Efforts to Improve Public Policy and Programs through Data Practice: Experiences in 15 Distressed American Cities

In a seminal lecture delivered in 1970, Alice Rivlin stated, “The distribution of social problems has been illuminated by two important technical developments. The first is the improvement and wider use of sample survey techniques. The second is the astonishing increase in the data capacity of computers” (Rivlin 1971).

A wealth of efforts have focused on taking up the challenge of using such advancements to incorporate systematically gathered information about social problems into decision making. Yet many of these efforts come to the challenge with different rationales and thus different strategies. For instance, the Annie E. Casey Foundation’s effort, KIDS COUNT, emphasizes the dissemination of formal reports containing data on children’s health, education, and social services to state and local agencies to help them plan and deliver services more effectively, emphasizing the link between policy making and analysis. In contrast, the Urban Institute’s National Neighborhood Indicators Partnership (NNIP) focuses on a different process and audience for such information: “NNIP partners operate very differently from traditional planners and researchers. Their theme is democratizing information. They concentrate on facilitating the direct practical use of data by city and community leaders, rather than preparing independent research reports on their own. And all have adopted as a primary purpose using information to build the capacities of institutions and residents in distressed urban neighborhoods” (Urban Institute 2004). In both examples, the emphasis on incorporating statistical measures into policy making rests on the assumption that the systematic collection, sharing, and analysis of numbers will result in improvements in social conditions.

The argument advanced by projects such as KIDS COUNT echoes the view that the regular review of summary statistics produced by agencies, or the sharing of microdata across agencies, could improve decision making in government and large nonprofits, thus making policy more efficient (Simon 1959). In common parlance, this is often referred to as “data-driven decision making.” In other cases, such as the NNIP, the argument has emphasized building wider community engagement by disseminating summary statistics about social problems, with the expectation that this engagement promotes a healthier democracy (Brand 1975). In both cases, improving data practice—the routine collection and processing of microdata and the dissemination of summary statistics—is assumed to improve accountability (Howard and Sharp 1985). The two approaches differ, however, in regard to their intended audience. The first assumes that better public policy will emerge when more and better information is provided to those at “the top.” The second approach expects improvements in public policy when such information is made available to those at “the bottom.”

Whether intended for the top or the bottom, there is little clarity about what the terms information or data actually encompass. In earlier decades, particularly the 1970s and early 1980s, with the advent of computerization, the improvement of data practices emphasized microdata, particularly the technical aspects of...
creating warehouses of individual case files or records (Hillier and Culhane 2004). Over time, the discussion has shifted to emphasize the availability of summary measures of those microdata. There is little distinction made in the discussion of data practice between raw, unprocessed microdata and summary statistics; our respondents use the words data and information to cover both or either of them.

Despite the looseness of definition in public discourse, we aim for greater precision in this article; we use the term microdata to include only raw, unprocessed individual case records, and we use summary statistics when we refer to the aggregation of those microdata. Such summary statistics may include simple counts, rates, or ratios. They may be process or outcome indicators, often tracked by agencies to evaluate performance. They may be aggregated at many different levels and in many different ways—across an entire municipality or within a geographic area or by age, sex, or race. Such summary statistics vary greatly in terms of the level at which they are aggregated and the ease with which users may take different “cuts” on the microdata. These differences have important implications for who can use such data and for what purposes. In this article, when we speak of efforts to improve data practice, we refer to the process by which formal organizations attempt to increase the amount or quality of microdata collected, better share them across or use them within agencies, or improve capability to analyze and distribute summary statistics.

Although there has been much enthusiasm for the concept of improving data practice for social and health policy, there has been little systematic study of the experience of improving such practice itself (Hilgartner and Brandt-Rauf 1994). In this article, we describe experiences in 15 distressed American cities in trying to improve data practices, especially in regard to human services and, more specifically, services for children and youth. In addition to examining the characteristics of these efforts, we investigate their underlying purpose and motivations in the context of contrasting models of how systematically gathered information can change policy. We ask, how did participants envision that improving data practice would result in improved public policy? Can we find evidence that their assumptions have been realized in practice?

### Background

As the two examples illustrate, improved data practice as a tool to improve policy making can be tied to two distinctive strains of political thought: Rational choice theorists believe that better information will allow for more comprehensive, analytical decision making, whereas deliberative democratic theorists believe that increased access to information will encourage greater civic and political participation.

Proponents of “data collaboratives” and “data warehouses” (often imprecisely defined but encompassing the centralization of summary statistics across agencies) use each rationale interchangeably and often claim to improve policy making through each approach simultaneously.

Although these models are normative in nature, they offer a framework against which the actual experiences we have documented can be better understood and addressed. A rational choice model of policy decision making envisions political agents identifying a problem, evaluating a variety of alternatives, and choosing the most effective solution (Bardach 1984). It requires collecting information to highlight program failures, rationalize systems, and inform policy (Reidy 2003). Some researchers have critiqued this model and argued that complete information is unavailable to decision makers, so that decisions are often better made incrementally through “successive limited comparison” (Lindblom 1959). Regardless, knowledge is required to understand problems, compare solutions, and examine the impacts of policy. Within the incrementalist framework, social researchers, economists, and policy analysts have long advocated the use of social indicators to target policy initiatives, evaluate policy internally, and examine the broad-reaching impacts of a policy beyond the intended consequences (Brand 1975).

