Addiction Treatment Programs Manage Data Inefficiently

Studying the collection, management and use of addiction treatment data to help organizations track quality and improve reimbursement

SUMMARY

Researchers at the Center for Health Enhancement Systems Studies at the University of Wisconsin-Madison studied the flow of data in eight substance abuse treatment agencies for three major processes—admission, discharge and transfer between levels of care.

The purpose was to understand how agencies collect and use data to support billing and ancillary systems and meet reporting requirements, and to provide a foundation for evaluating performance more effectively.

Key Findings

- Half of the surveyed programs reported that their electronic systems were completely or partially integrated. Full integration was defined as having linked their information technology (IT) capacity across billing and client data, at all levels of care and at all program locations.

- Treatment programs tended to manage data inefficiently and have few protocols guiding information management. Barriers to better data management included lack of integrated IT; limited funding, time and staff to develop and implement IT-related changes; and divergent staff skills and attitudes toward IT.

- Treatment agencies with more integrated health IT were able to expedite and improve the flow of information. Strengths of integrated systems include enhanced productivity, improved communication among intake, clinical and administrative staff, and an increased focus on data that allows information to be shared among stakeholders.

Funding

THE PROBLEM

Addiction treatment agencies need to be able to collect, manage and share data so that they can bill for services, develop appropriate treatment plans, monitor patient progress across inpatient and outpatient settings, test promising clinical practices and track quality improvements efforts.

However, these agencies typically lag behind other kinds of health care facilities in recognizing the value of data and using information technology (IT). "There is this perception in the field that information technology does not apply to us," said Jennifer Wisdom, PhD, MPH, one of the project directors. Many substance abuse treatment agencies have inadequate data management systems in place and lack ways to transfer data from one level of care to another, noted Wisdom in an interview for this report.

As a result, they often collect the same data several times in the course of a patient's treatment. Many agencies also lack the infrastructure to aggregate data about patients, thwarting efforts to evaluate clinical strategies adequately. Even those agencies that have good IT may not use it optimally.

CONTEXT

As RWJF moved away from funding in substance abuse prevention early in the 21st century, it started funding to improve substance abuse treatment. Two programs focused on this area:

- *Paths to Recovery: Changing the Process of Care for Substance Abuse Programs* addressed organizational and systems barriers to access, quality and efficiency. Delays in making appointments, waiting lists and call-back requests that defer admission, as well as undifferentiated clinical practices that discourage early engagement, all contribute to inefficient use of potential capacity, high failure to keep appointment rates, low rates of retention and ultimately poor outcomes. By exploring ways to redesign work and clinical systems, this program sought to reduce the time from call to admission, increase the number of admissions and reduce the number of people who leave treatment in the initial stages.

- *Advancing Recovery: State/Provider Partnerships for Quality Addiction Care* supports partnerships between treatment provider organizations that deliver care and states that are in the unique role of being both the largest purchaser of publicly funded treatment services (70%) and regulators and licensers of those services. The program used known leverage points at the state and provider organization levels to overcome barriers to proven practices and increase their use.

As of 2008, all RWJF funding in substance abuse falls under the Vulnerable Populations Portfolio.

THE PROJECT

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The purpose was to understand how agencies collect and use data to support billing and ancillary systems and meet reporting requirements, and to provide a foundation for evaluating performance more effectively.

The research questions were:

- How do substance abuse treatment programs collect client-level data?

- How do substance abuse treatment programs manage data?

- How do substance abuse treatment programs use the data they collect?

- What are the barriers and facilitators to improving data management systems?

- How does client intake information flow through different types of substance abuse treatment agencies?

- How does the level of IT integration affect staff-level efficiencies and agency-wide adoption of health IT?

The study combined two research methods:

- Qualitative inquiry is a social science research method that explores the "how" and the "why" of complex processes so that they can be understood holistically in the real world.

- Process mapping is a business-related method that uses flowcharting to give a clear picture of how a process activity is carried out, where the activity takes place and how it is performed. Through a pictorial representation of a business process, staff can identify bottlenecks, delays, barriers and errors, and opportunities for improvement.

Site Selection

Researchers selected eight substance abuse treatment agencies in four states that were diverse in terms of size, type of services offered and degree of sophistication in collecting data. The selected agencies offered between one and four levels of care (medical detoxification, outpatient, intensive outpatient and residential). Two of them also offered transitional housing.

Recruiting participant agencies initially proved difficult, with many of them declining to participate, either because they were not particularly interested in information technology or knew little about process improvement. Project staff ultimately selected agencies that

had participated in RWJF's national program, *Paths to Recovery: Changing the Process of Care for Substance Abuse Programs*, which addressed organizational and systems barriers to access, quality and efficiency.

Agency names were kept confidential.

