



**ASPE**  
ASSISTANT SECRETARY FOR  
PLANNING AND EVALUATION

**OFFICE OF BEHAVIORAL HEALTH,  
DISABILITY, AND AGING POLICY**

# Research Applications of Electronic Recovery Records: Final Report

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Prepared for  
the Office of the Assistant Secretary for Planning and Evaluation (ASPE)  
at the U.S. Department of Health & Human Services

by  
NORC at the University of Chicago

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# RESEARCH APPLICATIONS OF ELECTRONIC RECOVERY RECORDS: FINAL REPORT

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## ACRONYMS

The following acronyms are mentioned in this report and/or appendices.

ACE	Adverse Childhood Experience
ASPE	HHS Office of the Assistant Secretary for Planning and Evaluation
BARC	Brief Assessment of Recovery Capital
ERR	Electronic Recovery Record
GPRA	Government Performance and Results Act
HHS	U.S. Department of Health and Human Services
IRB	Institutional Review Board
KII	Key Informant Interview
RDP	Recovery Data Platform
RSS	Recovery Support Services
SAMHSA	HHS Substance Abuse and Mental Health Services Administration
SOGI	Sexual Orientations and Gender Identity
SUD	Substance Use Disorders
SURE	Substance Use Recovery Evaluator

## INTRODUCTION

NORC at the University of Chicago in partnership with Urban Institute (NORC/Urban team) assessed the use of electronic recovery records (ERRs) to conduct research into recovery support services (RSS) for individuals with substance use disorders (SUDs). RSS are non-clinical services that assist individuals and families in attaining and sustaining recovery from SUDs.<sup>1</sup> These services include social support, a full range of human services that facilitate recovery and wellness contributing to an improved quality of life (e.g., transportation, employment services and job training, housing assistance, childcare, spiritual and faith-based support, education), and linkage to and coordination among service providers (SAMHSA, 2023). Common types of RSS include peer support, mutual aid groups, recovery housing, and recovery-based education (e.g., collegiate recovery programs) (HHS, 2018). RSS may be provided through freestanding recovery community organizations, treatment agencies, workplaces, faith-based organizations, criminal justice settings, and child welfare programs, among others. Similar to electronic health or electronic medical records, ERRs are digital versions of participants' recovery history that RSS providers maintain over time. They include data on RSS clients, including demographics, previous and current substance use, treatment history, recovery plans, RSS use, and recovery outcomes (Ashford et al., 2021).

Little is known about the population that uses RSS, patterns of use, and the impact of RSS on outcomes. In order to strengthen the evidence-base around RSS, in line with the FY22 Substance Abuse and Mental Health Services Administration (SAMHSA) Congressional Justification and the U.S. Department of Health and Human Services (HHS) Overdose Prevention Strategy,<sup>2</sup> there is a need to assess research opportunities. While ERRs are a novel data source for expanding the evidence base around RSS, there has been limited assessment on their potential for research, including the data elements they capture, the data quality, and how RSS providers use them. To assess how ERR data can be used for recovery-related research, the NORC/Urban team conducted an environmental scan and key informant interviews (KIIs). In this report, we provide details on the approach, discuss findings, and identify opportunities to support ERR-based research.

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<sup>1</sup> The Substance Abuse and Mental Health Services Administration's working definition of recovery from mental and/or substance use disorders is "a process of change through which individuals improve their health and wellness, live self-directed lives, and strive to reach their full potential." For more information, visit <https://www.samhsa.gov/find-help/recovery>.

<sup>2</sup> See <https://www.hhs.gov/overdose-prevention/>.

## METHODOLOGY

### Environmental Scan

An abbreviated environmental scan was conducted between June 15-June 23, 2023. The purpose of the environmental scan was to: (1) review available information regarding ERRs, including ERR platforms, the data elements captured by these platforms, how the platforms are implemented, and how ERR data have been used for research; and (2) review available information to inform the KII protocol, including identification of possible key informants. The NORC/Urban team conducted a web-based search of known ERR vendor websites (i.e., RecoveryLink™ and Recovery Data Platform [RDP]), news outlets, academic journals, and social media websites using key search terms to acquire publicly available information. Key search terms included “electronic recovery record,” RecoveryLink, “electronic recovery platform,” “electronic peer support software,” “digital recovery app,” “digital peer support platform”, etc. At the conclusion of the environmental scan, the NORC team presented findings to Office of the Assistant Secretary for Planning and Evaluation (ASPE).

