



Improving Human Services through Technology

Non-Profits Sharing Data

Increasing Effectiveness Through Data Exchange

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Overview

Scenario: *A woman calls a local help-line looking for after-school child care for her two children. The information she gives to the call operator (name, address, income, etc.) goes into an on-line database that is accessible by a variety of organizations in the community. After quickly determining eligibility, the operator refers the caller to an agency that has space available. When the client contacts that organization, they are able to bring up the information that the client has already provided the call center on their computer.*

Sounds simple. It's not.

One of the biggest difficulties for non-profit organizations today is sharing data with other agencies and/or programs.

Why? Because data about community resources and the people who need them is collected, stored, organized and protected in ways that complicate the most basic sharing of information.

Unfortunately, the more typical scenario for a person seeking services would go more like this: *A woman looks in the yellow pages for after-school child care for her two children. The first place that she calls is not accepting new clients, and they do not make referrals to other agencies. The mother calls the next agency in the yellow pages, and this time, the person who answers the call takes down her name, address, information about children's ages, etc. yet quickly determines that they are not eligible for services from this particular agency. However, the call operator refers the woman to a private agency that provides after-school activities and may have space available. And the story goes on.....*

For the purposes of this paper, we will address two kinds of information that are commonly collected yet difficult to share between and among non-profits:

- **Resource data** - basic information about agencies, programs and services available in a community, such as financial assistance, legal aid, food banks, shelters available, etc.
- **Client data** - information about individuals and families who are seeking assistance and/or have provided personal information such as address, income, etc. to qualify for assistance

It is also important to look at this scenario through another lens - that of the case manager or agency.

Scenario: *A woman calls into my agency looking for after-school child care for her two children. Based on the information she gives us (name, address, etc.), she would be eligible for services from our organization, however, we are at capacity and have a waiting list. I know that there are other agencies that provide after school care, but I have no idea who has space available. All I can do is tell her to call the school that the children attend for more information. I feel bad that I cannot help this woman who has just moved here and is desperately trying to find a safe place for her children to stay while she is working.*



Data sharing is an important aspect of sound social service delivery. Non-profits working together to serve the needs of their community face the critical challenge of sharing information among themselves, their respective stakeholders, and the public. This need for data underscores the need for data standards. Without standards and common terms, widespread information sharing does not occur.

Data Standards

Data standards provide common vocabulary for any two people or technologies to communicate about defined types of data. Data standards are fundamental to the seamless exchange of data and they help improve the ability of partners (internal and external) to exchange data efficiently and accurately.

Data standards improve the quality and share-ability of data by:

- increasing data compatibility
- improving the consistency and efficiency of data collection
- reducing data redundancy

The lack of shared standards increases paperwork and data collection burdens, and reduces the ability to serve clients well, identify needed and provided services, and analytic potential of important data.¹ Without consistent use of data standards, there is little ability to make multiple uses of or link data, limiting the usefulness of data to public and private data customers and agency partners, and vice versa. The need for shared data standards encompasses the need for better agreement on common client data vocabularies, assurances of privacy, and other issues surrounding electronic transmission of information.

Examples of important ways that data standards are used:

- **Emergency Data Exchange (EDXL-RM) and the EDXL Hospital Availability Exchange (HAVE)** approved standard messages for sharing data among information systems that coordinate requests for emergency equipment, supplies, and people. HAVE allows emergency dispatchers to make sound logistics decisions on where to route victims based on accurate hospital bed availability, status, services, and capacity data.
- **U.S. National Institutes of Health, National Cancer Institute** - caBIG Data Standards allow sharing of data in a standardized format in a uniform manner across multiple institutions to accurately track disease and medical research, data, and trends.
- **Public Education Information Management System** - standard set of definitions, codes, formats, procedures and dates for the collection of data by school districts, state and federal departments of education.

Standards initiatives are dedicated to establishing standards to uniformly satisfy the complex needs of a particular industry (which cater to no one organization or group of organizations). The existence of a published standard does not imply that it is always useful or correct. The people who use a standard have the responsibility to consider the available standards, specify the correct one, enforce compliance, and use the item correctly.

Data portability is the ability to access, search, synchronize, move and manage data from multiple sources (while bridging the various data islands and providing transparent, secure access to data wherever it is stored).²

In the field of social service delivery, data standards are no less important than standards for energy production, research statistics, public safety or manufacturing.

Does Your Data Meet Existing Standards?

Great strides have been made over the past few years in the field of standards in the social services sector - for both resource and client data. These standards bring value to the information you manage, help build collaborations between agencies, honor the investments made by your donors, and reduce duplication and fraud.

For resource data, the "go to" standard is the AIRS XML Resource Exchange Standard. The purpose of the AIRS XSD is to encourage and support resource database interoperability -- that is, ways for resource databases to import/export resource data collected by other agencies using different softwares.