Site Visits

Researchers made visits to each of the agencies. During these site visits, trained interviewers conducted semistructured, hour-long interviews with up to eight people who were familiar with the agency's operations and data management. These included agency directors and clinical supervisors; billing specialists and office managers; intake specialists and therapists; and information technology specialists.

FINDINGS

Research staff reported these findings to RWJF:

- **Half of the participating agencies reported that their electronic systems were completely or partially integrated.** Full integration was defined as having linked their IT capacity across billing and client data, at all levels of care, and at all program locations.

  — Medical detoxification and transitional housing programs were more likely to rely on paper-based systems even where the agency had IT systems.

  — Headquarters and sites with administrative functions were more likely to have clinical electronic data systems than satellite sites, especially in rural areas.

- **Treatment agencies tended to manage data inefficiently and have few protocols guiding information management.** Barriers to better data management included lack of integrated IT; limited funding, time and staff to develop and implement IT-related changes; and divergent staff skills and attitudes toward IT. An infusion of expertise, training and funds is needed to enhance staff level of comfort with IT and improve its use.

- **Treatment agencies that had little or no integration in their information technology:**

  — Depended primarily on paper records. Staff at these agencies collected by hand, stored and communicated all client-level data from intakes and assessments via paper, and entered them into unlinked databases.

  — Used multiple and repetitive steps to a greater degree than agencies with integrated IT. For example, staff often had to enter data twice, especially for financial and billing information, client demographics and state reporting requirements. They also had to screen patients for eligibility multiple times to

satisfy the requirements of specific funders or of different intake processes across levels of care or agency locations.

- **Treatment agencies with more sophisticated health IT:**

  — Entered data directly into databases. In general, staff at these agencies was able to access data through electronic systems that linked clients across levels of care and program locations.

  — Expedited and improved the flow of information. Strengths of integrated systems include enhanced productivity; improved communication among intake, clinical and administrative staff; and an increased focus on data that allows information to be shared among stakeholders.

  — Did not use their systems as much as they could have to look at data across all of their clients and conduct quality improvement activities. This suggests "there is a need to provide technical assistance to agencies to help them use the data that they have," said Co-Project Director Jennifer Wisdom.

- **Treatment agencies reported that when they were able to improve their IT, they were able to streamline their processes and increase staff efficiency.**

- **Process mapping is an effective tool for identifying opportunities to streamline processes, identify inefficiencies in the intake process and show agencies where they can implement change to influence productivity and enhance the flow of information.**

Communications

The researchers presented study findings at:

- A workshop at the National Institute on Drug Abuse Clinical Trials Network Steering Committee Meeting, Washington, October 2008

- A meeting of the Addiction Health Services Research, Boston, October 2008

- College on Problems of Drug Dependence, San Juan, Puerto Rico, June 2008

- Using Performance and Outcome Measures to Improve Treatment Summit, Los Angeles, March 2008

CONCLUSIONS

In the final report to RWJF, the project directors noted:

> "While health IT integration may benefit the treatment agency, as well as its staff and clients, the current environment, including regulatory and reimbursement requirements, does not support, at this time, more standardization or integration of health IT. Treatment agencies are often, at best, left to leverage their own

knowledge and skills to identify, select and in some cases implement an appropriate health IT systems for their clients and staff.

"The absence of adequate training in how to use the health IT systems and organizational protocols governing how information is used and disseminated within the treatment agency often impacts the level of commitment by staff with such new systems. As a result, clinical and administrative staff still relies on paper-based systems to manage the flow of information within the organization despite the financial investment by agency leadership to implement health IT."

LESSONS LEARNED

1. **Addiction treatment agencies may need incentives to participate in a study that has the potential to expose their inefficiencies.** This project made it easier by:

   — Insuring that agency names and locations would not be revealed

   — Providing a summary of findings to participants to help them make improvements

   — Condensing the interview process into one or two days, so as not to disrupt staff work schedules

   — Giving gift cards to staff who completed interviews (Project Directors/Jay Ford and Jennifer Wisdom)

AFTERWARD

The project concluded with this grant. Researchers have submitted three manuscripts about the study to peer-reviewed journals. See the Bibliography for more information.

- A manuscript of the project's process mapping results, "Peek Inside the Box: How Information Flows Through Substance Abuse Treatment Agencies," has been accepted for publication and is in press at the *Journal of Technology in Human Services.*

- A manuscript integrating qualitative and process mapping findings, "Substance Abuse Treatment Programs' Data Management Capacity: An Exploratory Study," received positive reviews from the *Journal of Behavioral Health Services and Research* and a revision is currently under review there.

- The final manuscript, "The Use of Health Information Technology in U.S. Substance Abuse Treatment Programs," was accepted and is in press in the international journal *Contemporary Drug Problems.* This manuscript was informed by the findings from this study and presents a broad picture of issues related to health information technology in substance abuse treatment programs.

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