

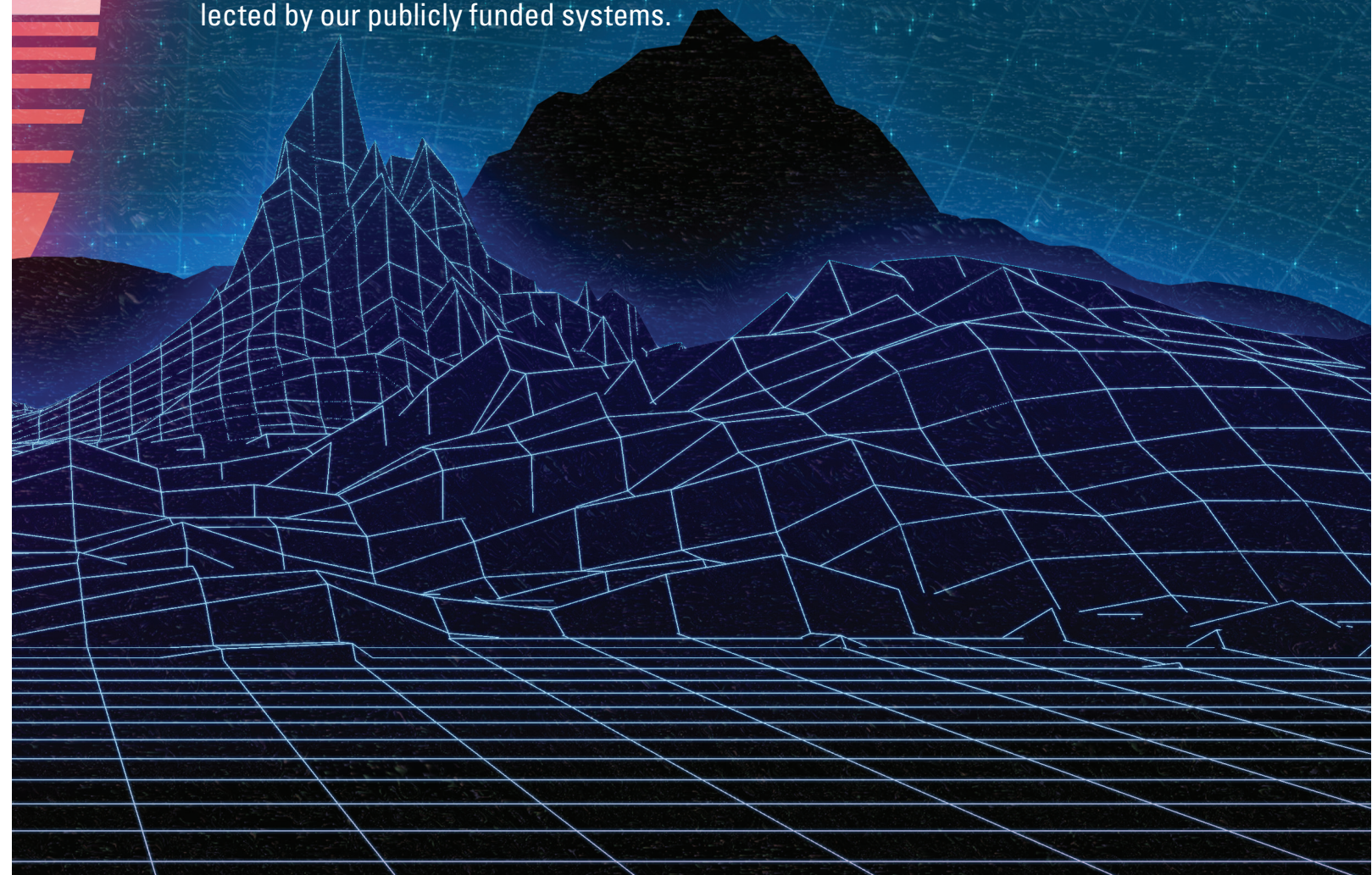


# THE POWER OF DATA

## How the Linked Information Network of Colorado (LINC) Is Bringing Cross-System Data to Prevention Conversations

BY WHITNEY LEBOGUE

**A** child raised in foster care who could make her way to college, but instead finds herself living on the streets. A commitment to high-quality early childhood programs without knowing where to prioritize spending for families in greatest need. A chance to help a young mother fight addiction to opioids before she becomes pregnant again. Tragedies and frustrations like these have prompted a deep desire among policymakers and researchers for data that can help them get ahead of problems before they occur. A national movement over the last two decades has sought to leverage, and better connect, the voluminous data we already have—administrative records collected by our publicly funded systems.