How can non-profits ensure that the resulting XML files from each vendor application share the same format?

Answer: Adopt a universal formatting standard for sharing data, which each vendor implements.

- Regardless of the vendor application, an XML export file will have the same data format.
- Vendors need only develop programming logic to handle this one standard format.

For client data, the Coordinated Assistance Network has championed the creation of a Disaster Client Data Standard by working with a task force sponsored by ANSI and the US Department of Homeland Security.

To support the development of standards across the nation, VisionLink created two online validation tools.

Learn more about the [AIRS XML Resource Exchange Standard](#), and test data files against the standard [here](#).

Learn more about the [CAN XML Client Exchange Standard](#), and test data files against the standard [here](#).



Today's Solutions

In the recent past, social service agencies have experienced technology barriers to exchanging resource and client data. Fortunately, thanks to standards development and numerous vendors actively working towards common solutions, technology is no longer the primary barrier when it comes to exchanging data.

It seems, however, that the greatest hurdle to data exchange, both resource and client data, now sits at the threshold of the social service agencies themselves. Based on feedback from all corners of the country, non-profits are reluctant to share data with other organizations.

Why? Research and anecdotal evidence suggests non profit organizations fundamentally want to control their own data while limiting access to others because of an underlying lack of trust: *what are you going to do with MY client's information?*

Addressing the issues surrounding trust and political will as barriers to exchange is essential for the social services sector to operate as a coordinated and effective system. As a first step, this paper will highlight practical examples of community an organizational benefits of data exchange.

While data exchange is a powerful tool for compiling and improving access to higher quality information, evidence suggests that it also delivers financially. Faced with the reality of tightening budgets and competing priorities, managers need to ensure that their technology investments will improve business processes and reduce operating costs. Partners that invest in technology to exchange data can realize a substantial financial return through more efficient ways of doing business.³



Benefits of Data Exchange

Fundamentally, data exchange can provide the following for organizations:

- Saving money and resources
- Better information and better decisions
- Improved data quality
- Improved service delivery
- Access to real time data
- Competitive advantage

In addition to the list of benefits of data exchange, we would like to shine a spotlight on exemplary work done across the country by our customers. These sites have realized benefits, both large and small, to their organizations, their communities, and most importantly, to their clients.



Eliminating the Duplication of Services

The resources and services of 47 agencies across the west Texas region go further because case managers can see what assistance people are receiving from other agencies. When a case manager is having to decide who to help with their limited funds, having the data of how much help a family has already received from the community can help them make informed decisions to maximize resources and ensure that people are receiving appropriate services from participating organizations. Sharing information has significantly reduced the number of clients who were “double-dipping” for rental assistance, utility assistance, etc.



Programs Use Data as Credible Needs Assessment Information

The Community Foundation of Abilene, Hendrick Health System, and the City of Abilene, have all recently convened a meeting of community leaders, assisted by A Call for Help data, to determine unmet needs, gaps in services, and potential overlaps. Each organization is charged with separately assessing and addressing community needs. Our data can show over time what people of different ages and by zip code are seeking assistance, for what types of services, and what the organizations working within the Basic Needs Network are able to provide toward those requested needs. Specifically, we are currently involved with a project that is going to map, by neighborhood, requests for food pantries and the location of food pantries. This data will help build the case for the food pantries to coordinate days and times of operation to best meet the needs of the neighborhoods and residents they serve.

Saving Money and Resources - For many organizations, exchanging data has become a costly and time consuming exercise. Data exchange often requires dedicated resources to build and maintain interfaces between data systems. In many cases, data must be transferred manually between systems through labor intensive data entry which drains both human and financial resources. Data exchanges, when all parties adhere to established standards, can reduce the cost and resource requirements of data sharing.

Better Information and Better Decisions - When stakeholders have better information, they can make better decisions about maximizing resources and serving the needs of the community. As organizations seek to provide community solutions, policy makers and the public have begun to demand more comprehensive information. Data exchanges allow partners to integrate, analyze, and interpret more comprehensive information from disparate sources.

Improved Data Quality - In the past, problems with traditional data exchange often compromised the quality of data. The problems included faulty data entry, multiple data entry, transmittal of incorrect data types or file formats, and sporadic use of data standards. The most common issues regarding data quality to the users include accuracy of data, and information that is out of date. When software systems consistently use data standards, data quality can improve.

Eligibility Shared Among Participating Organizations

FaithWorks, a life skills and employment program in Abilene, TX, will accept an applicant to their program automatically, if when reviewing the shared client notes from other human service providers, the client has shown a commitment/willingness to change old habits.



Access to Real-Time Data - Today, we live in a point-and-click culture -- the public demands more timely access to information. By utilizing web services and the internet, software systems can provide real-time information that can be used for real-time service delivery and decision making.



