EXTERNAL
CONFERENCE
2023 Oct 8
Oct 9
Oct 10
Oct 11**

NAWRS Bi-Annual Conference

Hosted by the National Association for Welfare Research and Statistics. MDRC moderated the panel, “TANF Data Collaborative: How States Are Building Data Analytics Capacity,” with presentations by the Minnesota and Utah pilot agency teams.

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