

Better Data, Better Outcomes

Engaging Users in Performance Management

Performance on outcomes and other measures depends on a wealth of factors, including the appropriate and accurate collection of data. This paper explores some of the issues affecting data quality in child welfare case management systems and their underlying causes. It also shows how these issues have the potential to lead to distorted performance and outcome measures and how they can become an impediment to actual practice improvement. The paper then describes the Children's Research Center's efforts to give agency staff the tools they need to improve both the quality of child welfare practice and the data that are used to measure it. At the center of these efforts is SafeMeasures, a service that supports continuous quality improvement through the use of near-real-time data, continuous engagement, total data transparency, and a community of users invested in the accuracy of the data they enter. Because of these elements, the SafeMeasures approach results in documented performance improvement.

San Francisco County's child welfare agency noted a problem when they reviewed their performance measures for making timely contacts with children served by the agency. According to the data report, only two of every three children were receiving scheduled social worker visits. Because failure to make regular contact with children in care places them at risk, maintaining regular contact is a top priority of child welfare agencies. Yet the data was telling the agency that contacts were not being made. What was the cause? Were more staff needed? What would the cost be?

Upon investigation, the agency was able to identify the true problem. It was not an issue with the number of staff, or the staff's service delivery, or even the analysis that produced the report. Rather, it turned out to be the underlying data. Workers were contacting their clients, but these contacts were not being documented in the agency's case management system in a correct or timely manner. A potentially costly and unnecessary response was avoided because the true cause was identified: poor quality data.

It is dangerous for agencies to assume that the data they collect is accurate or timely, especially when this data comes from large information systems that are designed to manage casework, not to collect reportable data. Agencies cannot invest in multi-million-dollar software applications and databases and hope that they will somehow fill up with useful and reliable data. Without a system in place to ensure data quality, data measurements can become worse than useless: they may distract or deceive us into allocating resources in ways that do not address real problems.

The Children's Research Center (CRC), a division of the National Council on Crime and Delinquency (NCCD), has dedicated itself to helping social services agencies identify and implement best practices. Since 1993 CRC has worked to reconcile a widespread issue plaguing the child welfare field: the disparity between the vast amounts of data entered into child welfare data collection systems and the usefulness of the information returned. With the increased complexity of modern child welfare information systems, CRC has observed that this disparity is getting worse.



CRC's solution is SafeMeasures®, a unique continuous quality improvement system that meets both the day-to-day case management needs of the line worker and the reporting needs of the high-level administrator. By using shared, current data, agency staff are all aware of and invested in improving the services they provide to children and families.

This paper explains the principles behind SafeMeasures and discusses what separates SafeMeasures from typical business intelligence tools. These principles have proven successful in improving data quality and program performance. In the end, we will highlight an easily overlooked area in the development of social service information systems: data integrity and its relationship with front-line staff.

Current Systems: What Is Going On?

Modern technologies have made it easy to gather data, but turning this data into usable information remains a daunting task. The growing dilemma of the information age is how to make sense of all of the data we accumulate. While business, industry, and government all struggle with this problem, the field of social services seems to be especially challenged. Understanding the impact of daily operations on outcomes and program effectiveness has largely eluded researchers and analysts in social science.

The state of basic information about child welfare in the United States is a case in point. In 1997, prompted by inconsistent and conflicting information, Congress enacted the Adoptions and Safe Families Act. The act mandated that each state collect data on children in their child welfare system and report it to the federal government in the form of case records. However, most states did not have computer systems that could do this. In some, there were no records available at the state level. In others, differences between counties in both case practice and data management made it impossible to pull together a master set of case records.

To address these difficulties, the federal government passed legislation that provided billions of dollars to fund statewide case management systems. A study funded by the Annie E. Casey Foundation found that as of 2007, \$2.8 billion in government money has been spent on the development of these new systems, which are generally referred to by the acronym SACWIS, for State Automated Child Welfare Information System.¹ In most cases, the databases, interfaces, and analytical tools adopted for SACWIS systems are the same as those used by business. Yet, for all the expense, effort, and technology, we do not seem to have much more knowledge about the effectiveness of child abuse and neglect programs than we did in 1997.

Why? In part, this may stem from two assumptions that seem to underlie SACWIS development:

- The data entered into these large, complex data systems will be timely and useful; and
- Agencies will be able to find and retain staff with the required computer, analytical, and business process skills needed to analyze the data in an effective and timely manner.

