

PRACTICE

HHS-Connect: Big Apple, Big Changes

New York City transforms its health and human services programs with a cross-agency data management system and other state-of-the-art technology

By Isidore Sobkowski

NEW YORK CITY health and human services agencies provide a wide range of programs for more than 2 million people. With this variety, the city's service delivery model is extremely complex. Data management is a core function of this service delivery model, as HHS professionals make programmatic and clinical decisions based on knowledge and information—access to relevant, timely, reliable data is critical in ensuring individuals and families receive the most effective care possible. Like many other HHS environments, however, the city's agencies have long operated in silos that limit integration and consistent cross-agency service delivery, despite common clients and similar models. This reduces service effectiveness, eliminating the opportunity to address clients' underlying needs in a holistic, integrated way.

The HHS-Connect Vision: Using Tech to Transform Services

In 2007, under the leadership of Linda Gibbs, New York City's deputy mayor for health and human services, the city's HHS heads committed to a transformational journey, using technology as the primary tool to improve the way the city serves its constituents. Their unified vision, shared in the release of the HHS-Connect Roadmap, moved the thinking beyond conventional service delivery, toward breaking information silos through the use of modern technology and coordinated agency practices to provide more efficient and effective health and human services to New Yorkers. To achieve this vision, the city's agencies worked

collaboratively, abiding by a set of guiding principles:

- Establish a client-centric approach to service delivery
- Increase and manage accessibility of information
- Improve accountability
- Use modern and flexible technology.

HHS-Connect's vision is to enhance the experience of clients, workers and agencies. The residents of New York City—our clients—will have greater knowledge about the services available to them, increased and convenient access to agencies and programs, and improved interaction with workers, who will have better tools at their disposal. Workers at city agencies and provider organizations will have relevant information readily available, with less paperwork to complete, and they'll be equipped with technology tools to facilitate interagency coordination. They will be able to analyze data across agencies, and allocate and optimize resources more effectively by providing more targeted and appropriate services.

Governance and Accountability

The release of the HHS-Connect Roadmap was followed by Mayor Michael Bloomberg's issuance, in March 2008, of Mayoral Executive Order No. 114, which established HHS-Connect to facilitate data integration and exchange between existing agency-based information management systems in accordance with all appli-



cable federal, state and local laws and regulations. This executive order set the groundwork not only for the vision of a more connected and efficient sector, but also for the mandate and governance structure needed to ensure the project's success. HHS-Connect governance structure takes into account New York City's HHS complex and diverse landscape, and involvement of all stakeholders at all developmental stages of the project is essential to its success.

The Executive Steering Committee, comprised of the deputy mayor for HHS, CIO for HHS and city HHS agency commissioners, provides guidance, support and oversight on all HHS-Connect initiatives to help ensure alignment with business objectives and compliance with legal and regulatory requirements. The requirements of federal and state privacy and confidentiality policies, regulations, legislation and statutes have been addressed through the standing Cross-Agency Policy and Legal Subcommittee that serves as the structure for city HHS agencies to collaboratively work through complex legal and regulatory compliance issues related to cross-agency data sharing. The HHS-Connect Enterprise Architecture Governance processes serve as a guide for development of business and technical requirements and architectures so the delivered solutions align with the city HHS agencies' vision.

The table below lists the major New York City stakeholders; HHS-Connect also maintains a vital connection to the nonprofit provider community via umbrella membership organizations, city agencies and individual providers.

Laying the Groundwork for Data Exchange

Much of the earlier phase of HHS-Connect was spent on making the necessary investments in key foundational elements, paving the way for data exchange between many disparate HHS systems. These include:

Common Client Index

The Common Client Index, implemented during the initial phase of HHS-Connect, helps provide a single view of a client who has interacted with any of the participating city agencies. Using a federated approach, the CCI identifies and links client records and information across participating source systems and facilitates sharing of this information among authorized participating agencies.

The HHS CCI is a registry-style master data management solution that matches client identities based on demographic data from multiple HHS systems, both within and across agencies. The CCI creates and maintains linkages between the individuals who are matched and stores the client locator record keys used to identify the client in a specific agency source system. It does not store program-related data, but does store a virtual collection of client demographic information that can be used to create an aggregate HHS domain-level view of a client (sometimes referred to as a client control record or "golden" record). The information is assembled based on data aggregation rules that factor in data quality, source, timeliness and consistency with other source material.

Document Management

The HHS-Connect document management capability integrates technology, access controls and indexing to provide a single, integrated view of client documents maintained by New York City HHS agencies. A federated technical architecture can leverage connectors to the existing underlying agency systems, regardless of their technology, and is easily scalable. HHS-Connect currently provides authorized users with access to more than 32 million client-provided document images from the Human Resources Administration repository via Worker Connect (read more about Worker Connect below).



