

WORKING DRAFT

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**DEALING WITH THE DIGITAL DIVIDE: CHALLENGES
AND SECTOR RESPONSES**

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Dealing with the Digital Divide: Challenges and Sector Responses

Anne Hays Egan and Sarah Williams

The paper demonstrates the pressures that expanding information and data requirements place on nonprofit health and human service organizations. The rapidly escalating pace of technological change has provided the nonprofit sector with significant challenges as well as new tools and opportunities. New technologies provide important resources for more efficient writing, case summaries, financial record keeping, marketing and information sharing. Spreadsheets and databases have allowed more nonprofits to track budgets and accounts in-house, manage client service records, volunteer and donor database records. Nonprofits can more effectively analyze their services and outcomes, and interface more easily with other agencies within a networked environment. However, nonprofits have found that obtaining hardware, maintaining software and records, and training staff are more time consuming and expensive than many anticipated. And staff are stretched to try to cover technology tasks.

The study presents a brief overview and analysis of major technological, public policy and financing trends that have converged within the health and human services subsectors to create significant challenges and a growing digital divide within the nonprofit sector itself and between nonprofits and for-profits in the health and human service industry. It shows many factors which contribute to the growing digital divide, including changes in government contracting, new performance mandates, reporting requirements, network formation, financial requirements, and challenges of mastering fast-changing, expensive technology.

A. Issues Impacting the Digital Divide

The issues impacting the digital divide include:

- (1) Changes in local and state government contracting,

- (2) Mandates for performance, networks and service outcomes,
- (3) Information system, database and data reporting requirements,
- (4) Costs of mastering and maintaining complex and expensive technologies.

1. Changes in Policy and State Contracting. Local, state and federal government contracting changed rather dramatically during the 1990s as a response to major shifts in federal and state public policy.¹ These policy changes included health policies promoting privatization and managed care, child welfare policies promoting responsibility, sanctions and privatization of services. State matches for certain funds were available but not required, and many states chose not to draw down all possible federal dollars through a full state match. In many states, the policies and contracting shifted toward contracting with a large oversight organization that maintained a service network, rather than manage a large group of separate contracts. As a result, nonprofits found themselves competing for fewer dollars, in an environment that required very different structural and service delivery systems.

During the early and mid 1990s, many states implemented Medicaid Managed Care, which required large complex integrated care systems to respond to proposals. Other health contracts were often modified as well, requiring agencies to be part of integrated service networks, with coordinated care across agencies, and shared information systems. Children and Family Departments also modified contracting requirements in many states, requiring service coordination and integration. By the late 1990s, many of these state departments were not only requiring integrated networks to bid for contracts, they were mandating specific service evaluation and data collection criteria. A number of national resource organizations saw the impact of these changes as they were developing in the early and mid 90s, and provided technical assistance to interagency networks and their agency affiliates. These include the

federal Bureau for Primary Health Care (BPHC), the Association for Community Health Centers (ACHC), the Child Welfare League of America (CWLA) and the Alliance for Children and Families.²

2. Mandates for Performance and Service Outcomes. Over the past decade, there has been a steady increase in funder requirements for demonstrated service outcomes. Both government and foundation funders have asked to see more outcome-based results, rather than activities completed.³ As a result, many agencies have found themselves struggling to deal with multi-funder requirements. Oftentimes these requirements have overlapped, or actually contradicted one another. Larger agencies have found ways to design evaluation and data collection systems that provide a large comprehensive system that integrates a range of evaluation requirements as data elements. However, this is a difficult, time consuming and costly task to design and develop the system and data elements. Perhaps the most challenging requirements that agencies face are those imposed by some state bureaus where the state bureau actually designs the evaluation data requirements it wants and places them in a database the agency is required to use. In some cases, those databases are open architecture, allowing agencies to import and export data from the main database. However, that is not always the case, and some agencies are entering data multiple times into different databases, or dealing with very fragmented data systems. The mandates for service outcomes are growing in their complexity, difficulty, and in the negative impact they can have on agencies.

Some of the major bureaus in the State of New Mexico understood the difficulty their differing reporting requirements and systems causes agencies and had intended to coordinate data requirements between programs. But as the planning and development of systems for the different programs got underway, the varying stages of development in different departments made coordination of data elements difficult. In the end, each state program went their own way,

creating divergent systems whose varying data elements make coordination of reporting systems impossible. As a result, with the new state systems in place, agencies are still struggling to meet requirements by entering data into three or four different systems.

In a technology needs survey we conducted with 22 agencies in the Santa Fe and northern part of the state, we found a high level of stress on agencies caused by heavy reporting requirements from local, state and private funders. Though most of the needed information was similar in nature, each funder has its own system of reporting that necessitated redundant input and record keeping by agencies. In a survey we conducted in West Florida, we found similar levels of agency stress and frustration caused by heavy reporting requirements from funders, and a reporting system by one state agency that mandated redundant input and record keeping.