### Key Informant Interviews

Prior to data collection, the Urban Institute’s Institutional Review Board (IRB) determined the project was not human subjects research and therefore did not require full IRB review. The NORC/Urban team, with feedback from ASPE, identified focus areas to guide the KIIs and gain additional information on ERRs, including:

- Data elements captured by ERR platforms.
- How ERR data have been used for research.
- How research using ERR data can inform RSS policies and programs.
- As time permitted, implementation of ERRs, including experience of RSS providers in using ERR platforms and how ERRs affect service delivery.

### *Sample*

The sample of key informants included authors of peer-reviewed literature on recovery-related research using ERRs, staff from ERR vendors, users of ERR data platforms (e.g., recovery community organizations), and independent researchers in the field of recovery identified during the environmental scan. These groups were chosen for their unique insights and direct experience with ERRs and the provision of RSS. Authors of peer-reviewed literature and independent recovery-related researchers brought academic and scientific insights, while staff from ERR vendors offered intimate knowledge of ERRs and implementation experience. Individuals from recovery community organizations provided frontline perspectives on practical usage and potential for research in the context of ERRs and RSS provision. ASPE approved the final list of key informants, which included a total of 12 individuals: seven staff from ERR vendors (i.e., RecoveryLink™ and RDP), three recovery researchers, and two staff members from organizations that use ERRs.

### *Data Collection*

In collaboration with ASPE, the NORC/Urban team developed a discussion guide tailoring questions based on each key informant’s role. The guide covered a range of topics aimed at answering the overarching research question, “How can ERR data be used for recovery-related research?” Topics included:

- Participant background.
- Implementation of ERR platforms.
- Data elements and quality.
- Research experience with ERRs.



- Barriers to external ERR research.
- Potential of ERRs to fill knowledge gaps in recovery-related research.
- Future of ERRs in research.
- [Optional/time permitting] ERRs' effect on service delivery.
- [Optional/time permitting] Opportunities for ERR research.
- [Optional/time permitting] Training, best practices, and recommendations for ERR data as a research tool.

The NORC/Urban team reached out to each key informant via e-mail providing an overview of the project and asking if they would be willing to participate in a one-hour discussion within a two-week period between July 17 and July 28, 2023. Interviews were immediately scheduled with those who were interested and available.

We conducted interviews with six key informants between July 19 and July 28, 2023. Informants included four individuals from two ERR vendors (i.e., RecoveryLink™ and RDP), one recovery researcher, and one staff member from an organization that uses ERRs. A trained qualitative interviewer from the NORC/Urban team facilitated each interview and obtained consent and permission to record the conversation. Interviews were conducted using the Zoom platform, and the discussions were transcribed using the automated transcription tool, Otter.ai.

### ***Analytic Approach***

We used a qualitative case study approach to explore how ERRs have been used for recovery-related research, employing grounded theory as the guiding methodology (Corbin & Strauss, 1990). Grounded theory was utilized to investigate specific phenomena (e.g., use of ERR), generating novel theories through systematic collection and analysis of data (e.g., KIs). The constructivist/interpretivist research paradigm was adopted to understand diverse perspectives from key informants, including ERR vendors, researchers, and RSS providers (Burns et al., 2022). The study aimed to provide valuable insights into ERR data's potential for research in the context of RSS.

## FINDINGS

This section presents findings from the modified environmental scan and KIIs organized by areas of interest: (1) data elements captured by ERR platforms; (2) how ERR data have been used for research; (3) how research using ERR data can inform RSS policies and programs; and (4) implementation of ERRs, including experience of RSS providers in using ERR platforms and how ERRs affect service delivery. This section ends with a discussion on future opportunities to support ERR-based research based on findings from the environmental scan and KIIs.

