How Data Protects At-Risk Children

Analytics for child well-being

Featuring

Susan Smith, Director of Data Advocacy, Casey Family Programs
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Contents

A $220-million-a-day concern

▶ "Up to $80 billion is spent annually across the US to confront child abuse and neglect, an ugly underside of American life that afflicts hundreds of thousands of children. …

In 2013, about 3.5 million reports were made to child protective services concerning the safety and well-being of approximately 6.4 million children, according to federal government data.

A nationally estimated 679,000 children were found by the federal government to be victims of child abuse or neglect. An estimated 1,520 children died due to abuse or neglect in 2013, the most recent year for which the data is available."

Dina Gusovsky, "Can life as a data point save America's at-risk children?"
CNBC, January 2016[1]

Federal, state and local agencies together spend about $220 million a day to protect and promote the welfare of all children, prevent child abuse and neglect, and provide support and interventions that promote safety, permanency and well-being for children.[2] These figures point to the magnitude of the threats on a vulnerable population and the imperative to use government and private resources as effectively as possible to accomplish the most good.

Could those dollars be doing more? Yes, says Will Jones, a Principal Industry Consultant at SAS. "There is tremendous potential for child welfare agencies to use vast stores of data

to improve outcomes for children and families. Despite being rich in data, many agencies have yet to establish the data-driven culture that's required to advance both practice and policy."

At a SAS-hosted panel discussion, child welfare advocates discussed the potential benefits of greater use of data – and how public and private agencies can establish a culture that not only encourages but requires data-driven management techniques.

How data improves outcomes for children

Using data to improve results seems self-evident in more quantitative fields, such as financial services and pharmaceutical research and development, than in human services fields. But data can play a big role in supplementing the instincts, compassion and understanding of administrators, social workers and caregivers. Where personal experience leads you down one path, data can prove or disprove the hypothesis on that path and even define the paths that are options. Data can inform agencies on how to apply limited resources in the most productive ways – and can prevent them from investing in unproductive directions.

Data helps define the problems we're trying to solve.

"When I worked with the [federal] Children's Bureau agency, I was surprised at the number of program improvement plans that came in as a result of a child and family services review with interventions that didn't seem to be aligned with the problem they were trying to resolve," said Jerry Milner, Vice President for Child Welfare Practice at the Center for the Support of Families. "We're far away from that point now – there have been a lot of improvements – and data serves a dual role in informing our work and improving our work, not using it as a way to 'get' people.

"How many times do we strike out to address an issue – whether it's children in foster care or increases in maltreatment or child deaths, for example – without really understanding the root cause of the problem? Very often we end up treating the symptoms, or we end up adopting an intervention that looks

[1]Gusovsky, Dina, "Can life as a data point save America's at-risk children?" CNBC, Dina Gusovsky, CNBC Reporter/Producer, http://www.cnbc.com/2016/01/14/an-80-billion-annual-tax-bill-thats-failing-our-children.html

[2]Estimated Annual Cost of Child Abuse and Neglect, Prevent Child Abuse America, April 2012 http://www.preventchildabuse.org/images/research/PCA_COM2012_FAQs.pdf

good somewhere else, but there may not be evidence to support it, or it may not fit the particular circumstances of this jurisdiction. With data we have the opportunity to actually match solutions to the root causes of the problems we're trying to resolve."

Data brings the agency's mission to life.

"Data keeps us honest to the agency's mission," said Milner. "If we can define behaviors that operationalize our mission, vision and values – and we have measures that help us understand how well we're being true to that – we actually have a chance of behaving in accordance with our mission, vision and values, as opposed to just having a nicely framed set of guiding principles on the wall."

> "The mission, vision and values that guide a child welfare agency should not be some lofty goals out there; they should be translatable into action – operationalized into specific behaviors you expect of staff in the field, and they should be measurable with the data we provide and use."
>
> Jerry Milner, Center for the Support of Families

Data supplements instinct and opinion.

In the absence of data, decisions are guided by opinions, which are likely to be biased or flawed, said Susan Smith, Director of Data Advocacy for Casey Family Programs. "Humans don't make decisions very well relying on their own faculties. The brain over-generalizes; it takes one thing and applies it to different situations. It doesn't take in new information very well. You'll find the gambler's fallacy – the belief that if enough things go wrong, you're about due for something to go right. So there is inherent bias in human reasoning. In the absence of data, we're left with less reliable mechanisms that we're overly confident in."

Through Smith's leadership, Casey Family Programs built an analytical data set that includes all children in foster care in the US, supporting analysis that helps guide the prevention of maltreatment and improvement of child safety.

Data boosts the focus and effectiveness of the work.

"The absence of a data-driven culture often leads to a scattershot approach to agencies' attempts to reach their goals or improve their performance," said Milner. "Having data to guide our work helps us to be more focused on what we're trying to achieve with children and families. Rather than trying to treat symptoms, or going after something that really isn't going to deliver the results we need, data can point us in the direction where we need to focus our efforts."