3. Information System Requirements. Many nonprofits are just now discovering what the tech field has known for years – that these changes represent a very real revolution. Once a nonprofit is “wired,” their capacity for planning, managing and evaluating services changes dramatically. And, the nonprofits capacity for communicating with its stakeholders changes as well. The information system becomes a critical and integrated part of the organization’s system and structure. Most organizations begin their technology journey by obtaining and upgrading their computers. Most health and human service nonprofits find that they need internal and external networks, which allow them to share files, data and communicate about important topics online. Case managers and other front-line staff slowly begin shifting their case files from paper files to online files that include a record of activity as well as other key client demographic and utilization information. Software for health and human service agencies is becoming increasingly integrated so that client service activity, once entered by registrar or case manager, can be made immediately available to finance staff for billing purposes – and to the program manager for utilization review and quality management.

Through surveys and consultation, we found that, while a few of the larger agencies were well equipped and supported with computers and technologically skilled staff, most had outdated equipment, untrained staff, and practically no budget for improvement in those areas. We found that many of these agencies had dreams of better systems but lacked the knowledge or the time to develop the necessary resources required to plan for and implement the needed technological infrastructure

The level of complexity requires that agency staff be able to analyze work goals, workflow, work patterns, outcomes and design and re-design information systems that support the work. Many nonprofits have hired information technology consultants to find that the system created did not work. That is usually because agency staff did not conduct the system analysis and work with the consultant to design the system first on paper – and the consultant knew less about the agency's work than was required for optimal IT system development.

4. Costs of Mastering and Maintaining Complex and Expensive Technologies. Many nonprofits are surprised to discover that technology is more expensive to develop and maintain than originally thought. Once agencies build a certain basic level of technological capacity, they can no longer depend upon the occasional donated computer or printer to drive the agency's technology. Technological developments must be planned and included in the budget. And, staff need to receive ongoing training in order to manage integrated software system modules. One mid sized nonprofit that had deferred technology development invested \$50,000 in hardware and software upgrades in one year alone. Larger nonprofit service systems can spend hundreds of thousands of dollars on system hardware, software and consulting. Even small to mid-sized agencies need to budget between \$5,000 and \$25,000 yearly for technology and system development, depending upon the size of the agency and complexity of its systems. For many nonprofits, these funds are difficult to find. Most government contracts provide a very limited

amount for operations, usually 5% to 10%. As a result, health and human service agencies with multiple government contracts often defer operations and system development in order to maintain contracts and services to clients. However, the long-term impact of this deferred maintenance is growing inability to compete in the tech-driven service delivery system. When we consider that the average nonprofit today has less than 3 months' worth of operating cash reserve, we should become seriously concerned about nonprofits' ability to build the sort of infrastructure and capacity needed to succeed in this increasingly competitive, high-tech health and human service delivery world. Businesses like IBM, Microsoft and Digital are partnering with communities to provide resources and technical assistance, however even more is needed. Foundations currently provide limited funding for operations, and the sector continues to ask for increases in funding for operations. One new development in the foundation world is an increasing level of funding support for technology.

B. Case Examples. These short vignettes illustrate the key factors described earlier, and demonstrate both the complexity of the challenges as well as the importance of resources.

1. Grassroots Agencies in Chicago, New York, Tampa, Atlanta, Research Triangle, Los Angeles, Burlington, Endicott, Boston, San Francisco and other cities. Teaming for Technology (T4T) (a national initiative of IBM, United Way of America, Corporation for National Service, and Public Allies) was concerned about the potential of losing grassroots organizations and those serving the poor to the digital divide. In T4T cities, staff worked to identify and choose agencies, and then provided technical assistance to help agencies develop technology plans, integrate new hardware and software, and meet their basic tech goals. And, T4T is working with four types of nonprofit service networks in three different sites.⁴ A significant number of agencies have reported significant accomplishments, especially with developing and

implementing their tech plans, and making progress with basic technology development. Many of the sites report that the local partnerships have enabled them to leverage equipment, software and expertise. The biggest challenges seem to be reaching enough nonprofits, and helping them to sustain their technology development. This approach seems particularly well suited to helping grassroots and community-based nonprofits develop technological capacity, and build a base for further development. Success has required significant investment by all of the partners.