For more than a decade, policy-makers have pushed to bring the power of data into the public sector. Since 2006, the Institute for Education Sciences National Center for Education Statistics has invested \$826 million in State Longitudinal Data Systems with the goal of seamless data connections from early learning through the workforce. The Office of the National Coordinator for Health Information Technology released nearly \$550 million beginning in 2010 to support state Health Information Exchanges for improved patient care coordination. These large investments in data infrastructure surfaced a persistent tension when sharing data across public systems by effectively sharing the right data, at the right time, for the right purpose while simultaneously respecting the privacy of individuals who rely on public systems to protect their most sensitive information.

## THE LINKED INFORMATION NETWORK OF COLORADO (LINC)

In 2017, the State of Colorado and the Colorado Evaluation and Action Lab (Colorado Lab) at the University of Denver partnered to design and launch the Linked Information Network of Colorado (LINC), which has effectively balanced these data-sharing tensions. LINC is a collaborative based out of the Governor's Office of Information Technology that supports timely and cost-efficient research, evaluation, and analytics. LINC has the ability to integrate data across state and local agencies, including human services, Medicaid, public health, labor and

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employment, higher education, housing, K-12 education, and criminal justice.

Colorado policy leaders and data scientists launched LINC with the recognition that the state is devoted to a "local control" government approach and holds a strong commitment to the protection of individual privacy. Given this environment, a reasonable question frequently arises: How has LINC successfully brought partners from so many disparate public systems to the table to commit to purposeful data sharing? The "secret sauce" for LINC has not been a technical solution or a legislative mandate. In fact, during its launch phase LINC has operated on an annual budget of less than \$350,000, is entirely voluntary, and produces actionable analytics with minimal technology investments. Rather, the success of LINC is its dedication to a partnership model that is flexible, respectful, and responsive at every step.

## LINC PARTNERSHIP WORK

In its earliest days, the LINC design team spent considerable time, one-on-one, with agency leadership, data privacy officers, and other relevant staff to review a proposed governance approach and tweak it to the preferences of potential early adopters. Through a technical assistance award from Actionable Intelligence for Social Policy (AISP), LINC borrowed best practices from other state and county cross-system data solutions to create a proposed model for Colorado leaders to consider. The LINC collaborative landed on a federated model where each partner maintains complete control of their data until they approve

a project and send data to the centralized linking hub for integration and anonymization for end users.

Responding to the input collected from potential partners, the LINC Director developed a three-tier legal framework designed to ensure a common, high-level commitment to collaboration among LINC data partners while providing flexibility in lower-level agreements to allow data partners to meet their legal obligations. LINC performed no arm twisting nor teeth pulling to bring data partners to the table. Rather, the team fostered relationships and asked public officials how data sharing could help solve persistent problems. They sought at least one leader within the organization who saw value in LINC partnership and then began the onboarding process. "When we look across our network sites, the Colorado one stands out for its day-to-day responsiveness to government leaders in the state" said Dr. Dennis Culhane, AISP Co-Principal Investigator. If there was no foreseeable benefit for a partner to engage, then the team moved on. To do otherwise, trying to cajole or coerce involvement, would stray from LINC's commitment to being flexible, respectful, and responsive.

## LINC PROJECTS INFORMING PREVENTION EFFORTS

Another important component of LINC's successful launch is the prioritization of high-value uses of LINC. The most obvious way for LINC to fulfill its commitment to responsiveness is by focusing on projects that will result in actionable information for multiple policy and program leaders in Colorado. The first approved LINC project came



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from the leadership of human services in the state, and a deep commitment to preventing future homelessness among youth aging out of the foster care system. “I saw a real value in connecting child welfare and homelessness data that could help us point to potential prevention tactics in human services, and knew that the Colorado Lab and LINC could help us with this,” said Jerene Petersen, then Interim Executive Director of the Colorado Department of Human Services (CDHS). This priority project inspired the onboarding of the Metro Denver Homelessness Initiative as a LINC partner so the state could have a view into the intersection of child welfare and homeless experiences in the largest metro area of the state. An initial analysis of these data shows that a sizeable proportion of adults experiencing homelessness had previous involvement in the child welfare system, indicating that further study of potential prevention strategies may be fruitful.