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Data guides continuous improvement.

"A lot of leaders in child welfare know where their biggest problem is, but they don't know how to solve it," said Carole Hussey, Associate Manager in the Human Services Practice at Public Consulting Group. Which interventions will work? "Any outcome can be evaluated through the use of advanced analytics. Post-decision-making, data clarifies which interventions are working and which ones are not working. We can develop tailored service models that allow us to change path in given sets of scenarios, and then evaluate them to understand the efficacy of that intervention. The key is what you actually do once you've learned something from the data.

"If you don't know the data in your existing environment, how can you establish key performance indicators? And if you don't know where you stand on key performance indicators today, how can you assess progress toward goals? So it really is critical to use data to establish how you're going to work and what you're going to work toward."

The value of a data-driven culture

"Given the fact that the industry is data rich, but analysis poor, now is the time for administrators and policy makers to lean on the power of analytics in an effort to do things differently and expect different and improved outcomes," said Jones.

There is growing appreciation for the value of data, said Hussey. "It seems like every meeting I'm in, no matter what the topic started out to be, we always somehow end up talking about data. It's exciting that people are interested and see value in it."

However, the greatest data and analytics in the world won't have any effect if they don't fuel a decision or change something. That requires a culture where people understand, value and demand fact-based decisions and strategies.

Few social services agencies have reached that point, said Milner. "A lot of social workers will say, 'I'm not interested in the data; I want to work with children and families.' [To change that attitude], the data has to be relevant to the people who will use it. They have to understand that the numbers are representative of the children and families they're serving.

"If I'm a social worker or supervisor, and I say I'm all about family-centered practice, how can I not be interested in what the data are telling me about engaging fathers, for instance? If I'm interested in permanence for children in foster care, how can I not

be interested in the data about success of older youth leaving the foster care system to independence? Making that connection back to the mission is a real hook."

Another hook is to prove how an operational analytics system can actually free up more time for what drew them to social work to begin with. "Recent child protective services work allocation studies have shown that 35-45 percent of a case worker's time is spent doing administrative duties, and less than 25 percent of a case worker's time is spent conducting client-facing activities," said Jones. "Technology can help flip those numbers, but there's often a reluctance to embrace change, even if it could benefit the workforce and the children being served. As someone who has been in the trenches and led large child protective services operations, I truly believe in the power of analytics to support informed decision making that will help improve child welfare outcomes and save lives."

However, few agencies have the culture or analytic maturity to take advantage of data to that degree.

What does a data-driven culture look like?

In *Competing on Analytics: The New Science of Winning*, Thomas Davenport and Jeanne Harris defined a five-level analytical maturity scale, from Level 1, "Analytically Impaired," to Level 5, "Analytical Competitors." In the book *Information Revolution*, thought leaders at SAS defined a comparable Information Evolution Model with five levels, from basic use of data to support discrete operational functions, to consolidation across functions, then integration of novel data sources for deeper insights, and moving from descriptive to predictive analysis. Both frameworks were devised primarily for business enterprises, but they apply quite nicely to any organization that relies on data, including social service agencies, who tend to rate as a 2.5 on either scale.

Not until the agency reaches a 3.0 might you say there's a data-driven or evidence-based culture. On the SAS scale, a Level 3 organization has integrated data from diverse sources into a broad perspective – a well-rounded view of children, their families, their social network and circumstances. There may be spreadsheets and other desktop applications in use, but the heart of the agency's information pipeline is based on formal information systems under a central point of control. Analysis is not just reporting on what was, but understanding what is likely to be under different scenarios and interventions. Data

users collaborate and have a holistic view of how their efforts contribute to the agency's mission.

The operational analytic solution in a Level 3 agency will improve outcomes in many ways, both for staff and clients. It can:

- Eliminate worker bias and the need for fidelity monitoring.
- Enable more accurate risk assessment compared to many current actuarial models.
- Support ongoing risk/safety assessments based on real-time or daily data feeds, not just periodic visits.
- Deliver critical information to case workers at their fingertips.
- Reduce time spent on administration and free up more time for client-facing activities.
- Give case workers better information to prioritize case-related tasks and make decisions.

It's easy to imagine how better information and operational efficiencies can improve the odds for at-risk children while using agency resources more wisely.

Does your agency have a data-driven culture?

- Is the organization open to new ideas that challenge current practice?
- Does the organization view data as a core asset?
- Is senior management driving the organization to become more data-driven and analytical?
- Does the organization use analytical insights to guide strategy?
- Is the organization willing to let analysts help change the way business is done?