### ERR Platforms

ERRs contain vital information on RSS clients, including demographics, previous and current substance use, treatment history, recovery plans, RSS use, and recovery outcomes. ERR data allows RSS providers to monitor client progress and facilitate evaluations to determine the optimal approach for offering recovery services. The novel nature of ERRs is reflected by the limited information publicly available. Two robust ERR platforms currently exist: RDP and RecoveryLink™ (Faces & Voices of Recovery, 2023; RecoveryLink, 2021).

#### *Recovery Data Platform*

Launched in 2017, RDP is a cloud-based software with robust reporting and scheduling tools developed in part by Faces & Voices of Recovery and Recovery Trek (Faces & Voices of Recovery, 2023). Key features include cloud-based access to Recovery Vital Signs, which are “evidence-based assessment tools that aid in constructing a qualitative recovery story for each participant” (Faces & Voices of Recovery, 2023). With more than 400 unique data points, RDP reporting and scheduling tools provide individuals and organizations with outcome data and service management tools (Faces & Voices of Recovery, 2023). RDP collects data on peer support attendance/engagement, participant demographics, employment, education, mental health, housing, and fulfillment of participant’s goals (Vilsaint et al., 2017). At this time, no peer-reviewed research studies using RDP data have been published.

#### *RecoveryLink™*

Launched in 2019, RecoveryLink™ (RecoveryLink) is an ERR platform that provides a suite of recovery support tools (RecoveryLink, 2021; Ojukwu, 2023). Key features include 24/7 recovery support, accessible anywhere (i.e., laptop, tablet, or smartphone) via in-person, call, text, or video chat (RecoveryLink, 2021). Leveraging over 350 data points, RecoveryLink provides real-time feedback to help individuals navigate the recovery process and offers providers a suite of digital tools to improve outcomes and promote long term success. **Table 1** provides examples of the data points captured by RecoveryLink organized by outcome categories. Currently one peer-reviewed journal article has been published using RecoveryLink data and is described below in the “Using ERR Data for Research” section.

**Table 1. Data Elements Captured by RecoveryLink, Organized by Outcome Categories**

Outcome Categories	Data Points Captured
Demographics	<ul style="list-style-type: none"> <li>• Race/Ethnicity</li> <li>• Gender Identity</li> <li>• Sexual Orientation</li> <li>• Baseline Education</li> <li>• Employment</li> <li>• Housing</li> <li>• Income</li> <li>• Justice Involvement</li> </ul>
Health Status/Resources	<ul style="list-style-type: none"> <li>• Insurance Coverage</li> <li>• Transportation</li> <li>• Primary Care Physician Status</li> </ul>
Substance Use/Mental Health History	<ul style="list-style-type: none"> <li>• Recovery Length</li> <li>• Current Substances Being Used</li> <li>• Current Mental Health Symptoms</li> <li>• History of Overdose Event</li> </ul>
Recovery Support Services	<ul style="list-style-type: none"> <li>• Intake Recovery Capital</li> <li>• Current and Past Recovery Residence Living History</li> <li>• Length of Engagement</li> <li>• Recovery Support Services Requested at Baseline</li> <li>• Past Treatment Engagement</li> <li>• Total Number of Mutual Aid Meetings</li> <li>• Pro-Social Events</li> <li>• Advocacy Activities</li> <li>• Educational Activities Attended</li> </ul>

### ERR Data Elements and Quality

The environmental scan identified little information about the data elements ERR platforms capture. Discussions with key informants provided greater insights into the unique data collected by each platform and the quality of that data. Staff from both ERR platforms reported that RSS providers routinely collect standard socio-demographics (e.g., race, ethnicity, sexual orientation, gender identity), substance use history, RSS engagement, and recovery measures (e.g., Brief Assessment of Recovery Capital [BARC-10],<sup>3</sup> Substance Use Recovery Evaluator [SURE]<sup>4</sup>). However, the frequency, duration, and intensity of data collected varies due to the customizability of ERR platforms and differing priorities across RSS providers. As staff from one ERR vendor noted:

“When approaching this, I believe that you should be informed that every organization uses [ERRs] as a toolkit, how they use it varies, where they put their fields varies, how they implement varies... [RSS providers] get to control how they use our system. So, I think a researcher coming in here might think, everything's going to be the same across the board, but it varies. It varies because of programs, it varies because of states, it varies because of the

<sup>3</sup> BARC-10, developed by Dr. Vilsaint (2017), is a short 10-item measure that examines recovery capital globally across the ten primary domains of recovery capital. On average, it takes 2-5 minutes to complete.

<sup>4</sup> SURE, developed by Prof. Neale (2016), is a psychometrically valid, quick, and easy-to-complete outcome measure that is comprised of 21 items across five factors, specifically substance use, material resources, outlook on life, self-care, and relationships. It can be used alongside, or instead of, existing outcome tools and takes less than 15 minutes to complete.

fundors of RSS providers, clients, etc. So, I just want to set the record straight there, because having done research in the past, you're not going to get the straight line with this data.”

Similarly, staff from another ERR vendor emphasized the flexibility required by ERR platforms to capture the broad range of goals and priorities of RSS providers and their participants.

“Any [RSS provider], whether that is a recovery community organization, a different variant of a community based organization, or really any setting that would employ paraprofessionals, whether they use the peer title, recovery coach, community health care worker, those settings are as varied as you can imagine, from CEOs to collegiate recovery programs, alternative peer groups, permanent supportive housing programs, recovery residences, police assisted diversion programs, hospital systems, harm reduction organizations, syringe service programs, etc. These types of RSS provider roles have now been integrated and exist in a lot of different places... [therefore, ERR platforms] are highly variable and highly dynamic based on individual customer needs and how [RSS providers] choose to use the platform. Which is what makes this an ERR versus a survey software that’s used for research, right? It's merging those two worlds together at one time to suit the needs of the individual users.”

ERR platforms were developed to make it easy for RSS providers to consistently collect participant data, however, RSS providers have been slow to adopt this practice due to: (1) an emphasis on service delivery rather than data collection, which has historically been seen within the field of RSS; and (2) data collection requirements imposed by funders leaving little time for RSS providers to collect additional information. These data collection barriers ultimately limit the amount and consistency of data collected by RSS providers. As staff from one ERR vendor noted:

“Recovery support services, being non-clinical, and being, kind of, an emerging field, it's been difficult to establish it as this well researched, well studied field with best practices. Particularly challenging is the fact that collecting information from participants has always been kind of minimal, because the focus is actually on helping them achieve the outcomes instead of collecting data.”

Another staff member from the same ERR vendor went on to note:

“Just to emphasize what [my colleague] had already said about how we’re not very prescriptive about how organizations should or need to use the platform. There’s a wide variance and historically in this field, there has been less of an emphasis on records and keeping tracks of participants information and more just actually delivering the services... If you think about it, when someone is in crisis, or if they’re struggling with a substance use disorder, that first meeting, when people are looking to change, [the RSS provider] has very little time in order to actually help them move toward that point of change. The things that organizations will only really collect is the information that’s required to report back to their funder... historically, that has been a barrier to [RSS providers] collecting additional information, because [the RSS provider] has to collect this really awkward and cumbersome thing [e.g., GPRA data] that the federal government requires all people using federal funds to collect.”

Differing priorities across RSS providers have not only led to data collection challenges but also concerns about data quality. One recovery researcher expressed surprise at the lack of discussion regarding the quality of data captured by ERR platforms noting, “Data should be the driving factor. What we use should be a validated scale, and it should be a scale that’s shown to be significantly related to differential outcomes [e.g., recovery capital, quality of life, recovery/remission status, etc.]” However, staff at one ERR vendor identified standardized

outcomes along with engagement outcomes as areas with missing data due mainly to differing priorities among RSS providers.

