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Telling Your Story is a Click Away:

Using Data to Support Community Change

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Effective and Meaningful Data for Driving Change

We are well into the information age. In fact, we are awash in both information and data. An enormous amount of data and information is a click a way for most of us. As it relates to improving the outcomes for children, families, and communities, we know much more about the resources we have, where and how we allocate them, who is served, and how much service they receive, and the outcomes all of this investment is producing.

Yet, the data most available – data on where, how much, and how often a resource has been used – is simply not the information needed to drive the results we are trying to attain. So, what is the data needed to drive the improvement necessary to achieve better outcomes?

Data needs to tell the story as you think it will unfold, show how the story is actually unfolding over a period of time, and assist each person or entity to see where and how one's actions "fit" within it. This brief outlines how effective and meaningful data can support the change efforts of different community stakeholders so they achieve their desired results. An important caveat is that data alone does not drive change. It is insight – the process of making sense or meaning out of information – that sparks learning and change. Who gets what data, how they get it, and how they are supported to reflect and act on it are critical.

Data needs to help make the system more visible

Improving well-being in a community goes beyond the "right" service strategy, resource, or planning process (Bowie, 2011). It requires recognizing communities as complex systems. By a system, we mean a network of interdependent components that work together to accomplish a shared aim (Deming, 1986). In communities, this can include resident actions, parent actions, services and supports, and community resources. The interdependence refers to how various community stakeholders intentionally, and sometimes unintentionally, interact with and react to each other with an ultimate impact on outcomes. In complex systems like communities, the constant interplay of actors and actions produce outcomes that are impossible to fully predict (Meadows & Wright, 2009; Mitchell, 2009).

Our inability to predict and fully control what will happen in a complex system does not mean that it is not important to have a prediction, or a theory of change, of what actions will improve the outcomes of the system (Deming, 1986). A theory of change provides a foundation for planning a course of action. It also provides the opportunity to adjust as things move forward, which we sometimes refer to as "learning our way forward." This means formulating an idea, stating the assumptions, testing the ideas on a small scale, and making adjustments until you consistently get the result you intended.

Data needs to tell a story

Data should provide Information that helps people understand the behavior and performance of the system. Thus, crafting a story establishes the who, what, where, when, and how community change will happen. It is based in the theory of change and is an important vehicle

to bring diverse stakeholders together in a shared understanding of what matters and what actions should be taken. A story provides a point of reference from which to judge the situation and give meaning to the experience of stakeholders as they learn their way forward. The initial theory is based on existing data, experience of stakeholders, and research. The prediction of what drives change will need to be tested and adjusted based on information about what is happening in the present.

Thus, information needs to tell a story that explain the theory by including the following:

- *results* the system is producing (birth outcomes, kindergarten readiness, third grade reading scores, high school and college graduation rates, life expectancy, etc.)
- *individual behaviors* that contribute to those conditions (such as physical exercise and healthy eating, daily habits including parents reading daily with their young children, healthy parenting behaviors, consistent nurturing and care)
- *family and neighborhood conditions* contributing to those behaviors (such as social connections, access to healthy foods, safe environments, quality education, safe and stable housing, jobs and financial stability, family stability)
- if and how reliably individuals or organizations are taking the *actions* believed necessary to support positive behavior change (such as using empathic care, providing quality services, linking individuals to needed services and supports).

Data at the "right level"

Different levels of data provide the information needed to create a picture of progress of a system toward its goals. A family of measures can show individual actions in the near term as well as collective long-term results. See Table 2 for "Examples of Measures." This includes measures of

- long-term outcomes (the *results for children and for families*)
- intermediate results (the *drivers of change intended to improve family conditions and parenting and other health behaviors that are expected to contribute to the desired results*)
- day-to-day measures of progress in how individuals within organizations and within neighborhoods are supporting families toward desired goals (the *actions*).

Most community scorecards, report cards and profiles emphasize child and family outcomes. Outcome measures are the responsibility of the policymakers and system leaders (such as First 5 LA) and public agency leaders (such as school districts, the Los Angeles County Chief Executive Office, city and county department heads, etc.). These system leaders use scorecards or report cards to establish high-level goals for the system. This refers to numeric targets for what success would look like. Beyond policymakers and system leaders, community members and stakeholders can also use outcome measures as motivation to advocate for improved neighborhood and larger community conditions.