In figure 1, we illustrate the mechanisms underlying a simplified version of the rational choice model—that is, how improved data practice may lead to improved decision making. We have included question marks to note where the model makes implicit assumptions. The first question mark signifies the assumption that

![Figure 1](https://example.com/figure1.png)  
**Figure 1**  
Rational-Choice Model of Data Use

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systematically gathered and analyzed information can make its way into the hands of critical policy makers. The second signifies the assumption that this information, once received by policy makers, offers clear choices and that the best options are selected and implemented.

In their critique of the rational choice framework, some political scientists argue that the values and priorities of decision makers and the political climate have a more substantial effect on policy decision making than knowledge or information alone (Henriot 1970; Kingdon 1984). For example, Kingdon notes the importance of "policy entrepreneurs" in evaluating and presenting policy options to political elites but argues that they cannot, by themselves, open "policy windows" to establish new priorities.

In contrast, other thinkers focus on building "deliberative democracy," arguing that the "insider" policy debate should be transformed into a wider public debate aimed at producing reasonable, informed opinions, thus mediating self-interest and creating policy in the public good (Bessette 1980; Bohman 1998; Elster 1998). Proponents of deliberative democracy argue that a well-informed citizenry that is capable of deciding among policy alternatives is essential to a well-functioning state. In practice, these thinkers support the public distribution of summary statistics or microdata as a tool to hold political leaders accountable and force policy makers to justify initiatives (Chambers 2003; Freeman 2000). Though they argue that policy alternatives, or priorities, can be decided on the public's preferences according to values such as fairness, they also seek to create circumstances in which the public can use information as a tool in debating policy. These thinkers argue that empirical information regarding policy questions must be widely available, understandable, and accessible to fuel discussions based on reason (Bohman 1998). Without greater access to information, citizens cede political power to elites who guard their own narrow self-interests in setting and implementing a policy agenda. In figure 2, we illustrate the assumptions implicit in the deliberative democracy model. The first question mark signifies the assumption that a mechanism exists to communicate information to the public and that the public wants that information. The second question mark represents the assumption that, once mobilized, the public will be able to create or use mechanisms to effectively change policy.

Architects of and participants in initiatives aimed at improving data practice envision different audiences for their efforts depending on their implicit framework. The rational choice model defines the audience as policy "consumers," those who are active in the development and implementation of policy alternatives (Bardach 1984). The goal is to assist policy makers in using information to make "rational" choices among alternatives (Englehart 2001). Those interested in deliberative democracy envision their audience as the general public, sometimes mediated through community-based organizations. Their mission is to help these actors to understand and use information and to become involved in a broader public policymaking process. These models assume that empirical information plays a critical role for their audience in the construction, debate, and selection of policy alternatives.

What do researchers tell us about how empirical evidence is used in policy making? Historically, those who have studied the utilization of systematically collected information have focused on legally authorized policy makers rather than nonprofits, community-based organizations, or the general public, implicitly viewing utilization through a rational choice lens (Booth 1990; Landry, Lamari, and Amara 2003; Lester 1993; Mandell and Sauter 1984). They have tried to identify those characteristics of research that make it more accessible to policy makers (Bardach 1984; Booth 1990; Knott and Wildavsky 1980; Landry, Lamari, and Amara 2003). Implicit in the focus of this research is that policy makers will use empirical evidence to select policy alternatives and implement them.

Some researchers have found evidence that dissemination and user-friendliness have little to do with utilization (Knott and Wildavsky 1980), but the intensity of interpersonal links between policy makers and researchers explains much greater variation in the reported utilization of research (Landry, Lamari, and Amara 2003). Overall, researchers have found that policy makers read and understand policy research, but policy decisions are complicated by political pressures, timing, personal beliefs, and power (Booth 1990), lending support to Kingdon’s model of agenda setting.

Researchers have found that the type, source, and geographic level of microdata collected affects its use by policy makers (Booth 1990; Howard and Sharp 1985; Knott and Wildavsky 1980; Lester 1993), but they have rarely examined what may restrict its usability by those “closer to the ground,” such as community groups and the general public. One notable exception is that researchers have studied the use of

![Figure 2 Deliberative Democratic Model of Data Use](image-url)
geographic information systems (GIS) technology by neighborhood organizations as a tool to promote social policies tailored to individual neighborhood needs (Elwood 2001, 2002; Seiber 2003).

The call to gather microdata in multiple domains and from multiple sources to improve social well-being is not new. The social indicator movement of the 1960s and 1970s sought to measure social conditions and trends internationally and apply government solutions to alleviate poor conditions; researchers examining this effort did not find widespread change resulting from it (Brand 1975). Critics of social indicator reports have noted that the selection, measurement, and promotion of social indicators are loaded with bias toward solutions requiring state intervention (Henriot 1970). The enthusiasm for social indicators has not been dampened by these critiques. Indeed, there has been a recent push to “democratize research” by incorporating local knowledge into research and tracking indicators appropriate for community needs (Ansley and Gaventa 1997; Kellogg and Mathur 2003; Sawicki and Craig 1996). Furthermore, the widespread adoption of new technology and advances in software design may have rekindled a belief that broad access to a set of indicators and data can shape better policy.

According to Miringoff and Miringoff, the breadth of local efforts to systematically gather and report social summary statistics to the public can be “considered a social movement, not yet fully realized, but certainly the beginnings of a ‘bottom-up’ approach to improved social reporting” (1999, 31).