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> Will Jones, Principal Industry Consultant, SAS

Eight tips for advancing a data-driven culture

1. Get leadership buy-in.

The first step in building the right culture is to have a strong, stated commitment to data-driven decision making as a core value that has consistent buy-in, involvement and investment from leadership. According to Milner, data-driven culture leaders will:

- Establish a clear vision.
- Research and learn from other agencies' successes.
- Examine the information infrastructure for effective data use.
- Remove or modify barriers to effective data use.
- Cultivate buy-in, commitment and trust in data.
- Foster professional development in understanding and using data.
- Lead by example to encourage data utilization.
- Establish data meetings to plan, track and improve data systems and processes.

But there's a catch. "We all know that state government leadership turns over every four or eight years, and that's a problem," said Milner. "To make a data-driven culture sustainable, you have to have buy-in from supervisors and case workers, who are likely to be there many years. You have to integrate the use of data into other parts of the agency where it becomes more institutionalized at the functional level. A lot of that is achieved through good old-fashioned, non-technical communication that gets those front-line people to embrace data, to use it, and to see the value it brings to the job they're doing."

> "There are going to be a lot of political, budgetary and even philosophical challenges along the way. Without leadership at the top of the governance structure modeling the behavior you want the rest of the agency to adopt, these challenges will be very difficult to overcome."
>
> Carole Hussey, Public Consulting Group

> "Look at other program areas and the social network of people who are supporting a child and family in getting to better outcomes – and have that data too. Some data will be in your span of control, and some will be outside of that, but ask, 'What data do you need to really evaluate progress toward our goals?'"
>
> Carole Hussey, Public Consulting Group

2. Look beyond compliance.

"The biggest struggle is to get away from the focus on data only for compliance reporting," said Smith. "One of the biggest challenges is making data relevant and valued in the field, not just seen as a hammer. It's about engaging front-line workers and making a clear connection to outcomes. It's up to top-level managers to set the tone and make data about the vision – to use it to make sure the vision is being practiced and is improving outcomes for the families and children that are being served."

3. Integrate data for big-picture perspective.

Marketers have really mastered the art of creating the 360-degree view of the customer – a perspective that spans all the customer's relationships with the enterprise and is enriched with information from a variety of third-party sources.

"One of the most important steps we can take in that direction – something shining stars in this area are already doing – is integrating data to provide information that people are really interested in, whether in the field or at the management level," said Smith. "We really need to elevate the conversation to provide broader information. We know it's possible. There are technology barriers and legal barriers, but there are ways to work around them. We just need to make it happen. Without that shared data, we focus on small process measures in our day-to-day work, such as how many visits were made, and we have a hard time getting a true picture of child and family outcomes.

For example, to get a clear picture of a child's risk would typically entail integrating data from six to 10 government agencies. Case agents don't have to pick up the phone and call all these agencies. Technology is available to streamline the process by retrieving all the relevant statistics from those various sources – departments of health, education and corrections, for example – and importing that information into one database.

Anomalies in the data, such as frequent changes of school or visits to the ER, would raise the child's risk score and could trigger an alert. The SAS Analytics solution for child safety provides a total risk score for each child based on numerous factors, as well as a map of that child's social network and data points related to those connections, such as criminal background.

4. Be very strategic about what you track.

"A number of agencies, sometimes because of settlement agreements, are dealing with very large numbers of reports and indicators, and it doesn't always support the agency," said Milner. "We need to be very strategic about what we're going to track. Use data as the opportunity to focus efforts, to prioritize what's most important and where we expect to get the largest benefit from the efforts we make. Focus on the indicators that represent behaviors that have a lot of influence on the outcomes you're trying to achieve."

5. Score some early wins.

It's hard to sell an idea, but everybody wants to buy into a proven success. "If I'm a child welfare administrator, I'm going to be looking for some early successes, some quick wins," said Milner. "Social workers, who are dealing with high-stress situations every day, need to be able to see how this really impacts the work they're doing out there. So it's absolutely essential to build in that possibility of getting some goals achieved early on in the process."

6. Think continuously improving process.

Smith showed a continuous loop graphic showing the key processes to make data relevant in the field:

- Use information to allocate resources in accordance with the agency's mission.
- Have front-line workers provide services consistent with mission and vision.
- Collect data in the process of delivering services.
- Capture and analyze qualitative and quantitative data over time, at the client level and aggregate.
- Continually monitor outcomes to assess the benefit of provided services.
- Feed data from that assessment back into the information used to allocate resources.
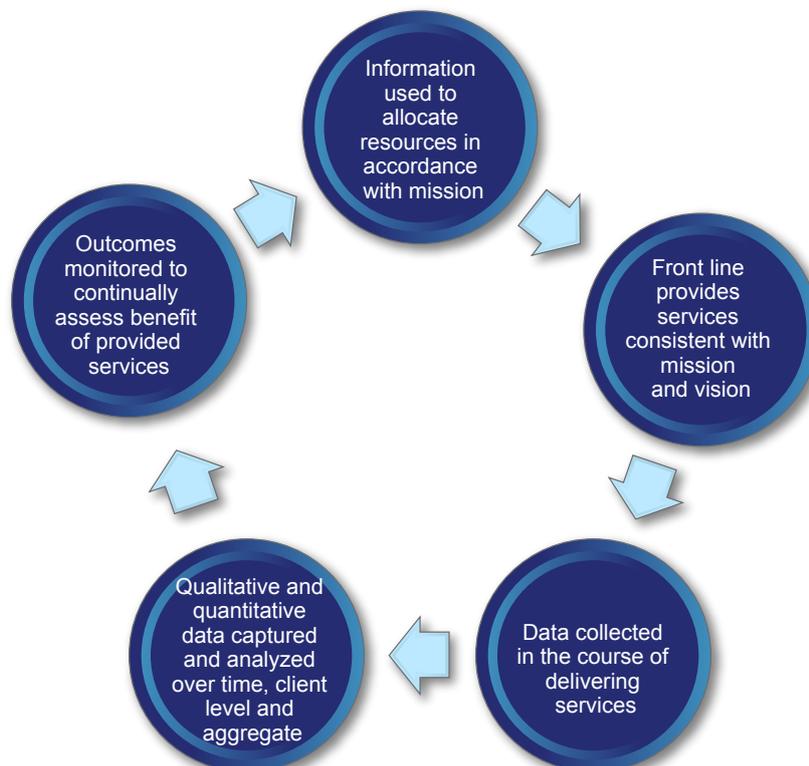
7. Keep it simple.

"We don't have to expect every supervisor out there to know all the ins and outs of the technical computations behind the data," said Milner. "They just need to know how to use the data and how to make that relevant and applicable to the work they're doing out in the field. Some of the biggest success stories I've seen have been social workers who realized how useful the data was to them in working with children and families, but they couldn't tell you a thing about how the data got computed or calculated."

8. Own it.

"We don't want the data – the use of it, the analysis of it – to be somebody else's business," said Milner. "From a very practical point of view, it needs to be the business of people at a broad range of responsibility within the organization. If it's going to be useful, it's going to be a part of the culture," not something you outsource.

> "The decisions we make on behalf of a child or family in the system are often traumatic from a child's point of view. So when we can use data to make better decisions about child removal, about when to send a child home, about any of the steps throughout the child welfare system – and we're able to minimize that trauma – that's key."
>
> Susan Smith, Director of Data Advocacy, Casey Family Programs

Closing Thoughts

"I don't think there are any outcomes out there that are irrelevant to the data," said Milner. "The data may be harder to collect for some outcomes than for others, but the data and the use of data is entirely relevant to all the outcomes we're concerned with in child welfare.

"The social worker in me says, overall throughout this process, the biggest outcome we can hope to achieve is to reduce the amount of trauma children experience as a result of their experience with child welfare agencies. It's simply a fact that often in our work, we unintentionally add to the trauma that children and their families experience when abuse or neglect occurs within the family context.

"When we move children, they experience a loss. We have data that helps us understand why children move and under what circumstances they're most likely to move. We can use that data to adapt our practice. When children don't achieve permanence in their lives, that's another trauma added to their lives, in addition to all the traumatic events leading up to that. We have or can get data to understand under what circumstances permanence is more or less likely – and we can use that data to adapt our practice. Ultimately, broader use of data and analytics should reduce the trauma that children and their families experience."

About the Panel Members

Susan Smith, Director of Data Advocacy, Casey Family Programs
Smith leads work to enable organizations to develop their capacity for data-driven decision making. Before coming to Casey, Smith served on the faculty at the University of Southern California and taught child welfare policy and research there, as well as at the University of Washington and the University of Chicago. Smith earned her doctorate from the University of Chicago and Masters of Social Work from the University of Washington.

Carole Hussey, Associate Manager, Human Services Practice, Public Consulting Group
Hussey leads delivery teams in IT planning and consultant engagements for public sector human services nationwide for the Public Consulting Group. She has led efforts for many large-scale, high-risk enterprise initiatives in various program areas, including Child Welfare, Medicaid cost reporting, integrated eligibility, SNAP/TANF (Supplemental Nutrition Assistance/ Temporary Assistance for Needy Families).

Jerry Milner, Vice President for Child Welfare Practice, Center for the Support of Families
Milner has 40 years of public sector child welfare experience at the local, state and federal levels. In his current role, he assists state and local child welfare agencies in evaluating their child welfare programs and implementing needed improvements in practices, policies and procedures.

Learn More

View the on-demand webinar: sas.com/apps/webnet/webcast_ viewer.htm?index=wc_sa03dec15bc

Learn about SAS solutions for child welfare: sas.com/en_us/ industry/government/child-well-being.html

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