

Briefing Notes No. 2

The Value of Quality Data and How to Get It

April 30, 2012

Introduction

The Community Indicators Consortium (CIC; see www.communityindicators.net) is the driving force behind an evolving Community of Practice focusing on Community Indicators-Performance Measure (CI-PM) Integration. Community indicators quantify values, community, conditions, outcomes and results important to the residents of a community. Performance measures communicate the outputs and outcomes of services provided by a governmental or nongovernmental entity.

Figure 1 illustrates tight community indicator-performance measure integration.¹ Example A shows an execution gap where little alignment in programmatic strategies results in reduced program performance and community impact, as measured by performance measures and community indicators, respectively. Example B shows both governmental and nongovernmental entities working together, resulting in a minimal execution gap, better program performance, greater return on investment, and better community-wide results, as reflected by community indicators.

Issues surrounding data are central to both community indicator and performance measurement projects. What data do you need for a community indicator or performance measurement project? Who has the data and how do you acquire it? How do you ensure that the data obtained is of sufficient quality? What are the best ways of reporting the data so that community members understand it? Thus, working together to resolve data challenges in a community is an essential element for bridging the gap between community indicators and performance measures.

The acquisition and use of quality data in CI-PM integration efforts is essential. Without quality data, the usefulness of integration efforts will be marginal at best. Quality data allows community indicators to be linked to performance measures such that program impact can be quantified and linked to community needs and emerging priorities. Without quality data, there is no *collective impact*², only a collective effort. However, quality data does not mean that data do not have limitations and the desire for the highest quality of data must be balanced with data that is timely.

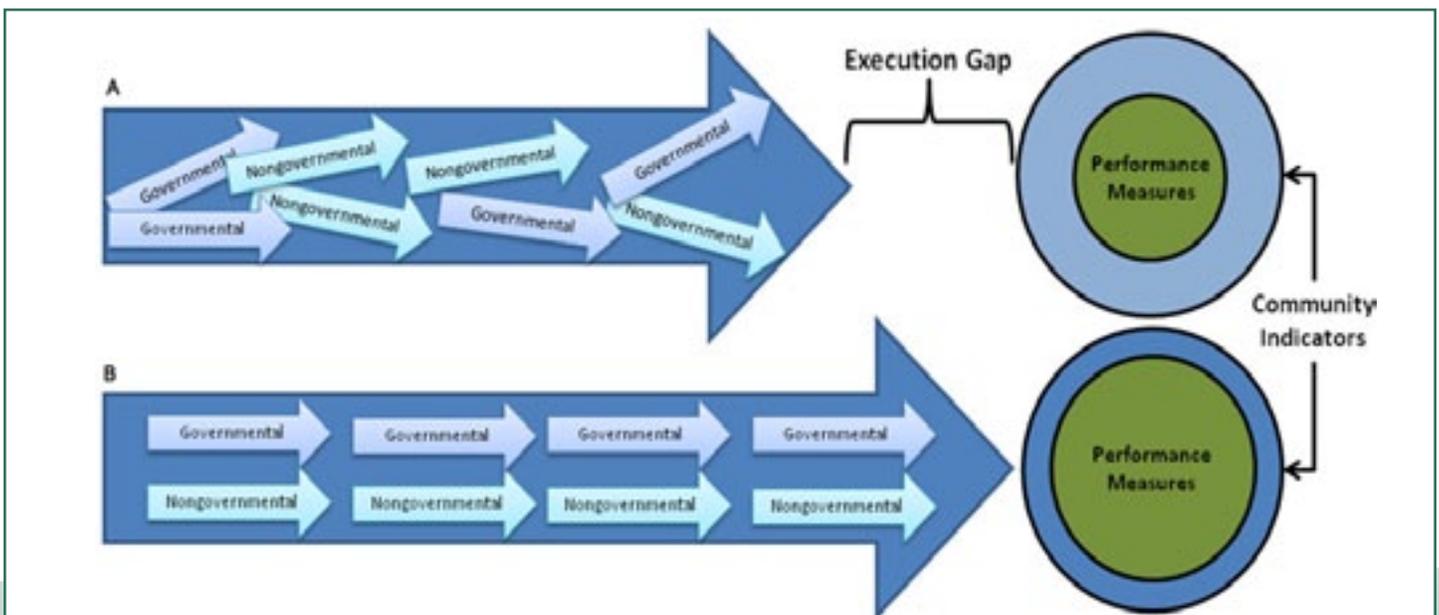


Figure 1. Maximizing Impact

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Characteristics of Quality Data

There are questions about what constitutes quality data. For the purposes of this discussion, data is factual information. It can be numbers, words, measurements, observations or even just descriptions of things. Simply put, data is used as a basis for reasoning, discussion, or calculation.³ Both qualitative and quantitative data are useful in CI-PM integration efforts; however, most community indicator and performance measurement systems favor the latter.

