

Survey Analyses for Implementing an Electronic Information System to Enhance Practice at an Opioid Treatment Program (1R01DA022030-03)

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Enhancing Practice Improvement in Community-Based Care for Prevention and Treatment of Drug Abuse

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**PATIENTS AND
STAFF OF THE
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ABSTRACT

ARTC, an outpatient opioid treatment program providing onsite primary medical care and HIV-related care for approximately 3,000 predominantly minority adults in Brooklyn and Manhattan in New York City, is in the process of selecting and implementing an electronic health information system that integrates counseling and social services, medical services, case management, HIV counseling and testing, dispensing information, and administrative and fiscal data. Through a NIDA grant, an assessment of system performance will be studied. Buy-in by stakeholders (patients, clinicians and managers) was the initial focus of this process. Five specific aims (quality, productivity, satisfaction, financial performance and risk management) with nine related hypotheses were chosen for study based on needs assessment meetings with stakeholders and literature review of prior published investigations.

The final selection of specific health information hardware and software is informed by a number of specific criteria, including the ability to provide relevant data regarding the aims mentioned above, information obtained from stakeholders and literature review, and determination as to whether the system will be developed totally in-house, by an outside vendor or as a hybrid. Presentations by various vendors were evaluated using specific criteria.

A detailed survey of 105 clinician stakeholders was done to determine (1) ability to use the current paper-electronic system; (2) challenges encountered with the current system; and, (3) training needs. The results of this detailed program description have the potential to inform continuing discussions about the selection and impact of integrated electronic systems in enhancing healthcare outcomes and agency cost-effectiveness in substance abuse treatment settings for this unique patient population.

BACKGROUND

- Electronic information systems rarely utilized or evaluated in substance abuse treatment settings
- ARTC serves a racially, ethnically and economically disenfranchised population
- ARTC serves a population that experiences significant disparities in access and quality of healthcare

STUDY PURPOSE

To Evaluate the Integration of an Electronic Information System at ARTC in the following areas:

- Quality
- Productivity
- Satisfaction
- Risks
- Financial Performance

STUDY DESIGN

- Prospective, comparative study
- Pre-post implementation evaluation
- 3-year timeline

STUDY DESIGN & DATA COLLECTION

Aim	Measure	Data Source	Mechanism
Quality	HCV viral load	Patient chart	Alerts; easier access
	Medical assessments	Patient chart	Alerts; easier access
	Multi-discipline assessments	Patent chart	Alerts; easier access
Productivity	Counseling visits	Clinician logs	Time efficiency
	Primary care visits	Clinician logs	Time efficiency
	HIV case management visits	Clinician logs	Time efficiency

STUDY DESIGN & DATA COLLECTION

Aim	Measure	Data Source	Mechanism
Satisfaction	Patients	Survey	Reduced waiting
	Clinicians/managers	Survey	Easier reports
Risks	Complaints, incidents, medication errors	Reports to CQI Manager	Quality, productivity and satisfaction
Financial Performance	Revenue per capita	Finance/HR Depts	Improved accounts receivable; billing
	Cost per visit	Finance Dept	Cost savings

AIMS & HYPOTHESES

Specific AIM 1: Quality

Hypothesis - Improved capture or timeliness of:

- HCV Viral Load
- Medical Assessments
- Multi-discipline Assessments

Specific AIM 2: Productivity

Hypothesis - Appointments will increase for:

- Counseling Visits
- Primary Care Visits
- HIV Case Management Visits

Specific AIM 3: Satisfaction

Hypothesis - Overall satisfaction will increase for:

- Managers
- Clinicians
- Patients

AIMS & HYPOTHESES

Specific AIM 4: Risks

Hypothesis - Rates will decrease for:

- Patient Complaints
- Patient Incidents
- Medication Errors

Specific AIM 5: Financial Performance

Hypotheses:

- Revenue per capita staff will increase
- Cost per visit will decrease

SAMPLE SIZE PROJECTIONS & PROGRESS-TO-DATE

Sample Size Projections:

900 – Patient Admissions (Quality)

65,189 – Counseling, Primary Medical and Case Management Visits (Productivity)

150 – Clinician & Manager Surveys (Satisfaction)

1,000 – Patient Surveys (Satisfaction)

100 – Incidents, Complaints, Medication Errors (Risks)

Progress-to-Date:

- ✓ SOP Manual & CRFs Finalized
- ✓ Pre-Implementation Data Collection Commenced
- ✓ Staff Pilot Surveys Completed (Evaluation of paper-based/electronic record sys.)
- ✓ Computer Skills Assessment Completed for All Clinician Stakeholders

PRELIMINARY RESULTS

➤ Staff Pilot Survey findings:

- ❖ Only 27% of respondents rated their orientation as making them 'well prepared' or 'fully prepared' to perform job functions
- ❖ Of 7 questions related to HIPAA, 4 were answered correctly by more than 90% of respondents, 2 others were answered correctly by more than 80% of respondents, and 1 was answered correctly by 51% of respondents
- ❖ >70% of respondents stated that lack of access to information from another discipline had moderate to high impact on ability to deliver care

PRELIMINARY RESULTS

➤ Computer Skills Assessment findings:

- ❖ Total # of employees assessed: 157
- ❖ 80 (51%) of 157 require training
- ❖ 36 of 80 have attended training

BARRIERS & SOLUTIONS

- Implementation and integration of electronic system
 - ✓ Participation in NYSDOH/NYCDOHMH Primary Care Information Project (PCIP)
- Redundant and inconsistent care processes
 - ✓ Process Mastering
- Mismatch between training & usage of current system
 - ✓ Needs assessment meetings fostered clinician input
 - ✓ Computer skills assessments done

WHAT WORKED?

- More frequent inter-divisional interaction
- Support from Executive Director, which translated into greater support from senior management
- Involvement with NYSDOH/NYCDOHMH Primary Care Information Project (PCIP)

LESSONS LEARNED

- Senior management support and direct involvement are critical
- Clearly stated objectives are key
- Communication between divisions highlighted the need for process mastering
- There is insufficient electronic cross-talk between federal, state and local agencies

PLANS FOR NEXT 12 MONTHS

- Complete pre-implementation data collection and data analysis
- Complete training assessment needs, begin and complete staff training
- Choose and implement electronic information system ("go live")
- Disseminate preliminary findings at National Conferences