Information about child and family outcomes is not sufficient to help organizations, families, or residents understand what specific actions they can take to change the outcome.

Organizations need information on "drivers," which refers to organizational practices that influence, shape, or drive the outcomes of the system. Drivers are concepts for how a system should operate to accomplish an intended goal (Inkelas, Bowie, Kahn, Margolis, & Provost, et al., 2013a,b,c; Inkelas, Margolis, Kahn, Bowie, & Provost, 2013; Bryk, Gomez, & Grunow, et al., 2010). Drivers are generally the responsibility of managers and program coordinators in the system that is being worked on. Examples of drivers include empathy in all encounters with families and reliable referral processes. Individuals who focus on implementation of the drivers tend to be chief executive officers or public or private agency program leaders, program managers, or coordinators. These are the individuals who are asked to, or simply trying to, align their work with others and function as a system to achieve better outcomes for their constituency. Challenges to aligning efforts include narrow service mandates and funding restrictions. The drivers help diverse stakeholders see specific ways that they can adopt common actions and practices within their "sphere of influence" to create the intended experience for families.

The providers and other individuals who interact on a daily basis with families need information about how well they are carrying out specific actions, also called care processes, that follow from the drivers (Inkelas, Bowie, et al., 2013a,b,c; Inkelas, Margolis, et al., 2013). It is usually frontline providers who are actually introducing the information, guidance, or other support intended to effect change with individuals and families, so meeting their information needs is essential. Making change happen is typically the responsibility of program managers or coordinators in partnership with the frontline providers of services and supports (such as doctors, social workers, teachers, intake workers, and others). This is why it is important that these individuals have access to regular and timely feedback about their care processes. They often need this information monthly, or soon after the service date, so they can easily see if their changes are leading to an improvement.

A current challenge is that frontline workers often spend considerable time gathering and entering data, but do not receive it back in a meaningful time frame, or at all. Making sense or meaning of the data is what creates the opportunity for change that leads to improvement. This requires having the time to reflect and to make connections between the data and one's actions. It is important to keep in mind that having information alone is not sufficient to drive change in professional practice, in resident actions, or in home behaviors. Professionals, management, and frontline staff, as well as residents and parents, need coaching and other support to actually make a change.

Community members also need information to guide their change efforts. They may consider themselves neighborhood residents; participants of, or clients working in partnership with, organizations; parents striving to create safe, nurturing, and development-promoting home environments for their child; or all of these. Some will use information on outcomes for local children or on the allocation of resources to advocate for changes or new resources in their neighborhoods with entities such as neighborhood and city councils. Other community members use information to respond to crime or other concerns with actions such as joining the PTA or neighborhood watch. And some community members respond to information

about individual behavior by making personal changes such as exercise or developing home routines such as reading together with their child. Some community members use the different types of information to take all of these kinds of actions. It is important to support community members with the right information tailored to their purpose. The type of information that motivates one to advocate for resources or safety should not be assumed to be the same type that is needed to help parents change their personal behaviors at home.

Table 2 titled "Measuring at the Right Level" describes how a system or network of organizations can use information to engage key stakeholders at each level necessary for change at the community level. Chief executive officers and program directors focus on measures of the core theory of the strategy, also referred to as drivers. These are categories of changes that, taken together, are expected to improve results and reach or surpass the goal targets. Examples of drivers include activating parents or residents, eliciting parent concerns, and providing empathic, client-centered care. Frontline providers and staff focus on measures of day-to-day practice that tell them if changes to their work actions, protocols, or processes are improving specific goals, such as asking specific questions consistently in family encounters/visits, providing linkages/referrals, and offering access or reduced wait time to receive information, service, or support.

Recognizing the need for the right measurement at the right level acknowledges the reality that leaders in a system do not attend to day-to-day actions and therefore require a different set of measures that indicate the day-to-day operations are achieving a larger impact. Similarly doctors, social workers, classroom teachers, and parents cannot be accountable for achieving results, such as third grade reading or reducing low birth weight. By providing the various stakeholders information at the level that is appropriate for them, everyone receives the information they need to take actions within their realm of responsibility or influence. Putting the measures together shows if everyone's collective actions are resulting in meaningful change.