Measures must be reliable and valid. Reliability refers to the consistency of measures. Measures

are said to have a high reliability if they produce consistent results under consistent conditions. A valid measure is one that accurately measures the variable of interest. A measure is said to be valid if it captures what it is intended to measure.⁴ If measures are not statistically sound, data and the corresponding inferences derived from them will be suspect.

Often it is said that data from one program or community must be compared to another program or community in order to be meaningful; and, in general, it is good practice. However, this is not a necessary condition. The critical question is whether or not the condition reflected in the data is acceptable to the stakeholders. For example, if 4 out of 10 students in your county are not graduating from high school, the most relevant question is *“Is this acceptable?”* not *“How are we doing compared to other counties?”*

It is important to have broad representation from governmental and non-governmental entities when establishing community indicators and creating citizen-centric performance measures. Coalitions, networks, compacts and other community groups must create a common agenda from which community indicators evolve. These stakeholders then participate in the development of performance measures through forums, feedback systems, and advisory bodies. It is also necessary to have indicators and measures scrutinized by experts in measurement and statistics, so that data can be evaluated from a technical perspective, and so that any issues communicated to stakeholders prior to incorporating the data in any CI-PM system.

Another important aspect of quality data is communication power;⁵ that is, people must understand it. Data reflects the visioning process of citizens, key stakeholders, and governmental and nongovernmental entities. Quality data from a CI-PM integration perspective allows for the communication of clear, readily evident, causal relationships between efforts and outcomes at the program and community level. A clear example can be found in King County’s Annual Indicators and Measures High (AIMs High; see Figure 2). AIMs High lays out the causal logic chain graphically for visitors to their website. Clicking on a community indicator or performance measure icon on the webpage takes the visitor to data on that indicator or measure. These data are accompanied by clear interpretations. Both community indicators