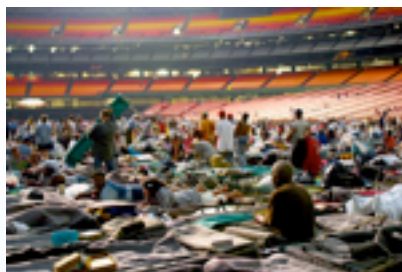
Use of “Presenting Needs” Data

The Rolling Plains Health Coalition in west Texas

analyzed 2-1-1 presenting needs statistics for mental health requests from persons 60 years of age or older. This data was alarming to a county judge who worked with the Health Coalition to make the case for a federal grant to support transportation and counseling services in this large rural area.

Competitive Advantage - The non-profit that uses technology that adheres to standards for its resource and client data has a competitive advantage over other non-profits for funding, position in community for serving as a hub of information and resources, and credibility of policy-makers as “the source” for reliable, aggregated information across programs and services.

Improved Service Delivery - When dealing with agencies that do not exchange information, a client has to give the same information over and over, and the community (overall) lacks awareness of available services/resources. Service delivery is improved when information in the system is accurate, and the technology allows prompt, helpful, appropriate referral and instructions, the client receives appropriate service, and there is a feedback loop (to clients, providers & funders).



Exchange Spotlight: Coordinated Assistance Network

The Coordinated Assistance Network (CAN) works with communities across the United States: helping caseworkers improve assistance to individuals impacted by disaster. By creating the capability to share data prior to a disaster, CAN has improved community readiness and ensured that information will quickly be made available to the range of human service organizations involved in disaster recovery.

To facilitate the exchange of resource data in the disaster recovery sector, CAN⁴ has been working with information & referral organizations, mainly 2-1-1s, to ensure that their existing data about community services may be easily and quickly shared with CAN in the event of a disaster. If you would like to populate your resources in preparation for a disaster, and share that data with CAN, please contact Elizabeth Lawrence - Bowen at liz@can.org.

What can you do?	Resource Data	Client Data
	Contact CAN to participate in the national resource database.	Ensure essential client data is included.
	Make sure that your data software vendor is fully compliant with AIRS 3.0.	Make sure that your client data software vendor is DCDS compliant.
	Use the data validation tool at https://validation.communityos.org/xmlvalidation	Use the data validation tool at https://validation.communityos.org/cdsxml

Technology Solutions

What to Look For in a Data Exchange Technology

There are a number of critical functions or traits to consider if you are looking for a technological solution to help your agency or community with data exchange. Look to solutions that are:

- proven
- web-based collaborative space
- content management drives public and private information
- treats technology as a back office operation
- share information/data easily
- share training resources
- share service delivery/referrals, etc.
- mapping capacity
- agreements re. confidentiality
- common intake forms/standards across services
- access controlled via permissions/roles
- reporting tools/export and use data efficiently
- ability to display in multiple languages
- able to link family members in records
- impact of follow-up
- tools for partners (donations, volunteer, etc.)
- flexibility to use on-line or off-line as appropriate
- technology created and supported by practitioners so that technology supports strategy
- provides audit trail
- adheres to industry standards (AIRS Resource Taxonomy and Client Data Standard) to leverage resource and client data sharing
- have consulting/coaching services available

CommunityOS: a New Class of Technology Products

In the past, many organizations tried to protect the information they collected and managed, and protecting data added value to the organization.

Today, the value of data is directly proportional to its use, and exchanging data with other partners is a fundamental value in this context.

To make this possible, VisionLink's Community Operating System (CommunityOS) not only adheres to various standards, it also provides powerful import and export tools, and sophisticated data wizards to help you utilize your data in value-adding ways.

In fact, we even offer reporting tools that track the use of data by source, so that you can provide credit to those who provide data to you, and so you can gain credit when you provide data to other CommunityOS system.

Non-AIRS Compliant Imports: VisionLink provides personalized technical assistance when you have non-standard resource data to import into CommunityOS. We understand the complexity of resource data and the importance of importing the data accurately. We will work closely with your staff to schedule these types of data imports.

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Resources

- Coordinated Assistance Network - CAN - www.can.org
- AIRS validation tool
- CDS validation tool
- Cottingham, Kutsch, Shank. *A Case Study in Data Sharing: 211 Helplink and the AIRS SXD*. June 6, 2008
- [AIRS XML Resource Exchange Standard](#)
- [CAN XML Client Exchange Standard](#)

Endnotes

¹ Health & Human Services Data Council Committee on Health Data Standards.

² Tcherevik, D., *Data Portability: A New Answer to Integration for a Web 2.0 World*, InfoManagement Direct, January 9, 2009.

³ www.exchangenetwork.net

⁴ www.can.org