One problem with these assumptions is that people do not become social workers because they want to work with computers. If a social worker is going to devote a significant amount of her time to entering and managing data in a computerized system, that system must be relevant and useful to her work with clients. CRC believes that most SACWIS systems overlook this critical insight. Many SACWIS applications only work in one direction: workers enter a lot of data, but the system fails to provide direct, timely, and useful

¹ Bissell, M., & Miller, J. (2007). *Child welfare technology research project*. New York: Stewards of Change.

information on operations and progress toward outcomes. Simply put, there is a disconnect between a social worker's daily work routine and the information that comes out of her SACWIS system.

A Different Approach

While working on other projects, CRC staff noticed that supervisors and line staff were being held accountable for several performance measures, but they did not have the tools available to monitor their day-to-day and week-to-week compliance. In many cases, they were given printed reports the size of a phone book that documented what happened to cases that had closed six months earlier.

In response to this situation, CRC created a reporting system that could analyze compliance with case practice standards. CRC believed that to be useful, this system would need to be accessible from the workers' computer desktops and updated frequently. CRC compiled a list of further requirements:

- This system must be easy to use and relevant for all users at all levels of the agency.
- It must encourage transparency, i.e., all users should understand how the data is being analyzed and how cases are being counted.
- The data and the resulting reports must be as current as possible.
- The reports must reflect ongoing changes in practice, policy, and regulation.
- The reports must allow for local variations in practice and policy.
- The system must include a tight feedback loop between users and analysts to support ongoing communication and resolution of problems with reports or system data.

The result was SafeMeasures. With SafeMeasures, CRC has helped more than 50 social services agencies set up systems that use data to improve performance. Developing SafeMeasures and working with these agencies has taught CRC a few lessons about looking at data critically and developing processes and systems for ensuring data quality.

What Is SafeMeasures®?

SafeMeasures is a unique accountability and continuous quality improvement service. Each SafeMeasures analysis reviews every case in a SACWIS system to provide performance indicators and outcome measures at every organizational level, from the entire agency down to the individual caseload.

SafeMeasures provides a tool for supervisors and case managers to monitor compliance with local case practice standards and state and federal outcome goals. It can also act as an accountability system for funding and oversight bodies that hold the agency responsible for achieving goals, reforming practice, and utilizing resources effectively.

SafeMeasures has four primary components:

- A hosted analytical service to transform case management data into performance and outcome metrics.
- A dynamic display engine that presents outcome data in a variety of built-in views, along with multiple options for organizing (“slicing and dicing”) the data to meet users' needs.
- Hands-on training for supervisors, managers, administrators, and IT/research staff.
- An end-user support system that engages users directly with analysts in a dynamic feedback loop to continually improve the analyses.

These components support the fundamental premise of SafeMeasures: positive outcomes are the result of actively and effectively managing practice. This cannot be done by looking backward at outcomes from 3, 6, or 12 months ago. The most direct path to improvement is to monitor what is happening *now* by putting specific, frequently updated indicators on staff desktops.

SafeMeasures provides supervisors and their staff with simple, current answers to a discrete set of questions that will help them do their respective jobs. At a superficial level, many reporting tools can be seen as accomplishing the same goal. What sets SafeMeasures apart from other reporting tools is CRC's notion of "living analyses," which represent a tightly bound suite of user-centric services: a rapid analytical cycle, continuous engagement, bottom-up reconciliation, and total data transparency.

Rapid Analytical Cycle

Supervisors need current information. Caseloads are dynamic; service information is updated regularly; clients' needs change. SafeMeasures takes the position that the "truth" lies in the most current state of the data: if the underlying data has changed, then what was true yesterday is no longer true today. For this reason, SafeMeasures re-analyzes every display period in every report at least twice weekly, if not nightly, using system data that lags real time by no more than 48 hours. This is the rapid analytical cycle, and it helps guarantee that supervisors and their workers always use current information to make decisions.

Continuous Engagement

Traditionally, report development is conceived as a one-time engagement. Agency management articulates a need for specific report; research staff or contractors write a draft; management reviews the draft and makes comments or requests changes; and the report is then submitted as official. The engagement ends once the report is published.

With continuous engagement, a SafeMeasures report goes through the process described above, but publication is not the endpoint. Rather, it marks the beginning of an ongoing review process that addresses a few fundamental questions:

- Is the report topical?
- Does it continue to match the current regulatory or policy landscape?
- Is it accurate?
- Does it handle exceptional cases adequately?
- Does the information presented sufficiently answer the nuances of the question being asked?

These questions remain on the table for the lifetime of the report. If the answer for any of them comes back in the negative, the report is immediately fed back to the analyst for review and revision. There is no fixed endpoint, because the only acceptable endpoint is that the information presented to the user is relevant, accurate, and complete.