In this article, we describe efforts in 15 large, distressed American cities to share and disseminate microdata and summary statistics on children’s issues, and we examine how these experiences speak to the theories of rational choice decision making and deliberative democracy. The activities described here are not intended to be an exhaustive list of all efforts to improve data practice relating to children in each of these cities, but they are sufficiently comprehensive to allow for a meaningful assessment of the current state of these efforts. After describing our methods, we present our findings using examples from our interviews to illustrate key points.

Overall, as discussion highlights, we found that assumed “links” in both the rational choice and deliberative decision model are problematic. First, much of the microdata and summary statistics needed to enhance public decision making are not currently or easily collected. Second, meaningful dissemination of such information is impeded by technological constraints and limited understanding of statistical information. Finally, information alone is not sufficient to move policy—the policy arena is complex, and competing priorities limit the potential influence of systematically gathered information and research.

Methodology and Sample
This article presents evidence gathered while conducting the national evaluation of the Robert Wood Johnson Foundation’s Urban Health Initiative (UHI), a 10-year effort to improve the health and safety of children throughout the five participating cities. Cities participating in the UHI were given considerable latitude in the focus, approach, and strategies of their program. They focused their energies on a number of child health and safety issues, including youth violence, reading scores, and infant mortality.

While leaving the most critical decisions to the participants, the foundation imposed some guidelines for the initiative, several of which related to the use of data and evaluation. First, the foundation mandated that “data-driven decision making” characterize the planning process. Second, chosen strategies were to be “best practice models” to improve the performance of youth-serving institutions in their cities. Third, as a result of this work, measurable citywide improvements were anticipated.

Several participants focused significant parts of their strategic plans on the development of microdata-sharing tools, with the goals of helping public policy makers use empirical evidence to improve their decision making and increasing public access to summary statistics based on the microdata they collected. Although the foundation’s guidelines articulated both a top-down and a bottom-up approach to policy change (that is, it embraced the ideals of both rational choice and deliberative democracy), it provided little direction for how to blend and achieve such change (Robert Wood Johnson Foundation 2004). The problems that the sites faced led us to question whether a data-driven process was, in fact, possible and, more importantly, whether the theoretical justifications for improved data practice were borne out.

The national evaluation of the Urban Health Initiative combined a theory-of-change approach with a quasi-experimental design, including a comparison group of 10 similarly economically distressed cities selected using cluster analysis of underlying demographic and economic information (for more details on the evaluation, see Weitzman, Silver, and Dillman 2002). All evidence discussed here was obtained from the five UHI and 10 comparison cities. This article is not, however, a summative evaluation of the UHI, which is ongoing. The cities are listed in table 1.

Three different methods were used to gather the information discussed in this article. First, for the five UHI cities, evaluators conducted interviews during annual site visits. One-on-one and small group meetings with core staff, board members, collaborating partners, and local evaluators provided an opportunity to explore...
the activities, successes, and challenges of each site. A typical site visit lasted one and a half days and included interviews with six to eight participants, including members of local government agencies, philanthropic organizations, nonprofit advocacy or service delivery groups, university partners, and business leaders.

During the early phases of the initiative, site-visit interviews examined efforts to gather and analyze information needed for planning. During the implementation stage, efforts to improve data practice were key to the participants’ refinement of their “systems change” strategies. Detailed interview notes were taken and later reviewed for specific content.

Second, the Internet was used to identify national and local efforts to improve data practice. Web-based information provided an overview of the goals, activities, and participating localities for these efforts and helped to identify key informants in the comparison cities. Follow-up phone calls with staff members at identified national projects helped to clarify the missions and means of these efforts and to identify local participants for additional interviews.

Finally, key informant interviews were conducted in each of the comparison cities. Four to six key informants, located primarily through the Web-based search just described, were interviewed in each city. At the end of each interview, respondents were asked for additional contacts who were concerned with these issues and could add new information. These potential respondents were also contacted for interviews. A total of 53 interviews were conducted. The semistructured interview typically lasted 30 minutes. Respondents were questioned about the presence of data practice improvement efforts in their city, the nature of microdata collection and analysis, types of microdata and summary statistics available, and barriers to the coordination of data centralization efforts. These interviews were transcribed. Table 2 provides an overview of the categories of informants.

In each city, at least one member of an advocacy organization was interviewed. In most cities, interviews were held with staff from a local philanthropy, a university-based research center, and city or county government.

Interviews were reviewed and recurrent themes identified (Miles and Huberman 1994). The interviews were then coded for both factual information (e.g., the sources of funding for and participants in the effort) and subjective interpretation (e.g., the leadership for and the challenges faced by the data practice improvement effort). Special attention was paid to interviews that offered contrasting views within set themes. Raters also recorded their impressions of the level of attention given to data practice improvement efforts and optimism about the future of these efforts. Three reviewers coded the interviews, and checks of interrater reliability indicated roughly 85 percent agreement across the three raters.

Findings
Our assessment of these efforts is guided by a series of broad research questions that also guided our interviews:

- How are data practice improvement efforts started? Who provides the leadership?
- What kinds of organizational arrangements have been used for data practice improvement efforts? Who is involved in these arrangements?

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National initiatives have catalyzed and supported local activity to centralize microdata collection across agencies. Such national initiatives have also concentrated attention and resources on creating new ways to look at summary statistics across multiple domains. In the 15 cities we investigated, respondents frequently mentioned the Annie E. Casey Foundation’s KIDS COUNT program, the United Way’s Outcome Measurement Resource Network, the U.S. Office of Juvenile Justice and Delinquency Prevention’s Community Mapping for Planning and Analysis for Safety Strategies, and the Urban Institute’s National Neighborhood Indicators Partnership. In this regard, the Robert Wood Johnson Foundation’s UHI is another example of a national initiative spurring and supporting local efforts. None of these national efforts should be understood in isolation; they have served to complement and mutually reinforce one another.