“So, where we see more missing data is not demography and characteristics type data. It's more in things like standardized outcomes, [and] comprehensive engagement notes, because people have different styles, and those things are optional. Some organizations would say collect these each time you engage, others will try to get them at least one every 30 days. So, the missing data is less on the descriptive and much more on the outcomes in our experience and it's [due to] different priorities of whether or not that data is important, and at what intervals... business needs dictate data collection, or leadership priorities and that can be highly variable as well. Our concerns are not around missing data, it's around variable data based on differences across clusters and cohorts.”

### Using ERR Data for Research

Little research exists using ERR data, with only one known peer-reviewed journal article published to date that utilized ERR data points collected through the RecoveryLink platform (Ashford, 2021). The article aimed to examine the prevalence and patterns of participant engagement with peer-based RSS at 20 recovery community organizations across the United States. Additionally, the authors sought to identify if engagement with peer-based RSS was associated with improvements in recovery capital and if so, what aspects specifically. ERR data were categorized into three measures for analysis: (1) demographics; (2) RSS engagement (i.e., recovery planning follow-up engagements, brief check-in sessions, and recovery support services requested); and (3) recovery-related outcomes (i.e., BARC-10). The results found that peer-based RSS delivered by recovery community organizations, specifically follow-up engagements and completed recovery plan goals are associated with improved individual recovery capital. Additionally, authors found that involvement with an array of RSS may contribute to other functional social determinant domain improvements and lower negative health events.

Since publishing this research, the use of ERRs has expanded, causing ERR vendors to focus most of their time on the needs of the customer rather than researchers. As staff at one ERR vendor noted: “Our focus for the last 18 months has primarily been on a dynamic data model with dynamic solutions based on customer needs and practical needs, so we haven't spent a ton of time validating and doing additional peer-reviewed research or internal research.” That said, ERR vendors are open to requests to use ERR data for research purposes. Staff at one ERR vendor stated: “For an IRB approved study, using secondary data analysis, we are heavily research oriented and if a project is going to try to move the field forward and positively impact our communities, we would entertain those requests now, ad hoc or otherwise.”

ERR vendors do not advertise access to ERR data for research purposes; researchers would have to reach out to ERR vendors directly to inquire about data access and permissions. The data currently available to researchers is limited based on standards and procedures that organizations adopt to protect sensitive information when sharing it with third parties, like external researchers or other organizations (sometimes referred to as “Safe Harbor” practices). As staff at one ERR vendor noted:

“We do Safe Harbor practices on our data. So, if you were to get an export of it, it would obviously remove all identifying information. I think we had decided to only go to the State level for across the country, so you wouldn't know the zip code, or the town even, so we de-identify to that level. You won't get comments at all, because people will write into notes, people's names and other identifying information. So that's something that you would have to be aware of. Meaning that if you're looking at the goals and the outcomes that are specifically on their

task, you're unlikely to get very much content, except for maybe the very short film and how they summarize the title."

These privacy-protecting practices can limit the interoperability of ERR data, a challenge that the United States health care system has struggled with for decades. That said, ERR vendors are "taking steps today to adopt standards, and actually implement them and make them available for when the rest of the [health care] system comes online and is ready to do so, both what is legally required, but also what [ERR vendors] believe will be the future of interoperable data."

Although peer-reviewed literature using ERR data is limited, staff at ERR vendors shared that ERR data has been used in case studies and ongoing research that has not yet been published: "You will see, within the next 24 months, a very large secondary data analysis from our internal team with a primary focus on looking at geographical variants and setting variants of a cluster analysis with similar concepts, but also trying to predict more than just elements that are variables that are impacting recovery capital, as we have larger datasets." Staff at another ERR vendor also described some of their current research efforts noting, "We have a project going on with [university staff] looking at the impact of COVID on RSS and the outcome measurements overall."