Choosing measures

There are well-recognized features of useful measures to drive change for programs and systems (Reinertsen, 2007; McGlynn, 2003; Siu, McGlynn, Morgenstern et al. 1992) as well as for community systems that are striving for a population impact (Inkelas, Bowie, et al., 2013a,b,c; Inkelas, Margolis, et al., 2013; Bowie & Inkelas et al., 2012). Guiding principles for selecting measures include the following:

- *Validity*: Measures should represent the intended concept.
- *Reliability*: Measures should dependably gauge the intended concept over time.
- *Sensitive to change*: Measures should tell us if actions are producing better results.
- *Meaningful to the change effort*: Measures should reflect what we care about and represent important rather than minor features of the desired system.
- *Parent/consumer voice*: Measures are especially meaningful when they include the voice of the parent/consumer. Sets of measures that reflect only what organizations think they have done, and not what families say they have experienced, are less meaningful.

Scalable: The concept of *scale* is essential to consider if we intend for reflection on measures, and changes that result from this reflection, to impact a geographic population of children and families. We strive for measurement that works at the desired scale because change at a community level requires efforts of many stakeholders, and reach to the target population. This refers to all families in a community (a population of children) and to all organizations serving these families.

Working at scale also means that the data collection is feasible for all organizations, under all conditions. Some data collection systems that track information about children and families are proprietary and costly to organizations. Data systems that are tailored for a specific program or subpopulation are unlikely to scale within an organization to cover all families, or within a community system to cover all of the organizations involved. It is difficult to get a data-driven, population-wide change if the data collection process does not extend to all who need it. This is why scale is so important to consider when measures and the data collection process are chosen.

Sustainable: It is also important to select a modest number of measures at each level. Overwhelming leaders and practitioners with too many measures to track and improve is one of the most common reasons that change efforts get stuck. The key is to have measurement become a routine part of practice and regularly reviewed by leaders to inform decision making, assess progress, and support improvement over time.

To that end, the measurement system should be designed for the long term. It is important to *sustain* the measurement long enough to see the learning, testing, and implementation take effect. Measurement that takes too much time to collect is unlikely to be sustained as a permanent part of a community system. Similarly, data systems that are costly to maintain for a system, or for organizations to use, are unlikely to be adopted by the number of organizations required to get to a population change.

Again, the key is to have a scalable and sustainable data system such that all network partners who need to be involved to achieve a system-level, community-wide change can actually adopt measurement as part of their routine practice.

Recommendations

When attempting to drive change for a large-scale community effort or place-based strategy, of particular importance is adopting a system of measures that *tells a story, motivates people to take the appropriate actions in their sphere of influence, works at scale, and can be sustained over time.* This is essential because systems do not transform overnight. It takes a long time to improve family conditions influenced by a complex community system. Many things need to happen at the same time for families to experience a difference and for participants to begin to see the benefit of their individual efforts.

- Select a set of measures that reflect your theory of change from action to results.

- Be mindful not to overwhelm those you hope will participate by adopting too many measures.
- Avoid giving people (actors, stakeholders) measures without a change process that helps them take actions in their sphere of influence.
- Consider all the different roles that community members play when providing or helping gather and use information. They are a critical voice in showing how system is performing, and creating the "demand" for change. Recognize that information for one purpose may not be helpful for other purposes, with the understanding that not all community members will play all possible roles.
- Design a measurement system for scale so that all of the community members, community-based organizations, and decision makers who are important for the outcomes will receive the information they need to take the appropriate actions at their level. This means attending to considerations of cost to develop, maintain, and participate in a data collection system, as well as considering open versus proprietary information systems.
- Design for sustainability so that data supports an enduring change process. Designing measurement support for a 2–3 year process may inform some change, but it is unlikely to deliver community-wide change, or provide families with a supportive environment for a long enough period of time to have an impact on their conditions, actions, and well-being.