Although national efforts have helped to catalyze local activity, most formal initiatives had local philanthropies at their core, providing funding and direction on substantive issues. As one local foundation officer said, “I think it’s a trend—more and more foundations are understanding the use of strategic communication around data to really raise an issue to a level of prominence or to derail something and cause a major groundswell.” Another respondent noted, “I can say that there certainly is more of a push to collaborate because that’s what a lot of funders are looking for.”

Given the level of technical expertise necessary for these endeavors, one might have expected universities to be in the lead. Though frequently involved when the project was “further along,” universities rarely spearheaded these endeavors. A few universities (e.g., Wayne State) have established Web sites that allow users to access federally collected microdata, typically from the U.S. Census. One reported example of strong leadership from the academic community is Case Western Reserve University, where faculty members were actively working with local leaders in Cleveland. Even though this level of university leadership was rare, respondents in some cities did note individual “helpful researchers” or others at universities who were willing to share their expertise and provide technical assistance. Additionally, the University of Pennsylvania was a key leader in the creation and maintenance of a data warehouse for Philadelphia.

Local governments rarely served as the catalyst for efforts to improve data practice, but their participation and leadership were seen as the most critical ingredients in the success of these initiatives. Respondents talked at length about technical and logistical problems of sharing microdata and summary statistics, but they focused most attention on the importance of political will in getting new efforts under way. We heard reports of local governments constituting substantial obstacles to the formation of shared data improvement efforts. Many respondents argued that information could not be meaningfully obtained, shared, or used for decision making without the cooperation of people inside government.

Some respondents suggested that the availability of new technologies itself was a catalyzing force. According to one respondent,

Long before I was involved in data, fifteen or twenty years ago, long before GIS or the Internet, I understand that there were discussions among county government kinds of people that the information they had on geography and parcel information and all that kind of information would be shared by different communities. Everybody would be better off and everybody would be better served. But it still hasn’t happened. But there is a new effort afoot to try, and I think that’s because of what computers can do, not because it all of a sudden seems to make sense.

What Kinds of Organizational Arrangements Have Been Used for Data Practice Improvement Efforts? Who Is Involved in These Arrangements?

Our research indicates that data practice improvement efforts can be positioned along a continuum of formality from highly structured, formalized arrangements to systematically collect information to informal data-sharing relationships among agencies or analysts within agencies. We found that the degree of formality is closely associated with the leadership for the initiative.

Philadelphia provides an example of one of the more comprehensive efforts we found. Using funding from the UHI and relying on substantial support from city government, the city convened numerous governmental and nongovernmental agencies to identify both outcomes and process indicators and publish these in

How Are Data Practice Improvement Efforts Started? Who Provides the Leadership?

Support and motivation for efforts to collect, compile, and disseminate microdata and summary statistics came from several sectors and differed in their degree of formality and leadership. Naturally, the leadership for these efforts affects the underlying framework for the data practice improvement initiatives; high-level government agencies more often employed the rational choice model, whereas universities and nonprofit collaboratives often operated under the deliberative democracy model.
a report card. It also used this process to work with governmental agencies and community-based organizations to improve planning and accountability. Furthermore, the city government developed internal systems for linking client-based microdata across agencies. Beyond these efforts, but during the same time period, researchers at the University of Pennsylvania were engaged in a long-term, intensive effort to gather microdata from a broad array of public agencies and allow those data to be publicly analyzed beyond preset summary statistics (Hillier and Culhane 2004).

Although Philadelphia may be at one end of the continuum of activity to improve data practice, in several other cities, consortia—independent of city government—regularly compile a wide range of summary statistics concerning children and youth and disseminate them to the public through indicator reports. In other places, such as Newark and Baton Rouge, such efforts are far more sporadic and examples are relatively rare.

**Formalized Arrangements to Share Systematically Gathered Information with the Public** For some, the ideal arrangement for sharing systematically collected information is a comprehensive data warehouse that serves as a repository of all microdata gathered by city agencies, perhaps even combining them with census or hospital microdata. The closest realization of such a warehouse can be found in Philadelphia. But for the other cities in our study, such a comprehensive warehouse remains a phantom—a vision of what might be rather than what is. Many respondents were highly skeptical about the possibility for such broad centralization. A senior staff member at a local United Way agency said, “In my lifetime, I don’t think we will ever see a centralized place where all of the information can be collected, because every organization has a different mission and reason for collecting data.” Another said, “I don’t necessarily buy the idea of some kind of a giant warehouse. I don’t think that’s cost effective or efficient.” However, the notion of a centralized microdata repository resonated for some respondents: “We have talked about it, that we need a central depository, not only for data collection, but there are a lot of people who are getting funding for various research projects, and that we would like to have the results of these fed into some central data-collection point as well.”

**Formal Arrangements for Improving Information-Sharing among Local Agencies** Although comprehensive data warehouses remain elusive, respondents described more limited efforts to institutionalize informal relationships among policy analysts from different agencies through formalized agreements or standardization of microdata collection across agencies. Standardization generally included aligning geographic boundaries and redefining demographic variables. Formal data-sharing agreements frequently involved the departments of social services, planning, schools, health, and police.