When asked about the future of RSS research and what questions could be answered using ERR data, key informants provided some interesting perspectives. Staff at one ERR vendor identified two areas for future research using ERR data. The first has to do with the increased use of technology for the delivery of RSS due in large part to the COVID-19 pandemic. "The looming question, at least at baseline is, do digital recovery support services produce different effects from in-person ones? And we think we have ideas, right, we certainly have internal data that would answer that question." The second area of research has to do with a shift in how RSS are defined and measured. "[RSS] can be standalone and complementary services that have mechanisms of change and outcome enhancements that should be evaluated as a distinct service, not always as a complement to care. [For example,] peer support services aren't just a mechanism to increase treatment retention and care... they also do all of these other things that are standalone primary endpoints that make them a valid and efficacious service in their own right... and I think ERR data has the ability to answer that type of fundamental line of questioning."

Staff at another ERR vendor described some upcoming system enhancements that will allow for data to be collected on providers (e.g., demographics, wellness and recovery goals) most of whom are in recovery as well. "Most providers at ERRs are paraprofessional and/or peer support specialists, therefore, by collecting demographic information, as well as recovery assessments from providers, we can see how well the provider is doing in their recovery pathway and how that translates to outcomes for their participants."

### Using ERR Data to Inform RSS Policies and Programs

ERR vendors are often engaged in internal research for advocacy and public policy goals. As noted by staff at one ERR vendor, "What we try to do is make it easy for organizations to collect the data and then we use it for our advocacy and public policy goals, which is to show that peer recovery support services work, how well they work, and how they are cost effective." That said, staff from ERR vendors stressed the importance of the Federal Government investing research and development dollars into ERRs and other types of electronic health or electronic medical records that are not just for primary care, if they want true innovation. As staff from one ERR vendor noted:

"The customer base at its current state can't support the level of innovation they deserve. It's one reason that it's taken so long for ERRs to even be developed. Because there's no support or even forward thinking from federal subsidies research and development and otherwise, and not

just [HHS agency] funding research. But you know, the same type of investment we've had in telehealth capabilities from [HHS Agency] and others... If we really want the future to be realized, it's not going to be on the backs of resources from an installed customer base using and paying for the software. Companies like mine exist, but if we want true innovation, if we want to accelerate the speed of that innovation, federal government needs to get involved, state governments need to get involved, because this is a social good, right? This is technology, the provider base cannot afford to innovate. In every other field where that's true, the federal government stepped in and I think they need to start taking a look at it now to fund infrastructure enhancement and research and development within this space... hopefully, we'll have that same kind of freedom paid to us that electronic health records and [electronic medical records] had... But today, if we were to go to the federal government and others that govern and kind of provide regulatory frameworks for electronic medical records and health records, if you'd said the word "electronic recovery record", they would have no idea what you're talking about. And that needs to change for the future to be realized as well."

While more research exists than it did 20 years ago, RSS research is only now starting to be federally funded. Service delivery, on the other hand, is being funded more now than ever before through federal block grants, state-funded RSS programs, increasing coverage for RSS by insurance providers, and changes in the Affordable Care Act. Therefore, as noted by staff at one RSS provider, the field of RSS should be "taking direct practice data and doing secondary analysis on it... because it's the most cost-effective way to deal with that large scale federal funding, which is just now starting to be talked about and started coming and we all know that takes a very long time to come." The same staff went on to note:

"RSS is still an underfunded area of research... But the reality for us is these services are happening. They're well-funded now more so than they ever have been before. And we should be researching what's actually happening compared to model efficacy. And that's what administrative data allows us to do. So, whether we are looking at the benefits of recovery support services on a range of outcomes, looking at dose, duration, and intensity of peer services delivering in vivo versus digitally, the rise of virtual reality and recovery support services, like all of this data can be collected and analyzed with real world outcomes as people collect it to answer efficacy and validity questions... I think the empirical questions that should be asked is like, there's no limit to them, right? Because most haven't been asked, or if they have been asked, they still haven't been answered... so I think for the next five to 10 years, most of our answers are going to come from data."