Bottom-up Reconciliation

Standard vetting techniques for statistical reports are top-down. An analyst returns a report and methodology document to an administrator or review committee. Sometimes the reviewers may ask for a list of sample cases to see how they were reported. The reviewers generally do not know how to read the analytical code, so they depend on the descriptions in the methodology document, along with their familiarity with the system, to come to a consensus on whether the report is correct. The report is then approved for dissemination to the

user community. While this top-down evaluation is a standard part of any quality assurance or vetting process, the results are, at best, well-educated guesses made by a relatively small number of individuals.

Bottom-up reconciliation completes and validates the vetting process by making the cases counted in each category visible to the user community. When a report is approved and promulgated, there is also a quality assurance hand-off from management to the users. But the users are not just reviewing a sample of cases; they work with all the cases in their unit. And they reconcile individual report cases against what they have in the case files and the live SACWIS system, and do so continuously. Because all users have a vested interest in the accurate reporting of the cases for which they are responsible, their ability to see which cases are being counted and how they are being categorized makes the users the most accurate element of the vetting process. If a user believes that one of her cases is being misreported, the SafeMeasures team works with her to determine why the case may be misreported, modifying the analysis if appropriate. Not only does this ensure accurate analysis and reporting, it also helps identify differences in practice, areas of practice in need of refresher training, or issues in the underlying case management system.

Bottom-up reconciliation guarantees greater accuracy of information. Rather than a few people looking at the output, the entire user community vets every report every time it is displayed.

Total Data Transparency

Getting people to trust and use social services data to guide their decisions can be a challenge. Many users see data systems as an imposition. Often, they mistrust the content. Many users are more cognizant of what is not in the system than what is available, and some feel victimized by an inadequate data system rather than being invested in the quality of “their” information.

Total transparency is the notion that the worker understands exactly how every entered data element affects the report content. The help for SafeMeasures displays is written in “user speak,” the language of the end user. Help graphics capture what the user sees in his case management application, explicitly showing that *this* data element is checked for *these* values. When workers question a case, they are instructed to compare the output from SafeMeasures to what they see in the live management system. This exercise of relating SafeMeasures back to their system forges a solid link between what they put into the system and what comes out. SafeMeasures help desk staff report that this exercise resolves over 90% of questions, generally because the user discovers that the cause of the problem is incorrectly entered data.

In summary, the unique features of SafeMeasures transform a series of static data reports into a comprehensive set of living analyses. Users see a direct connection between the work that they do and what is in their system. Electronic data are seen as useful information, not an impediment. When users can see how the results of their actions in the case management system are directly reflected in the reports used to monitor their performance, they see how the system supports their work, and they become better users of the system.

Does This Approach Make a Difference?

According to the data, yes. As mentioned earlier, when the San Francisco County agency detected a problem with contact compliance, SafeMeasures helped the agency determine that the problem was not with staff ability to make contacts. Rather, staff needed to improve their SACWIS training to ensure that all contacts were entered accurately. SafeMeasures also helped supervisors and line staff monitor performance and identify staff members who needed additional assistance.

As Figure 1 shows, prior to SafeMeasures implementation, San Francisco’s documented contact compliance rate was around 65%. With SafeMeasures identifying problems with practice, the county increased its compliance to 93% and has maintained that level since.

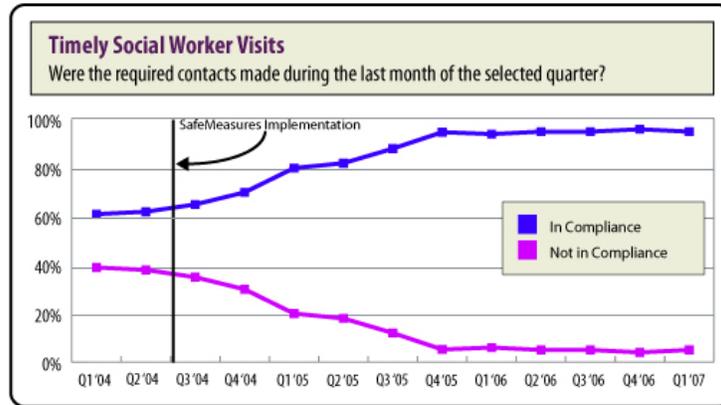


Figure 1: San Francisco County Contact Compliance By Quarter, Q1 2004 to Q1 2007.

A similar change can be seen in Fresno County. In California, child welfare investigations are assigned a priority of “immediate” or “10-day,” which determines how quickly an investigator must make contact with a child victim. By all appearances, investigators in Fresno County were having trouble making their first contacts on 10-day investigations. However, they were not having the same trouble making contact with their immediate investigations.