Respondents from nearly all of the 15 cities (Baton Rouge is a notable exception) described efforts to improve policy making and service delivery by sharing systematically collected information among city agencies in order to coordinate service delivery. In Pittsburgh, respondents reported that “the Children’s Cabinet had been created to coordinate the continuum of care across services” by sharing limited client information across agencies, among other strategies. Pittsburgh’s approach is evocative of that used in Philadelphia, where myriad legal and technical hurdles have been overcome to facilitate information exchange among caseworkers serving the same client. In Baltimore, local government sought to improve policy making and accountability among agencies by regularly sharing agency performance measures among senior administrators through the CitiStat program. Of note, CitiStat recently received an Innovations in American Government Award from Harvard’s John F. Kennedy School of Government (see Robert D. Behn’s essay “The Varieties of CitiStat” in this issue of *PAR*). Also in Baltimore, a quasi-governmental agency responsible for dispersing city, state, and philanthropic dollars for human services centralizes the reception and analysis of outcome and performance data and shares the findings with service providers, agency board members, and government officials. Baltimore Safe and Sound (the local UHI effort) has invested substantial resources in working with this agency to link city microdata to the census tract to better target and monitor services at the neighborhood level.

Improving the quality and access of policy makers to good information has proved enduringly difficult for many inside government. Many local government policy analysts voiced their frustrations at the difficulties they had encountered over the years getting data from one another. Their leadership in encouraging more formalized mechanisms for sharing comprehensive microdata has grown, they noted, out of a simple desire to do their jobs with less duplication of effort. One respondent ruefully noted the relative lack of power held by analysts and the limited role that systematically collected information has in the policy making process:
Look, you would get the honest answers from data geeks about what the problems are. Most of us are data geeks so we don’t have much power in organizations, especially in larger state organizations to change things. But it’s how you get the internal backing of the person who agrees with you.

There has to be some way of incentivizing the exchange of information between two sources. There is a considerable amount of infrastructure and planning expense going into hooking those things up, and if the powers that be don’t see any immediate relevance of the applicability for the expense, you might as well forget it.

Other analysts cited a lack of leadership and commitment as the key obstacles to setting up and sustaining formal arrangements for sharing microdata:

What keeps Human Services from sharing their data? The confidentiality issue, but mostly I think it’s the leadership. It’s having someone who is going to be in the middle of this in a neutral position.

I think there is a lack of will. I don’t think anybody places a very high priority on doing it. I think it’s a leadership problem. I mean, I think we have a fragmented bureaucracy and we don’t have somebody who is committed enough to children’s issues yet to make that happen.

People are afraid that if they work together, if our Division of Youth Services works with someone else, that somehow monies will be reallocated . . . there is almost a paranoia that runs through it that they are afraid if they work together that somehow someone will see inefficiencies and take money away from them.

Several respondents noted their concerns that formal efforts within government would lose resources in tough budget times and that the progress they had made would be eroded through shifting priorities.

Informal Information-Sharing Arrangements among Local Agencies Although numerous formal arrangements have emerged, the most commonly described approach to information sharing continues to be based on informal, personal relationships nurtured over time among analysts within government and nonprofit agencies. A staff member in one nonprofit offered the following observation:

For me personally, if I need something, I can pick up the phone and call somebody because [my organization] has a very close relationship with the Office of Public Health and I work with a lot of people over there . . . I can just pick up the phone and ask if they have any information on this or that . . . but I don’t think that’s true for everybody.

Several respondents observed that building informal relationships created short-term capacity for understanding cross-agency problems. Others suggested that the biggest benefit of formal efforts to coordinate the sharing of microdata and summary statistics was enhanced informal networking. As one participant said, “I feel if it were to all fall apart right now and people were to lose interest in doing the nitty-gritty work, that I will still have succeeded in my original goal which was to start opening the lines of communication and getting the information out there . . . and getting some relationships started and some networking going.”

Like the respondents who described more formal, institutionalized arrangements, these respondents also worried that such relationships would be eroded through staff turnover, lack of resources, and other challenges.

What Types of Microdata and Summary Statistics Are Collected and for What Purposes Are They Expected to Be Used?

Respondents overwhelmingly reported that the use of summary statistics of administrative microdata, routinely gathered by federal, local, and state agencies, results in much similarity in the data collected across cities and efforts. One respondent eloquently stated, “We tend to hold up and pay homage to the indicators, the ones we feel comfortable with.” In general, because of the constraints of money, time, and expertise, information-sharing efforts are mostly limited to existing sources, regardless of whether they answer the most pressing questions. Respondents were well aware of this constraint: “Data collection is very expensive. Adding items to existing surveys is very expensive. Launching a new survey is very expensive. Surveys are just expensive. So we end up using a lot of administrative data that are not collected to be used for what we use them for.”

In fact, a few initiatives rely solely on federally collected microdata and summary statistics, such as the U.S. Census (most common) or data from the Federal Bureau of Investigation or the Centers for Disease Control and Prevention. Local government sources often provide outcome indicators, such as test scores or changes in violent crime. Several respondents spoke of efforts to incorporate the information gathered by surveys, including both locally developed surveys, such as those conducted by the Philadelphia Health Management Corporation, or the local component of a national survey, such as the Youth Risk Behavior Survey.

There are far fewer examples of sharing process or management indicators (e.g., information regarding rates of participation in specified programs or expenditures on particular groups or programmatic
that they share reports or summary statistics gathered for other purposes.