2. Mid-sized Health Clinic in New Mexico. This small to mid-sized (\$1.75 million) health clinic had deferred upgrading of its patient records and billing system for a number of years. New requirements by the state and insurance carriers made it necessary to create a more integrated patient record and billing database. When a new Executive Director came on board, she developed a plan and worked with a consultant to revise their patient record keeping and billing structure and database. The new system has been installed, revised, and fine-tuned over a period of two years. The clinic now has networked systems, and staff that are trained. The ED and other managers have played a major role, driving these changes as a major priority. Even with the improvements, the ED of the clinic says “we still find it very difficult to respond to all of the data requirements from different funders and will find it challenging to maintain the infrastructure needed.” The ED’s leadership and commitment to IT has been critical here.

3. Mid-Sized to Large Health and Human Service Agencies in Florida – Two mid-sized to large (\$4 million to \$6 million) health and human service agencies in Florida had budgeted for technological development and upgrades, and had sufficiently diversified staffing to handle technological developments. However, what they had not expected were a series of new evaluation requirements from a number of Florida state offices, including one bureau that provided a database that was not initially open architecture. ⁵“These new requirements are driving us crazy,” said a senior management staffer. “We’re dealing with it, but staff are

working nights and week-ends. Think what this must do to the smaller nonprofits.” These agencies, known for quality services, were able to integrate the new demands, because they had access to resources. It was a difficult transition, made more so by some of the technology requirements of state offices. Agency capacity and staff commitment were key to success.

4. Large Statewide Health System in New Mexico. This large (\$50 million) multi-program and multi-site agency began planning for technological change in the early 90s and implementing change by the mid-90s. The agency’s plans focused on technology and organizational systems as well as program and clinical goals. Anticipating the move to managed health care, the system conducted a series of studies of utilization rates, costs by site and by program area. They invested in a large server that could handle utilization management, billing and financial reporting data. They provided training to staff, both in technical areas of database management, as well as the quality management side of data analysis. However, even with the early planning, investments and training, front-line staff still continued to need resources. In fact, as we surveyed multiple sites, we discovered that some had IS systems, but most had limited equipment and very little technological capacity. Front line staff were stressed and complaining about all they had to do. They resisted additional requirements, levels of bureaucracy and reports. To meet staff and organizational system needs, Just the Basics designed an Access-based system called Client Tracker to provide front line staff with easy data collection and report tools that integrate and streamline the staff work with client service data collection and reporting functions. These were then linked with billing and finance to provide a wrap-around resource. IT accessibility and practicality were key for these sites and their staff.

5. Integrated Health Service Network in New Mexico. This health network includes 16 different agencies from the northern part of the state. They range in size from small grassroots programs and small agencies to mid sized and large organization. During the mid 90s, the state

health department indicated that it would require that state funded agencies serving the poor would need to coordinate to create integrated, networked services. Private for-profit companies had come into the state and competed successfully for Medicaid Managed Care contracts, causing a good number of community-based health organizations to lose some funding and even more autonomy. The community agencies were determined to win the contract to keep funds in the communities. Creating an integrated service network and an IT system to serve it was a challenge. And, this network realized that nonprofit agency networks have not had an excellent track record nationally of successfully bidding against well-resourced for-profit competitors. However, in this case, the group of 16 had a passion to win, planning resources that had been provided by the state for network and IT system development, significant strength and expertise among member agencies, and a consulting team to help them develop the network and the data system. The lead players in the system worked intensively with the consulting team to develop the network and IT infrastructure. System staff, board and committees worked intensively to develop and test the system. Using knowledge gained from other system development around the U.S., the team was able to develop, pilot and test the system sufficiently to win the competitive bid. Ongoing system development has remained important – and challenging. This behavioral health network would not have been able to succeed without the combination of resources, expertise, significant system involvement and a drive to win.

C. Analysis of Challenges

The barriers nonprofits face vary, based on the organization's size, resources available, their own tech goals, and current level of involvement with technology. Small nonprofits typically respond to technology needs more slowly than larger organizations, and they have fewer resources available. Many of the smaller organizations face significant risks to their viability if

they do not have a minimal level of technological capacity, as they will be increasingly unable to communicate, network or respond to data requirements. Mid-sized nonprofits often have basic technology in place, including database management of client and program information. However, the challenges for these organizations remain building the right capacity for a changing environment, and continuing to fund technology as part of the annual budget.

Health and human service agencies face significant challenges from changes in government requirements, funding patterns and data demands to the need to develop inter-agency networks to new competition from for-profit and large nonprofit providers. The requirements of “managed” systems require a new level of sophistication with data analysis and utilization management not needed five or ten years ago. These organizations have often been hardest hit, and must build both agency service and data system capacity. Almost all nonprofits report that changing funder data requirements create significant stress.

D. Recommendations for Sector Strategies

If the nonprofit sector is to emerge in 2020 as strong, vibrant and competitive within a high-tech environment, then significant resources must be allocated to the sector during the next ten years. Agencies themselves will need to understand the importance of technology, and make commitments to technological development through creating tech goals that are part of their strategic plan. Agencies must allocate budget resources to infrastructure and technological development. However, the agencies will only be able to handle these challenges by working in partnership with key community and national initiatives that leverage resources.