There is now a great opportunity to reflect on data needs and to design better measurement systems for place-based efforts. Whether known as collective impact, promise, or choice neighborhoods, cradle to career, place-based, or comprehensive community initiatives, many past and present efforts seek to overcome the aforementioned challenges and improve individual, family, and community outcomes. Much has been written on why most of these initiatives have failed to realize their intended results. Many cite the need for data and the importance of having shared outcomes and measures.

In addition to the measurement principles listed above, it is important to remember that improvement comes from embedding information within an effective change process (Langley et al., 2009). Information that is isolated from a systemic approach to learning and improvement is unlikely to yield demonstrable change. It is often stated that "what gets measured gets done," and it is also common knowledge that "you can't fatten a cow by weighing it."

Providing data so that leadership, managers, providers, community, and family members are all taking regular actions and getting regular feedback is critical. Everyone has a different role, responsibility, and sphere of influence, so providing meaningful information at the right level and periodicity is essential for achieving better outcomes in communities.

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Table 1. Examples of Measures.

Policy and System Leaders	Organization and Program Leads	Frontline Providers	Community Members
Third grade reading % of children in third grade who are proficient or above	**Home routines** % parents of children < 5 who read together daily	**Discussion & coaching on reading** % of families who receive guidance on how to introduce reading as a daily routine	**How are children in this neighborhood doing? Comparison of neighborhood school with elsewhere? Parents reading to their children daily?**
Unmet needs % of families with unmet needs for common needs (such as depression, food, housing)	**Ease of linkage** % of organizations reporting that linkages are easy to make for key services (such as medical care, mental health, home visiting)	**Linkage & referral** % of families referred by their provider to specific types of resources (such as financial services)	**Neighborhood conditions** % of community members who feel safe on local streets and in parks
Learning culture % of organizations in a network with high ratings of teamwork, reflection, and learning culture	**Improvement activity** % of providers/staff in a network displaying regular improvement activity	**Improvement cycles** % of providers/staff who can complete a test of change	**Collective neighborhood actions** % of community members who know their neighbors and believe they care about the community % of community members active in the schools or taking civic action

Table 2. Measuring at the Right Level.

	Policy and System Leaders	Organization and Program Leads	Frontline Providers	Community Members
What questions do we ask?	What are our key strategic goals? How good must we be, by when? What are the "whole system" measures of those goals?	What needs to be changed, or put in place, to achieve each of our goals? What are we tracking to know whether these drivers of the results are changing?	What set of strategies/actions will move the drivers far enough, fast enough, to achieve our goals? Are parent/participants interactions with staff, programs and the organization improving? How will we know if the strategies are being implemented effectively?	How well are children doing in our neighborhood, our community? Are things getting better? Do other community members have the same perceptions and experiences that I do?
Decisions and actions influenced by measures	What investments, resources, policy changes can be made to improve the measures?	What approaches do we use to influence the conditions that are driving the result? How can we create the conditions in our organizations, programs, networks that will encourage providers/staff to act in these ways consistently?	Are our improvements making a difference for families and children? In all conditions/in all interactions? What should we adjust to be more effective?	What can we ask local leaders to do/provide for our community? What direct actions can we take together as neighbors to make a change? What changes do I want to make in my family life, personal life?
Use of the measures	Setting numeric goal targets for the system/ network, and committing to changes that will help organizations, providers,	Prioritizing which improvement projects to undertake. Are the strategies being implemented effectively?	Gauging the impact of testing and implementing changes (daily, weekly), as perceived by providers and staff (does it seem to	What to advocate for with decision-makers, what contributions to make in working with neighbors to make the community a

	community members take the actions that are needed	Are the strategies having the intended results?	work? are we saving time?) and families (are we addressing their priorities and concerns)?	better place for families, what changes to make in one's personal and family life

Adapted from: Reinertsen JL. Boards, dashboards and data. From the top: getting the Board on board. Institute for Healthcare Improvement. June 11, 2007. Boston, MA and Getting the board on board: engaging hospital boards in quality and patient safety. Joshi MS, Hines SC. Jt Comm J Qual Patient Saf. 2006;32:179-187. http://www.webmm.ahrq.gov/perspective.aspx?perspectiveID=45