Because most efforts concentrate on existing summary statistics, there is little information on issues such as after-school programs or child care utilization. These services, provided through a mix of public and private monies and by myriad public, private, and nonprofit agencies, have no history of sharing administrative records. Furthermore, many nonprofit providers have weak or nonexistent microdata-collection systems.

A recent national focus on after-school activities and early childhood interventions has underscored the need for shared information systems, but progress has been slow. Because most after-school activities are paid for out of pocket by families and provided by private organizations, local churches, and neighborhood groups, there is no mandate for central reporting. Efforts to gather primary data are expensive to undertake and maintain. For example, Detroit, which has made after-school activities the hallmark of its UHI effort, has struggled to routinely and systematically estimate the level of participation across the city and encountered problems developing a comprehensive list of youth-serving or social service programs that could be analyzed at small geographic levels.

New software has facilitated new ways of collecting and reporting information in this arena. In Milwaukee, for example, a local company devised a standardized information system for tracking youth participation in after-school programs that is widely used by major service providers. They are attempting to link this information to school and juvenile justice records to track outcomes and risk behaviors to better evaluate after-school programs.

In addition, GIS has become an important tool for many governmental efforts to improve data practice to aid distressed neighborhoods and to understand the relationship between problems across disciplines. As one respondent noted, “We used this existing data to feed into a GIS mapping system, and we mapped out [the location] where the infant deaths were occurring. We did various overlays with that, trying to see if there were any factors that had a relationship to that, such as where the alcohol outlets are.” In this area, GIS software has been paired with Web-based portals in Cleveland, Detroit, Milwaukee, and St. Louis to simply and appealingly present U.S. Census microdata concerning local conditions to the general public.

Unfortunately, many types of information do not lend themselves to mapping. For example, summary statistics that are available only at the city level cannot be mapped. Furthermore, respondents described the difficulty of overlaying microdata with different geographic boundaries. Our respondents described struggling with the level at which the data should be aggregated. Schools aggregate microdata at the school-building level, police aggregate microdata at the precinct level, and so on. As one respondent lamented, “I guess the most expensive and time-consuming part of the whole damn project . . . was trying to take zip code-based data, neighborhood-based data, ward-based data, and sometimes in a few anomalies, even beyond that, where an agency did something even more bizarre, and trying to translate this into a database that would allow us to compare apples and apples and oranges and oranges.”

The inability to create a common definition of geographic boundaries impedes the use of systematically collected information for planning and decision making. Although the system at the University of Pennsylvania addressed this problem by coding microdata to specific addresses, it has been costly to remove legal, political, and technological barriers.

The level of data collected and reported (microdata and summary statistics) has implications for the underlying frameworks. For example, though microdata can be more difficult for the general public to use and understand, they offer greater freedom to choose the level of aggregation that suits their political purpose. Similarly, Web-based GIS tools are generally touted using a deliberative democracy argument, but the level of aggregation and the content of data (administrative data rather than expenditure information or community service data) are limited by the agency that created the system, not the person using it. As previously noted, some have argued that gathered information tends to support the status quo (Ansley and Gaventa 1997; Sawicki and Craig 1996).

**How Are Microdata and Summary Statistics Disseminated? How Are They Used?**

The most typical model for sharing information with the public is the indicators report, which gathers a limited array of measures on an annual basis from several different agencies; efforts of this type were found in 13 cities. These reports permit public users to track indicators over time or, in many cases, across communities. Local KIDS COUNT projects are a good example of this type of work. Efforts to assemble information in this manner from multiple agencies, at various levels of government were found in cities such as Cleveland, St. Louis, Pittsburgh, Minneapolis, and Boston. Report cards represent a related effort, providing a normative assessment of whether the indicators suggest weak or positive performance. Microdata are not available in either type of report, nor do they let users shape their own analyses. Ambitiously, Philadelphia Safe and Sound has spearheaded efforts to convene several city agencies to define a set of...
indicators for their report card and to work together to choose the form in which the indicators should be disseminated.

Beyond written reports, some cities are experimenting with new technologies for centrally maintaining, linking, and organizing summary statistics from multiple agencies, such as Web-based portals. Unlike report cards or indicator reports, these portals keep the statistics in a less processed format, allowing the user to mix and match the data (e.g., over time or within communities) to answer their own questions. Serving as a middle ground between traditional print reports and Web-based portals, CD-ROM versions have also been used as a tool for disseminating local information.

Dissemination strategies are intrinsically linked to the fundamental rationale for data practice improvement; deliberative democratic initiatives often use user-friendly published or Web-based reports or software that allows users to create their own reports. Data initiatives based on rational choice theory often disseminate reports to policy makers, create policy briefs, or meet directly with policy makers.

**How Are the Products of These Data Practice Improvement Efforts Being Used?**

Respondents repeatedly described a belief that increased access to systematically gathered information would improve policy and practice, though the majority did not articulate how this would happen. Few participants reported much in-depth consideration of how the information would be used, who would use it, or what that user would need. Even fewer identified the mechanisms by which empirical information would improve such services. This is particularly striking in light of how much time, money, and energy these efforts have devoted to thinking about how to collect and share microdata and summary statistics.

For the most part, respondents working on data practice improvement efforts simply did not know who was using their reports or accessing their Web sites. Once reports are disseminated, additional resources are needed to gather information on their use and impact. Rarely are such resources allocated as part of the planning and implementation of efforts to improve data practice: “We know a lot of people use the data because we get a lot of hits, but we don’t know what kind of data they pull out. So we don’t know who is using the system, or how much it is being used.”