## Implementation of ERR Platforms

### *Experience of RSS Providers*

How RSS providers choose to use ERR platforms varies based on the RSS provider setting and priorities. Staff at one ERR vendor described the initial steps taken to incorporate ERR systems into organizations, typically starting with a demonstration for potential users. Following a positive response, the organization would proceed to purchase a subscription. Assuming an RSS provider has the funds available to purchase a subscription, the major implementation challenges, as noted by staff from both ERR vendors, are technological proficiency among staff at RSS provider organizations, and time constraints, specifically time to train staff at RSS provider organizations on how to use the platform, and time for staff to enter data into the platform.

The transition period from the initial setup to full functionality was identified by staff at one ERR vendor as approximately 90 days. Successful implementation, as reported by more than one key informant, required an internal champion to oversee the platform, customize it to fit the organization's needs, and guide staff through training. Therefore, as staff from one ERR vendor noted, "[RSS providers] need to be heavily willing to invest

not only their money, these things in platforms, and technology costs money, but it's also a time commitment that people need to plan for. These aren't easy choices, and implementation is not an easy process." That said, it is possible; ERR vendors provide services to assist RSS providers throughout the implementation process. As staff from one ERR vendor commented: "I think more and more organizations will get on board with giving their employees the time to enter the data... the more and more we talk about it, the more and more we stress what data can provide for the recovery movement, I think more and more organizations will get on board."

ERR platforms were developed to make it easy for RSS providers to consistently collect participant data. Once staff receive the proper training, most are able to easily transition to using the platform, as staff from one RSS provider organization noted, "I can say that we've been very successful in doing that [i.e., training staff to use the ERR platform], including one staff member who was incarcerated for 10 years, and cut off from all technology, and we were able to train him to use [the ERR platform]." ERR vendors also offer free live trainings, paid trainings, as well as technical assistance as described by staff at one ERR vendor:

"We give free live training, which we kind of show the best way to go about entering, collecting, what things are really important, how to gauge how the organization can utilize [the ERR platform] to further their own mission, vision, and values. So yeah, we try to point organizations in the correct direction, plus, we have a paid training as well. Plus, we do technical assistance. So if an org really wants to drill down and be a little bit more involved, we can offer that assistance as well."

### ***How ERRs Affect Service Delivery***

As noted previously, ERRs are similar to electronic health or electronic medical records, in that they are digital versions of a participant's recovery history, maintained by RSS providers over time. However, staff at ERR vendors were quick to note that differences exist between platforms, specifically, ERRs emphasize person-centered data, allowing participants full access to their records and enabling them to contribute to their ERR. As staff at one ERR vendor noted:

"I have access to and control over my entire health record, but that doesn't exist, historically, within behavioral health data, both in treatment and certainly not in recovery support services, which is even more in its infancy as a field. And what [ERR vendor] had the benefit of doing is we can give that data, control, access, and viewing permissions to the participant just like we do in health care, that they can access at the touch of a button; every note ever written about them, every outcome collected, every assessment of recovery capital, every recovery plan, everything. At the end of the day, from an ethical perspective, we get to take the stance that people have real-time access rights to all of their data. We are giving access rights and taking a stand on ethical data principles, using ERR technology. That, to me, is a huge benefit."

Most key informants reported that ERR data has an important and positive effect on recovery service delivery, including by supporting and validating multiple pathways to recovery, and challenging stigma and misconceptions. ERR vendor staff reported that the ERR data allowed organizations to adapt their services according to client recovery journeys, potentially improving outcomes. Staff at one ERR vendor noted: "Most of the time, people are trying to make outcomes be based on assessments, right? So, the scores of assessments go up. I think that with [recent ERR platform updates], we've tried to flip that switch and really highlight that outcomes are also about achieving goals."



## Future Opportunities to Support ERR-Based Research

Findings from the environmental scan and KII provided insights into the current opportunities to support RSS research using ERR data, however, more is needed. The areas expected to have the biggest impact on the future of RSS research using ERRs include increasing the availability of funding to support RSS research using ERRs, emphasizing the need for additional research on recovery, and creating clear pathways for researchers to access ERR data. Each of these areas are discussed in greater detail below.