Unifying Standards: The National Information Exchange Model

The National Information Exchange Model (NIEM) provides a common XML-based data exchange format. This common language allows inter- and extra-agency data exchange (real-time or batch) to occur with minimal effort and maximum reusability. The NIEM organization structures this common language by subject areas, or domains, which are self-governing. Although neither a human services nor a health domain existed at the outset of HHS-Connect, the city of New York built all HHS-Connect data exchanges using the core (e.g., common to all existing domains) of the NIEM schema and extended the NIEM schema into health and human services where needed. Within HHS-Connect, and across the city's HHS agencies, the NIEM extensions have been leveraged and reused for system interoperability. The federal Department of Health and Human Services recently began to champion a health domain and a human services domain, and HHS-Connect's NIEM extensions will be a large part of the baseline domain schemas.

HHS-Connect Tools

Worker Connect and Access NYC are two primary components of the HHS-Connect services delivery model.

Improving the Worker Experience: Worker Connect

Released in the summer of 2010, Worker Connect is an integrated portal initiative that enables the front-line workers of New York City's HHS agencies to access client demographic and case/program-specific data across multiple agency system boundaries to improve service to their common clients. Client case information retrieved via the Worker Connect portal includes demographic, family composition and benefit/service information from five major HHS agencies/data sources.

Worker Connect is an enhancement, not a replacement, to the current processes caseworkers use when determining the most appropriate course of action for their clients. Prior to Worker Connect, workers had to rely on multiple sources to gain accurate and timely client information. Much of the information was client self-reported and information gathered through informal relationships with other agencies via calls, e-mail and fax. Now, approved Worker Connect user groups can perform client verification and validation work in real time through a secured computing environment.

Residents who interact with any of the city's HHS agencies benefit from the way tasks and processes are performed, thanks to Worker Connect, which lets caseworkers view a client's history, family composition, and immediate and future needs. By gaining a complete picture of a client's situation, they can manage their cases properly, connecting clients with all the resources necessary to treat each situation holistically and, ultimately, targeting underlying issues such as unemployment, incarceration and illness.

Improving the Client Experience: Access NYC

Access NYC serves as a robust and unparalleled online self-screening tool for 35 city, state and federal programs. Available in seven different languages, it allows city residents to find information about a variety of human services, instructs them in applying for benefits online or printing out application forms and searching agency locations where they can apply in person. Online applications are currently available for School Meals, Medicaid Renewal, Food Stamps and Senior Citizen Rent Increase Exemption (SCRIE)/Disability Rent Increase Exemption (DRIE). Building this capacity for client self-service is not only more convenient for those who might not otherwise be able to navigate the city's vast and complex HHS web, but it is also confidential or anonymous, ex-



panding access to those who may have been reluctant to seek assistance.

The establishment of Access NYC extends the city's health and human services, making them available to New Yorkers online in addition to existing phone access through the city's 311 service, by e-mail and in person at service locations. Now New York City aims to expand Access NYC by developing applications for:

- » Child Care and Head Start
- » Medicaid renewal
- » Food Stamp recertification
- » Links to existing statewide online applications, making more applications available via Access NYC, such as child support enforcement and the Heating and Energy Assistance Program.

HHS-Connect Roadmap 2.0

HHS-Connect Roadmap 2.0, scheduled for release in February 2011, builds on the foundations and investments made in the original Roadmap and sets the vision for the next phase of HHS-Connect. In keeping with the project's guiding principles and governance structure, HHS-Connect aims to continue to connect the HHS sector of New York City, expand and enhance utility of Worker Connect, Access NYC and other tools, work with three HHS agencies—the Department of Homeless Services, Administration for Children's Services and Department of Corrections—to roll out new enterprise case management systems, facilitate cross-agency service coordination and expand the reach of HHS tools to nonprofit providers.

In addition to these enhancements, HHS-Connect intends to develop a social enterprise intelligence capability, to enable agencies to drive policy and programming decisions using hard data. The agencies will

be able to optimize resources and align with outcome goals through coordinated policy objectives, more targeted and tailored prevention and intervention strategies, and more adaptive operations planning and management.

HHS-Connect through its innovative and iterative processes will continue to change the paradigm beyond conventional human services delivery, to break through information silos by using modern technology and coordinated agency practices and provide New Yorkers with more efficient and effective health and human services.

Isidore ("Izzy") Sobkowski is CIO and executive director of New York City's HHS-Connect Project. Sobkowski joined HHS-Connect in January 2011, and is regarded as an industry leader in the areas of artificial intelligence, predictive software and cyber-security. He previously led a number of successful technology companies including PrimeCloud, a provider of e-commerce personalization technology.