Initiatives in Minneapolis and Cleveland recognized the need to fill this gap concerning utilization. They surveyed recipients of their indicator reports to learn how and in what ways they were being used. One respondent in Minneapolis described the results of the survey: “Seventy-one percent [said they used the data] to learn about their community, 65 percent said for grant writing, . . . 58 percent said for policy advocacy, . . . 46 percent for research, and 65 percent said to answer questions from the public.”

In most cities, however, when asked for examples about how their gathered indicator reports and microdata were being used, respondents repeatedly reported, “grant writing,” that is, writing and updating grant applications. As many noted, funders drive this use by requiring numbers in proposals.

Though they cited the use of social indicators in demonstrating need, few respondents discussed how improved data practice was changing service planning or delivery. Some indicated that the systematically collected information had been used to justify support for new or existing programs or polices. The notion that policy or programs have changed dramatically as a result of information sharing remains unproven and, in most cases, undiscussed.

The sentiment that empirical information—across domains, at different geographic levels, and across agencies—is a necessary but not sufficient tool for improving policy was a repeated theme in some of our interviews and in our most recent visits to the UHI sites. Indeed, for some of the sites and in other cities with long-standing efforts, this lesson—and the need to put a greater emphasis on shaping the political process by building relationships and cultivating partners—has become a major challenge, more so perhaps than even getting or aggregating the microdata. One respondent indicated, “Okay, so you have data and you can make a case, but what’s the best way to frame your case? Because data alone do not do it. You can make an argument based on data and someone else can throw out other data that might put a different spin on it.”

At the same time, in cities with the most intensive efforts to collect and disseminate information, respondents described shifts in culture among those even marginally involved in the process. By continually raising the issues of increasing availability of microdata and summary statistics and devoting resources to cleaning and displaying them, the importance of making empirically grounded arguments may have been elevated. Several respondents noted this shift as a major accomplishment, even while noting the limits of this new awareness to translate quickly into improved policy.

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The problems of technical infrastructure and expertise are, in fact, related. An active participant in Richmond’s Youth Matters program (the UHI local arm) noted that the technological infrastructure of city agencies and the resulting capacities of city employees are limited at present; in the current economic climate, funds don’t exist to substantively upgrade equipment or skills in the near to medium term. In Oakland, a former government official lamented budget cuts over the last decade that had left him with few staff who could engage in substantive policy analysis and program evaluation work; hence, efforts to share agency microdata were unlikely to enhance the city’s capacity to use them.

As one local United Way official complained, “This is the most frustrating stuff I’ve ever done. It’s frustrating to talk about these things because I have such a need and love of information sharing.”

What do the achievements and frustrations of the efforts in these 15 cities tell us about the two models for improving public policy and outcomes through new data practices? If we return to figures 1 and 2, which depict the assumptions of the rational choice and deliberative democracy models, we see a shared belief that microdata can be assembled and made usable without significant cost or delay. Furthermore, both models assume that the intended audience—whether it is decision makers or the public—will be interested in and moved to action by the newly provided information. Finally, once received, those at both the top and the bottom of the political hierarchy will find new ways to use this information for improved action and policy. Our findings suggest there are significant obstacles and challenges to satisfying these assumptions. Regardless of the intended audiences for these data-improvement efforts in these 15 cities tell us about the two models for improving public policy and outcomes through new data practices? If we return to figures 1 and 2, which depict the assumptions of the rational choice and deliberative democracy models, we see a shared belief that microdata can be assembled and made usable without significant cost or delay. Furthermore, both models assume that the intended audience—whether it is decision makers or the public—will be interested in and moved to action by the newly provided information. Finally, once received, those at both the top and the bottom of the political hierarchy will find new ways to use this information for improved action and policy. Our findings suggest there are significant obstacles and challenges to satisfying these assumptions. Regardless of the intended audiences for these data-improvement efforts in these 15 cities tell us about the two models for improving public policy and outcomes through new data practices? If we return to figures 1 and 2, which depict the assumptions of the rational choice and deliberative democracy models, we see a shared belief that microdata can be assembled and made usable without significant cost or delay. Furthermore, both models assume that the intended audience—whether it is decision makers or the public—will be interested in and moved to action by the newly provided information. Finally, once received, those at both the top and the bottom of the political hierarchy will find new ways to use this information for improved action and policy. Our findings suggest there are significant obstacles and challenges to satisfying these assumptions. Regardless of the intended audiences for these data-improvement
Efforts to Improve Public Policy and Programs

Much of the needed microdata (and resulting summary statistics) are not currently being collected or cannot easily be collected. Some issues, and some new ways of thinking about policy making, require new ways of thinking about the information that public agencies collect. However, there is a strong tendency to collect what is already familiar, thus limiting the potential of microdata to foster new or innovative ways of thinking. For example, for most of the respondents, the absence of public expenditure data—or the way in which it is collected and kept—severely limits their capacity to generate new policy ideas and engage policy makers in new approaches (Brecher et al. 2004). Other pertinent statistics are not collected at all or, if collected, they are not readily accessible. This is especially true in areas of public service in which service delivery is in the hands of private and nonprofit providers and funding is received from multiple sources.