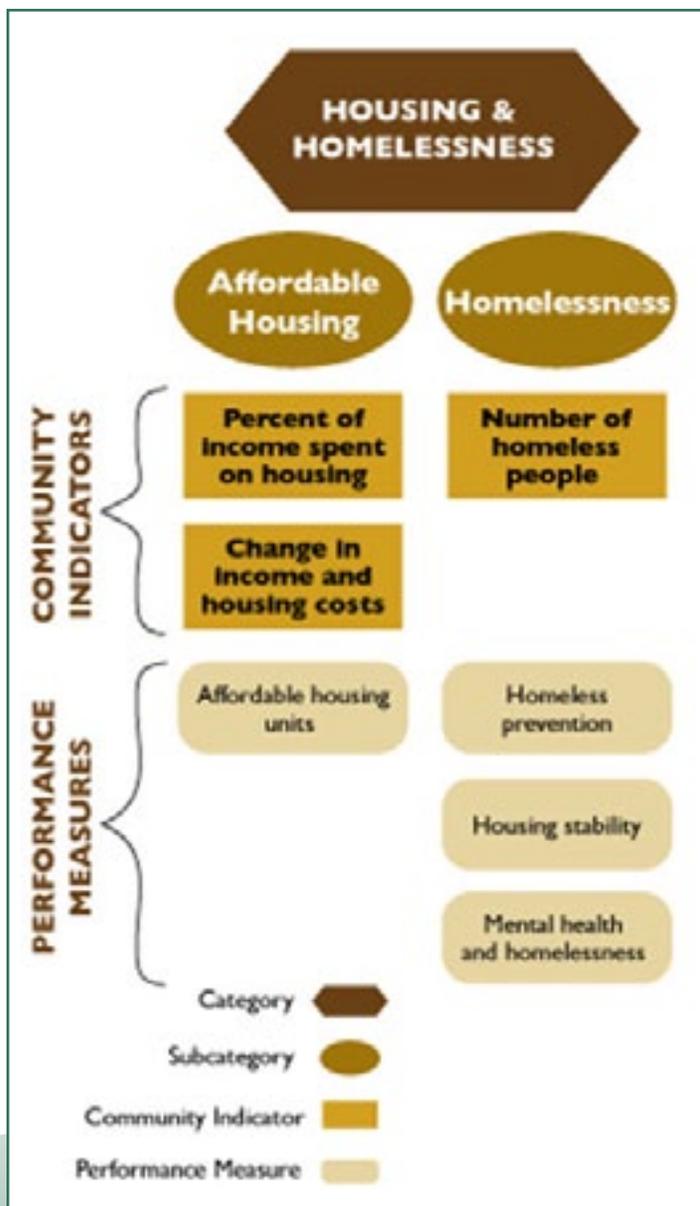


Figure 2. AIMs High Example

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and performance measures have narratives explaining how King County is doing, what influences the indicators, and the role that government and citizens have in making an impact. The Government of South Australia,⁶ the 2009 CI-PM Integration Award winner, has a similar strategy where primary and related goals are linked to primary and related target data.

Quality data also has the capacity to show return on investment (ROI). The lingering economic impact of the housing market collapse has accelerated the need for governmental and non-governmental entities to demonstrate a ROI to their stakeholders. Although there is a place for output data in informing the means (e.g., business process improvements), stakeholders are increasingly more interested in outcomes. Quality performance data can be tied to dollars expended to achieve a particular effect and inferences can be made from those data about the level of effort it will take to realize an impact at the community level. Efforts to collect, maintain, and analyze data must be cost effective.⁷

Acquiring Quality Data

Data for community indicators can be obtained from a wide variety of sources, including national government agencies, state government agencies, local government agencies, academic institutions, and libraries. Federal, state, and local government agencies, as well as not-for-profit entities, are making increasingly more data available on-line. In many cases these data are available in a format that can be consumed by spreadsheet, database, statistical, or data visualization software systems.

At times, data may not be readily available to the public. In such cases, data may be obtained from local entities, such as school districts or health departments. This normally requires the help of visionary local leadership and well crafted data sharing agreements (see www.neighborhoodindicators.org/library/guides/key-elements-data-sharing-agreements). In most cases, the more local the source of data, the more relevant it will be to your community.⁸

Many communities benefit from data intermediaries that create data agendas, broker agreements, collect data, maintain data visualization tools, and make the data available to the public. The National Neighborhood Indicators Partnership (NNIP, see

<http://www.neighborhoodindicators.org/>), supported by the Urban Institute (see www.urban.org), works with local partners across the United States to further the development and use of neighborhood-level information systems in community-building and policymaking.

Some examples of excellent data sources with data available at small geographies (i.e., county level or smaller) include:

- Centers for Disease Control and Prevention: Data and Statistics (www.cdc.gov/DataStatistics) - numerous tools providing access to credible, reliable health data and statistics.
- Data.gov (www.data.gov) - easily find, download, and use datasets that are generated and held by the Federal Government. Data.gov provides descriptions of the Federal datasets (metadata), information about how to access the datasets, and tools that leverage government datasets.
- Health Indicators Warehouse (www.healthindicators.gov) - access to high quality data to improve understanding of a community's health status and determinants, and facilitate the prioritization of interventions.
- Health Resources and Administration Data Warehouse (datawarehouse.hrsa.gov/) - HRSA focuses on uninsured, underserved, and special needs populations. The HRSA Data Warehouse provides a single point of access to resources, and demographic data for reporting on HRSA activities, providing access to charts, maps, and reports.
- Home Mortgage Disclosure Act (HMDA) (www.ffiec.gov/hmda/default.htm) - access to lending institutions public loan data.
- HUD USER (www.huduser.org) - provides access to the American Housing Survey, HUD median family income limits, as well as microdata from research initiatives on topics such as housing discrimination, the HUD-insured multifamily housing stock, and the public housing population.
- Internal Revenue Service - (www.irs.gov/taxstats/index.html) access to a wide range of tax statistics.
- National Center for Educational Statistics (NCES) (www.nces.ed.gov) - primary federal entity for collecting and analyzing data related to education.

