Show Me the Data!

Rhode Island Ryan White Part B Program’s Use of Data Strategies and Tools to Maximize Outcomes Along the HIV Continuum

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• Rhode Island is the smallest state in size in the United States. It covers an area of 1,214 square miles. Its distances North to South are 48 miles and East to West 37 miles.

Alaska Is Big!

• You could fit Rhode Island into Alaska 425 times! Alaska is bigger than Texas, California, and Montana combined! Alaska is also far-flung: 62.5 times wider (east to west) and 29.1 times taller (north to south) than Rhode Island.
Measuring Performance Improvement Across the HIV Care Continuum

HIV CARE CONTINUUM:

- The series of steps a person with HIV takes from initial diagnosis through their successful treatment with HIV medication.
- Diagnosed with HIV
- Engaged or retained in care
- Linked to care
- Prescribed antiretroviral therapy
- Achieved viral suppression
Good Data Begins with Good Strategic Management… "RI Circles of Data Life"
Mining or Fishing for Data
Requires approval and sometimes advanced authority. Example, DOH fishing in the Medicaid pond for claiming codes.

Discovery
Initial stage of finding what you need and who owns it. An assessment phase.

Mapping
Once the assessment is done, footwork is employed to plot where the data lives, learn what the data system does and then try to get further answers and clarification as to whether you can get in.

Data Governance
Defining Authority of a Data Management System or Base: Sometimes this is arduous and many times leads you to a necessary data use/share agreement.

Repository or the “Vaults”
This can be the beginning of your interoperability/Transferability search, but it starts with how to get in and out of the vaults and perhaps creating your own, new data vault.

Interoperability/Transferability
Looks at data relationships. The golden moment of making it all work, facilitating the collaboration among “them,” strategically outlining the point of data service, the transfers, the ins/outs and all abouts.

RI Circles of Data Life, Explained

Examples:
Payer Claims DB & CAREWare Integration with the Lifia Portal
Lifia Portal gives you control over your processes to achieve your program’s goals

Get easy access to client records, validate program quality, configurable eligibility rules, automate management tasks, and combine data from all your systems:

- Dashboards, Form Builders and Report Builders, Workflow and Business Rules Engines for easy process design, system notifications, data and integration.

Empower your staff with better tools that run smoothly so you can achieve more.

SAFE
Secure, HIPAA-compliant handling and storage of information

SMART
Improve data quality through validation, pre-population and automated services.

FASTER
Manage benefits information and speed up application and renewal processes
The Lifia Portal integrates with CAREWare (and soon TAVIE) to offer automated eligibility work flows and interfaces to EHRs, Medicaid, PBMs, and eHARS for more real-time data to provide timely support with historical data for informed, individualized, care coordination.

Traditional data warehousing solved some healthcare data integration issues. Alone it is not enough.
Traditional data warehousing, which solved some of the data integration issues facing healthcare organizations, is no longer good enough.
CHALLENGES WITH HEALTH CARE DATA

- Connecting Data Sources
- Regulations & Security
- Coding & Semantics
- Data Format & Structure
- Increasing Complexity
- Changing Requirements, Trends and Reporting
- Data Quality and Latency

Core Data Warehouse

KPIs
Punch List
• AJBoggs: Host and Developer of Innovative Products like Lifia
• TAVIE/360 MedLink – Developer and of advanced digital technology called TAVIE Red.
• CAREWare only became a solution when couple with Lifia and TAVIE.

• BI Tools
• APCD

• Location: Ryan White Part B is in the Medicaid house and within the umbrella HHS agency - Executive Office of Health and Human Services – also direct data connection to MCOs, AEs, DOC, BH, DCYF, Veterans, APCD, HIT, SIMS, etc.
Example of One State AJBoggs Works With: Integrated Data Sources

- Integrated Data Sources
- Performance Dashboards
- Web Portal
- HIPAA Compliant
- Multiple Sources (EHRs, CAREWare, Medicaid, PBMs, and eHARS)
- Performance Dashboards
Lifia Portal Framework
Lifia is a healthcare portal designed to improve the delivery of and coordination of care across multiple systems, including insurance, clinical care, social support, drug providers, etc..

Business Process Automation
Lifia helps you manage your program efficiently by reducing application and processing times and facilitating eligibility determination and periodic enrollment renewals.

KPIs & Monitoring
- Manage your program data through KPI dashboards.
- Generate reports quickly and intuitively
- Integrate with other systems (eHARS, PBM, ADAP, CAREWare and (EHR) systems.
Empower your programs to reach higher, achieve your goals and improve outcomes for underserved communities.