As we have noted, many of these efforts are limited to outcome indicators. Management, process, or financial data from public agencies are rarely included. As a result, there is a large gap between the outcomes and the actual practice of government; though the public may now be able to see progress—or a lack of progress—on key measures, they will find it hard to know the source or the reason for those changes.

Microdata or summary statistics may also be hard to interpret. For example, increases in reports of child abuse may be good (more people reporting) or bad (more absolute cases of abuse), leaving both the general public and experts befuddled as to whether praise or blame is in order. Furthermore, collecting and disseminating information can be slow because it must be assembled from a number of separate and distinct sources; often, volatile city politics mean that those responsible for change are no longer in power.

Meaningful dissemination is limited by technological constraints and the ability of the intended audience to understand the statistics provided. As figure 2 demonstrates, those in the deliberative democracy camp presume that the public will gravitate toward new information about their cities and communities, but we found little evidence to support this assumption. In the rational choice model, policy makers are similarly presumed to be ready to receive and use information as it becomes available.

For the rational choice model to be realized in practice, decision makers must be able to access the needed microdata and summary statistics. But this cannot occur without new investments in infrastructure and training. Such costs can be prohibitive. For example, public systems within a single local government may upgrade their computers and databases at different speeds and with different investments. This different pace creates a conundrum for public systems: What may be best for one system (e.g., human services) may not be best for the city’s public systems as a whole, and consequently they may not “speak” well to one another, perpetuating the difficulty of coordinating and disseminating information among the relevant players.

Furthermore, some public systems rely heavily on groups of nonprofit providers, which may have technological capacities and interests that differ from public systems. Improving microdata collection and analysis with contracting agencies is difficult because those agencies have an interest in reporting information that preserves their position, and city agencies have an interest in less costly service delivery. Thus, improving collection and analysis within these public systems comes with its own set of technological, political, and logistical problems.

In addition, even the most senior staff in city government and nonprofit agencies may lack expertise in using sophisticated microdata analysis tools. Bringing them up to speed is not a one-time effort because turnover will require constant attention to technical assistance. Again, these costs are great.

Finally, turning to the deliberative democracy model, the lack of sophisticated technological infrastructure and analytic expertise greatly limits the public’s capacity to receive information that has, in theory, been given to them. Portals, for example, are only useful to those who have the needed hardware and software—not to mention the skill—to use them effectively.

Information, by itself, does not put pressure on policy makers to make change or on the public to advocate it. For rational choice theorists (figure 1), better policy and outcomes flow from a better-informed political elite. That is, information should lead policy makers to better decision making. For those motivated by the deliberative democracy argument, a better-informed public will advocate for better policies and practice. But, as we have already noted, the evidence to support the leap from better information to better policy is not yet substantiated.

Public decisions are typically complex and rarely hinge on a single outcome. Public decision makers must balance priorities. Though efforts have made information available on a wider variety of issues and in a form that allows for community comparison, they do not provide a simple formula for assessing what is most pressing or what is the best solution. Different groups have varying and competing needs, requiring public decision makers to balance constituencies and competing priorities. And all decisions are made in the context of uncertainty, meaning that even the best
information about yesterday is of limited value in making decisions for today or tomorrow.

Furthermore, the competing interests of players within and among organizations make reforming and taming public systems a difficult task. Within organizations, using systematically collected information to change norms and practices is far more difficult than might be expected, requiring regular reinforcement and clear guidelines for translating empirical information into changes in practice. Experiences in the health care field, for example, underscore difficulties encountered in the implementation of evidence-based practice guidelines (Grol et al. 1998; Heinemann et al. 2003; Petrova, Smulian, and Ananth 2002).

For the public, complexity and uncertainty play critical roles. But beyond the limits of information to identify the best policies and practices, deliberative democracy is also constrained by the difficulty of mobilizing the public for political change. In the today’s world, voting rates are low, mobilization is rarely spontaneous, and forums for public discussion are scarce. Given these conditions, the public has little ability to translate their preferences into political pressure. Furthermore, the playing field is not level. The ability of the public to be heard by those in power only if one knows how to use it politically. Those who have struggled to improve data practice in these 15 distressed cities have done so out of a belief that their efforts would lead to something better. Though success has not yet been realized, they remain optimistic that, over time, success will come. We believe the steps they have taken are, indeed, necessary albeit not sufficient.

**Conclusion**

At the very least, the experiences of these cities indicate that the process of amassing microdata and creating greater access to it is not sufficient to drive broad or extensive political change in the short run. It will not, by itself, mobilize the general public to demand better public policy, nor will it provide sufficiently nuanced information to ensure better decision making.

Some of the reasons for these unrealized promises are technical and logistical ones: Different information is needed, catchment areas must be better aligned, hardware needs to be upgraded, and new software needs to be developed. Such barriers are, at least in theory, surmountable. The current situation, in which multiple philanthropic, private, and government efforts each sets off on its own course, encourages a good deal of redundancy and trial and error across cities. Federal leadership might help to ease the way if it built on the extensive experience gathered in these localities over the past ten years. It could also help by providing support to build the infrastructure of equipment and personnel that many distressed cities need to collect and use information effectively.

Still, one must acknowledge that information is power only if one knows how to use it politically. To date, many efforts to disseminate information have lacked a defined, strategic approach to empowering people—both inside and outside government—to use it. Those who have struggled to improve data practice in these 15 distressed cities have done so out of a belief that their efforts would lead to something better. Though success has not yet been realized, they remain optimistic that, over time, success will come. We believe the steps they have taken are, indeed, necessary albeit not sufficient.

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**References**


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