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- Urban Institute MetroTrends (www.metrotrends.org/natdata) - well-documented versions of the national data files with meaningful indicators of community well-being.
- USA.gov (www.usa.gov/Topics/Reference-Shelf/Data.shtml) - data and statistics by topic.
- US Census Bureau (see www.census.gov) - it is the leading source of quality data about the nation's people and economy. It provides data from the Population and Housing Census, Economic Census, Census of Governments, American Community Survey, and many other demographic and economic surveys.

To access additional annotated bibliographies of data sources, follow the links below:

- Catalog of Administrative Data Sources for Neighborhood Indicators - http://www.urban.org/UploadedPDF/411605_administrative_data_sources.pdf
- Community Indicators Consortium: Data Sources for Community Indicators - <http://www.communityindicators.net/resources/websites-and-documents>
- NNIP Data Sources - www.neighborhoodindicators.org/data-tech/sources
- Sustainable Measures: A List of Data Sources - www.sustainablemeasures.com/node/98
- Urban Institute: On-line Data Visualization Resources - <http://datavis.urban.org/>

The acquisition of performance data begins with the identification of program objectives linked in a causal chain to the community conditions that the program is intended to impact, measured by community indicators. Each objective should have two or three actions that are critical to achieving an objective. These actions become critical success factors. Critical success factors then become translated into one or more performance metrics.⁹ Thus performance metrics are integral elements of program and community success. Performance measures should answer one of three questions:

1. How much did we do?
2. How well did we do it?
3. Is anyone better off?

As indicated earlier, answering the third question

is the most important. It is also useful to employ information from internal or outside sources to benchmark, or compare your performance data and metrics with those of other entities. Set targets that seem reasonable in light of the benchmarking information you've gathered. To learn more about establishing performance measures and access quality performance measures, see the guides available at the Public Performance Measurement and Reporting Network (www.ppmrn.net) or International City/County Management Association's Center for Performance Measurement (www.icma.org).

Pitfalls to Avoid

Moving Geographical Boundaries

Data are sometimes made available at different geographies (e.g., municipality, ZIP Code, census tract), and typically the smallest geography available is the most useful. Caution should be exercised when using ZIP code polygons as indicator geographies. The term ZIP is an acronym for Zone Improvement Plan. The United States Postal Service (USPS) uses ZIP codes to expedite the sorting and delivery of mail. As such, the boundaries may change based on business needs of the USPS. Other geographies may change also; however, changes are generally less frequent and more systematic. For example, the US Census Bureau may merge or split census tracts during the process leading up to a decennial census.

Missing Metadata

Metadata is information about the data. Some common metadata elements are: title, creator, description, dates available, type, format, source, geographic coverage, and rights. It is important to scrutinize source metadata and make detailed metadata available to consumers. This will enhance the communications power of your performance measures or community indicators.

Moving Targets

Sometimes agencies will change how they compute indicators. For example, school systems may report the number or percentage of children ready for school; however, the tests used to compute the indicator may change over time and this may impact the reliability of this indicator.

Lack of Comparability

Care must be exercised when comparing local statistics to other agencies, municipalities, counties,

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regions, or states because there might not be one-to-one correspondence in the measures (i.e., you may be comparing apples to oranges). For example, there are many ways to compute graduation rate; and, prior to 2005 when the Compact Rate became the accepted measure for calculating graduation rates, there was no valid way to compare graduation rates across states.¹⁰

Conclusion

The Community Indicators Consortium is supporting an expanding network of governmental and nongovernmental entities working together for better program performance, a greater return on investment, and better community-wide results. They are implementing increasingly more mature CI-PM integration efforts. This includes the acquisition and use of quality data that allows for the prioritization of funding, evaluation of shared strategies to improve service delivery, and the identification of emerging trends.¹¹

Acknowledgements

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About the CI-PM Integration Project

In the fall of 2008, CIC received a multi-year grant from the Alfred P. Sloan Foundation to continue CIC's work to integrate community indicators and performance measures. The purpose of the grant was to promote, advocate for, and develop a community of practice around CI-PM integration, and for engaging citizens and other key community stakeholders in the process. We hope you will share your experiences seeking to improve community outcomes, citizen engagement, and public trust through integration of community indicators and performance measures. We welcome your ideas, interest and involvement, and can be contacted via CIPM@communityindicators.net.

Endnotes

1. Graphic was adapted from Paul Epstein's work. See Results That Matter at www.rtmteam.net
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