SafeMeasures exposed a misunderstanding among staff as to how to calculate the due date for a 10-day investigation. Once this issue was resolved, performance in Fresno County soared from approximately 30% to more than 80% in one quarter (see Figure 2). As in San Francisco County, clarifying data issues helped address and correct case practice problems.

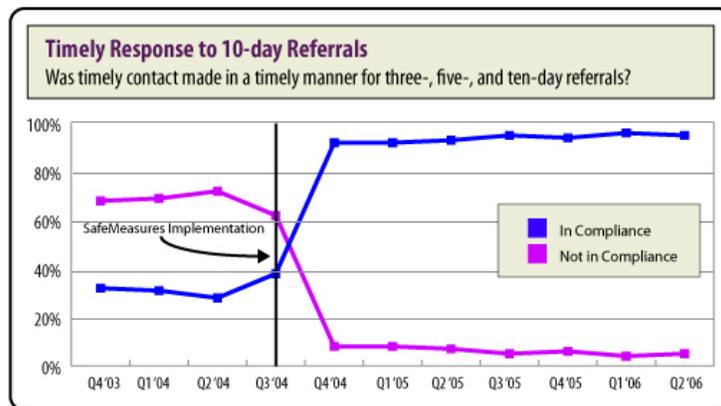


Figure 2: Fresno County Time to First Contact By Quarter, Q4 2003 to Q4 2006.

By using information from SafeMeasures, Alameda County, California, achieved compliance in six process outcomes on which they had previously been non-compliant. This improvement resulted in California Department of Social Services (CDSS) relieving the county of a formal notice of non-compliance and

potential legal action.² The magnitude of the improvement is not lost on state and county administrators. As the CDSS stated in its report to the federal government:

With SafeMeasures, managing performance shifts from using data based on limited randomized samples, to an analysis of data from CWS/CMS [California's SACWIS] for all cases in near-real time (reports are updated and refreshed twice each week). Social workers, supervisors, and managers connect with the data entered into CWS/CMS as they use the SafeMeasures tool to identify problem cases before they turn into negative outcomes.

Ultimately, SafeMeasures' goal is to improve outcomes for children in the child welfare system. We cannot improve our programs if we do not know how they are doing right now. SACWIS systems have given us a wealth of data about the children being served. However, the quality of the data is suspect, and agencies have limited tools with which to turn it into meaningful, usable information.

As an approach to quality improvement, SafeMeasures provides a lens with which we can view services, performance, and outcomes in the context of the SACWIS data system. By creating living analyses that include and empower the social worker in the quality improvement process, we create an environment where everyone can understand what elements of practice succeed and what elements need to change.

A SafeMeasures' Success Story

Because SafeMeasures makes the cases underlying an analysis visible, users are able to question how and why a specific case is categorized. As a result, the users responsible for those cases have a vested interest in making sure the data is accurate, and they have the tools to determine where the data is not accurate. Coupled with near-real-time data and reports at the unit and caseload levels, this visibility helps staff identify the problem cases; much of the subsequent impact is attributable to the correction and timely entry of data by staff.

This visibility can also be used to quickly review and modify the measurement methodology. This occurred recently in California, resulting in a policy change at the state level. California mandates that children in foster care must be maintained in the least restrictive setting available. A county contacted the SafeMeasures help desk to question why several of their children who, according to CWS/CMS, were placed in small family homes, were categorized as being in a group home. This categorization had a negative effect on the county's performance report.

SafeMeasures analysts reviewed the cases and determined that they were categorized in accordance with the methodology approved by the state for that report. Small family homes were indeed included with group homes in the official state methodology. SafeMeasures analysts responded to the county with citations and examples of the relevant state program code. At the same time, they also notified state analysts and others involved in determining the methodology. The state analysts conferred and contacted the CDSS Child Welfare Data Analysis Bureau. Together they agreed to take the small family homes out of the group home category and put them into the foster homes category.

A public announcement of the change to the analysis was made less than 24 hours after the original question from the county was received. This kind of change could never have taken place without the transparency SafeMeasures offers and the close relationship with California staff that it has created. The magnitude of the change was small, but from the county's perspective, significant. Group homes are generally considered a more restrictive, hence undesirable, setting. Statewide, 4,976 children were reported as being in a group home placement (CSSR, Dynamic Reporting System, 4B PIT, October 1, 2008). CRC estimates that the revision will reduce the reported group home population by 5 to 6%.

² From California Federal Child and Family Services Self Assessment, December 11, 2007.

How Can I Find Out More About SafeMeasures®?

For more information about SafeMeasures, contact:

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