The Office of Early Childhood in CDHS and the Colorado Governor’s Office initiated a second LINC effort. Governor Jared Polis holds a strong commitment to expanding quality pre-k opportunities for young children and recognizes that a high-quality early care and education (ECE) workforce is essential to fulfilling this goal. The state had no centralized information on the ECE workforce to guide its plans to roll out investments, such as the size of the workforce, where teacher shortages existed, qualifications earned by educators, and recruitment and turnover rates. Using LINC, the Office of Early Childhood was able to connect data from the state’s workforce registry, background checks, and early care provider systems to produce the first comprehensive look at the ECE workforce in Colorado. These data are now available in an interactive dashboard that will be routinely updated. “Access to these data has been critical for us. The dashboard is already informing the Governor’s Education and Workforce Cabinet Working Group’s goal to improve the ECE workforce to ensure all young children have an opportunity to succeed before they enter kindergarten,” said Scott Groginsky, Governor Polis’ Special Advisor for Early Childhood.

## **ACROSS THE COUNTRY, SUCCESSFUL DATA-SHARING MODELS WORK WHEN THEY RELY ON SOME VARIATION OF LINC’S FLEXIBLE, RESPECTFUL, AND RESPONSIVE PARTNERSHIP APPROACH.**

In 2019, the Colorado state legislature passed Senate Bill 19-228 to address the opioid crisis and authorized a LINC project focused on understanding the prevalence of perinatal substance exposure and identifying prevention opportunities within and outside of health care systems. This demand for knowledge refocused the LINC leadership team’s energy toward addressing a common data-sharing barrier—utilizing information on substance use and treatment for research and evaluation purposes without disclosing sensitive personal information. The LINC team sought and received guidance from the Center of Excellence for Protected Health Information, funded by the Substance Abuse and Mental Health Services Administration, on how LINC can receive such data for approved projects. LINC is now implementing this guidance and is able to onboard data partners who would like to better understand issues related to substance use and prevention. The first legislative report for Senate Bill 19-228 is anticipated for release at the end of 2020.

### **WHY DATA SOLUTIONS LIKE LINC WORK**

While still in its infancy, LINC has grown to include more data partners than originally envisioned. The

collaborative is producing actionable information on cross-system prevention and investment opportunities for programs designed to promote prenatal, early childhood, youth, and adult well-being. Colorado is not alone, as there are other data-sharing solutions in the AISP network. For example, California, South Carolina, and Allegheny County, Pennsylvania have successfully informed major prevention policies using integrated data.

Across the country, successful data-sharing models work when they rely on some variation of LINC’s flexible, respectful, and responsive partnership approach. Successful models build trust with data partners whose executive leadership see value in data-informed decisions and make data sharing a priority for their staff. When technical or legal barriers arise, leaders are assertive in finding appropriate solutions. Successful models launch nimbly, often with minimal funding and simple technology. They keep overhead to a minimum while staying laser focused on meeting the highest-priority data needs. Investment can be sought over time to create a more sophisticated infrastructure, but simpler is better to start. “LINC’s public-private partnership allowed it to launch with fewer bureaucratic barriers than other states and counties have experienced. This also means that all LINC partners get to share its successes,” said Chris Kingsley, Senior Associate for Data Initiatives at the Annie E. Casey Foundation, a national funder of AISP that supported the technical assistance to launch LINC.

While the LINC leadership team maintains a long-term vision for what LINC could be in its ideal state, they and their data partners are focused on using actionable data immediately to improve the lives of Colorado residents. They see too many opportunities to help the 18-year-old graduating from foster care stay out of homelessness, provide licensed caregivers for infants and toddlers in underserved rural communities, and help a new mother raise a healthy baby outside of addiction. Data can be powerful tools for changing lives. Keeping actionable information at the forefront of any data-sharing solution is essential for success. 