### ***Increase Funding for Research Using ERRs***

As noted in the section, “Using ERR Data to Inform RSS Policies and Programs,” more funding is needed to support RSS research, including funding for the implementation of ERRs among RSS providers. The field of RSS is still in its infancy with a paucity of data on how they are implemented, who receives them, and long-term outcomes. Therefore, funding is needed to support the analysis of longitudinal ERR data to generate evidence to inform effective RSS implementation. As one researcher noted:

“So, I think we’ve really got in many ways a larger blank sheet of paper that needs to be filled in to even formulate in a reasonable way what questions could be answered. If you got to start filling in the matrices, and we need to validate scales, then we need to have studies of individuals at various time points and recovery. We need to understand precipitants and transition states. We need to understand a momentary relapse versus lapse versus protracted relapse, what are the initiating conditions, what are the precipitants? The recognition that there are multiple concurrent problems that people may have, which may lead them to fall out of remission needs to be better understood, we’re coming to appreciate in some of the data that we have, of the importance of pain and chronic pain, which is, except perhaps a little bit in the opioid crisis is treated as an orthogonal issue. So, I think I think we’re at the very beginning, in many ways.”

Further, funding could also be made available to support RSS providers in implementing and using ERRs and collecting high-quality data, which would in turn enable larger and more representative studies. Additional funding should prioritize support for: (1) the implementation of ERR platforms; (2) staff trainings on how to use ERR platforms, including any technical proficiency that is needed among staff; and (3) the time it takes for staff to enter data into the ERR platforms. Funders should also consider removing some of the barriers required to access funds, including the cumbersome application processes and reporting requirements. These requirements not only reduce the amount of time providers spend delivering RSS, but they also reduce the amount of data RSS providers are able to enter into the ERR platforms.

### ***Further Prioritize Recovery Research and Expand Pathways for Accessing ERR Data***

Historically, research efforts have placed greater focus on people with acute substance use challenges than on people in recovery. As one researcher noted:

“I think we [researchers] have been preoccupied with the substance use problem. And I don't think we've been very focused on what happens to people after they received some sort of treatment. And I think that's, you know, I don't know if that's a bias of based on historical precedent, you know, we've always been more concerned about understanding the problems of addiction as opposed to the recovery of it.”

Therefore, in addition to increasing funding for research, entities who stand to benefit from recovery-related research (e.g., policymakers, RSS funders) could enhance their messaging on the need for such research. This may, in turn, stimulate greater interest among the research community.

Establishing pathways by which researchers can access ERR data would also facilitate further research and increase awareness of this data source. As previously mentioned, ERR vendors do not advertise access to ERR data for research purposes and it is unlikely that ERRs are well known among researchers who focus on substance use. As a result, researchers who have interest in recovery might not know about ERRs or opt not to reach out to vendors given the lack of formal pathways to access the data for research purposes. To address this issue, vendors could: (1) develop and advertise a streamlined approach by which researchers can request access; and (2) publish more detailed information on the types of data collected by ERRs and how analysis of these data can be used to strengthen understanding of recovery and inform RSS programs and policies.

## CONCLUSION

The purpose of this report was to assess how ERR data can be used for recovery-related research in an effort to strengthen the evidence base available for RSS. Little is known about the population that uses RSS, patterns of use, and their impact on outcomes. While ERRs are a novel data source for expanding the evidence base around RSS, there has been limited assessment on their potential. Through the use of a modified environmental scan and KIIs with staff from ERR vendors, users of ERR data platforms, and independent researchers in the field of recovery, the NORC/Urban team was able to provide information on: (1) data elements captured by ERR platforms, including data quality; (2) how ERR data have been used for research; (3) how research using ERR data can inform RSS policies and programs; and (4) implementation of ERRs, including experience of RSS providers in using ERR platforms and how ERRs affect service delivery. Findings highlight the potential ERRs have in answering important recovery-related questions. However, support from key stakeholders (e.g., federal and state funders, regulatory agencies, policymakers, academic researchers) and additional efforts by ERR vendors is critical to the future of ERR-based research, including increased funding to support RSS research, stronger communication on recovery-related research being a priority, and streamlined pathways for researchers to access ERR data.

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