1. Leverage partnerships. National funders and corporations are making hardware, software and technical assistance available through community initiatives. Examples include Teaming for Technology (IBM, UWA, CNS and Public Allies). Digital is mobilizing partnerships with Boys & Girls Clubs, and Microsoft has a new initiative. There are strong tech management support resources around the country, including CompuMentor

in San Francisco, IT Resource Center in Chicago, and others. However, the need for technical assistance is much greater than current resource capacity.

2. Build capacity with leadership from major national foundations , similar to the Ford Foundation Planning Giving initiative in the mid to late 80s, and its AIDS initiative in the early 90s, and Annie E. Casey children's initiatives.
3. Mobilize the Council on Governments (COGs) and other government groups to work on state policy and practice issues focusing on open architecture, TA w/ new data requirements, and resources for nonprofit system development.
4. Build a bank of national "effective practices" – looking at what works, areas where requirements may be too much or ineffective, and strategies and models.
5. Increase foundation funding for tech grants and operational grants.
6. Link tech and data issue work with Grantmakers for Effective Organizations (GEO).
7. Encourage the network of MSOs and state nonprofit associations to develop training and consulting for IT, data and system development, and to leverage their relationships w/ grantmakers to expand grants for tech development

EndNotes

¹ During the early and mid 1990s, the federal government passed major pieces of legislation that dramatically shifted the responsibility for policy development from federal to state levels. This policy shift, called devolution, included welfare reform legislation, workforce development legislation, children's services policy changes, and legislation health and Medicaid Managed care legislation.

² These national associations and federal bureau provided books and manuals, training materials and consultation to help their affiliates or funded agencies structure for the future and bridge the gap. BHPC funded pilot integrated service networks, which were critical to the ability of clinics to develop and maintain effectiveness in a new environment.

³ Many state bureaus funding health and human service agencies have increased their focus on outcome-based evaluation as part of grant accountability. They have used different models for outcome evaluation, with little integration between or among models. Large foundations have also moved increasingly toward funding outcomes, but tend to allow agencies to report using their own formats more than government funders.

⁴ One service network is a network of primary health care clinics, another service network is a network of childcare agencies, and the third service network is a network of agencies serving the homeless.

⁵ A database that is closed architecture does not allow importing from or exporting to other databases that may be central databases for the agency. An open architecture database allows importing and exporting, and minimizes the redundancy required in data entry.

Framework to Analyze Agency Capacity and Areas for Improvement

	1 Low Weak	2	3 Medium	4	5 High Strong
INTERNAL CAPACITIES					
Size (low for small; high for large)					
Budget operating reserve					
Budget diversification					
Tech goals and/or tech development plan					
Tech development					
Staff training and cross training for technology					
Commitment of leadership to build tech capacity					
Funds for tech development in budget					
Pressure to remain competitive					
Time to develop & integrate change					
EXTERNAL PRESSURES					
State/city funders require specific data reported for outcomes and indicators					
State/city funders provide database and mandate agencies use the database					
Government mandated databases are open architecture, meaning they can be linked to other agency databases, thus reducing the amount of re-keying of data required.					
Government funds are tied to performance measures					
State policies require that health or workforce development contracts be handled through a large intermediary, normally a private proprietary HMO or work-training firm. (HCA, Lockheed)					
Agency had multiple funder requirements, handled through multiple separate databases					
There is greater competition from wider array of organizations, including large proprietaries					
EXTERNAL SUPPORTS					
Funding from government sources for tech					
Funding from foundations for tech					
Technical assistance available					
Policies help and support nonprofit HHS involvement					

Model Framework – Agency at Risk

	1 Low Weak	2	3 Medium	4	5 High Strong
INTERNAL CAPACITIES					
Size (low for small; high for large)					
Budget operating reserve					
Budget diversification					
Tech goals and/or tech development plan					
Tech development					
Staff training and cross training for technology					
Commitment of leadership to build tech capacity					
Funds for tech development in budget					
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EXTERNAL SUPPORTS					
Funding from government sources for tech					
Funding from foundations for tech					
Technical assistance available					
Policies help and support nonprofit HHS involvement					

Model Framework – Agency Developing Tech Capacity

	1 Low Weak	2	3 Medium	4	5 High Strong
INTERNAL CAPACITIES					
Size (low for small; high for large)					
Budget operating reserve					
Budget diversification					
Tech goals and/or tech development plan					
Tech development					
Staff training and cross training for technology					
Commitment of leadership to build tech capacity					
Funds for tech development in budget					
Pressure to remain competitive					
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