<table>
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<tr>
<th>CLIENT MODULE</th>
<th>MANAGEMENT MODULE</th>
<th>ASSESSMENT MODULE</th>
<th>REPORTING MODULE</th>
<th>INTERFACE MODULE</th>
<th>NEXUS MODULE</th>
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<td>▪ Client Profile</td>
<td>▪ Management Dashboards</td>
<td>▪ Custom Program Forms</td>
<td>▪ Report Builder</td>
<td>▪ System Status Dashboard</td>
<td>▪ Program Eligibility Notifications</td>
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<td>▪ Case Notes</td>
<td>▪ Business Rules Engine</td>
<td>▪ Forms Builder</td>
<td>▪ Business Intelligence Tool</td>
<td>▪ Job Logs Tool</td>
<td>▪ Forms Notifications</td>
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<td>▪ Record Search Function</td>
<td>▪ Workflow Management</td>
<td>▪ Document Management System</td>
<td>▪ CAREWare Dashboard</td>
<td>▪ Job Notification</td>
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<td>▪ User Administration System</td>
<td>▪ Eligibility Engine</td>
<td>▪ Eligibility Determination</td>
<td>▪ CAREWare Interface</td>
<td>▪ PBM Interface</td>
<td>▪ Peer Support Forums [future]</td>
</tr>
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</table>

| ▪ Elitgibility Engine | ▪ CAREWare Dashboard | ▪ CAREWare Interface |

Empower your programs to reach higher, achieve your goals and improve outcomes for underserved communities.
Some further considerations of our data world...

**We need technology beyond set up and take down...**

- State IT staff may not be able to assist in the support of elements related to such matters as advanced digital technology, sophisticated software platforms, etc.

**Too much data?**

- “If it’s nice to know, data probably should go.”
- “Only take what you need in.”
This is sweet!

Yet, what’s really involved?

- **Knowledge and Action are Related**: Much of our time is spent on infrastructure/staff training and development both from the intra [RI - EOHHS] agency level to the agency [the ones we fund] level.

- **This means numerous educational moments, protocols, policies, business agreements, data usage agreements, client waivers, back end software tweaks, purchase of new equipment, creating a data ecosystem and a data center (AJBoggs), etc...**
More than 75% of all patients worldwide expect to use digital services in the future.

THE CHALLENGE: In a recent RI state study physicians, nurses and case managers report:

“We have little time to spend with patients”

“We can’t capture every patient’s story or their set of beliefs about health”

“Motivating patients to take action about their health is difficult, complex and time consuming”

“Proper health assessments are available but they are not all connected to each other and sometimes are unusable”

We understand social determinants of health are critical to a patient’s but where do we start with these?”
OUR APPROACH:
First Clinically Validated VirtualCoach™
Tailored by therapy, language, and cultural preferences

Patients highly satisfied
99% Patients declared they are Very Satisfied or Satisfied with the VirtualNurse™

Patients recommend the platform
87% Patients would recommend the application to their peers
CHARACTERISTICS: MODULAR DESIGN
Built to meet the needs of the patient population including Social determinants of health, culture, concerns, health status, and condition

**Virtual Coaching**
- Treatment adherence
- Patient education
- Side-effect management

**Whole Health**
- Psycho-social support
- Symptom management
- Service acquisition (food insecurity, housing, engagement with healthcare)

**Gamification**
- Interactive Quests
- Dynamic Feed
- Upgrading reminders and notifications
- Alerts for care managers

**Trackers and Feedback**
- Symptom assistance
- Treatment reminders
- Physical activity
- Viral load, weight, BP, +
Enrollee demographics reflected HIV epidemic in Rhode Island
Based on an iterative, user-centered design. A cohort of approximately 200 people living with HIV was enrolled.

Baseline said:

- Users faced poly morbidities and poly conditions linked to social determinants of health
- Lack of connectivity – few had internet smartphones, or computers.

Key Evaluation Domains:

- Patient self-efficacy
- The HIV and General Care Continuum
- Assessing health status across multiple areas including behavioral health, chronic conditions, etc.
“This technology is placed in a patient’s hands and then it enlivens them by sending them on a personal, healthcare journey filled with quests, gamification, and recursive rewards!”

ENGAGE

A “feed” page shows interactive content and announcements from case managers

ASSIST

Virtual coach, a GPS resource map, Symptom Tracker, announcements, and calendar with reminders help users manage day-to-day care

ENJOY

High customer satisfaction and enjoyment! Users practice and solidify skills through health-related “quests” and gain rewards as they progress
Rhode Island Case Suggests Study Strong User Engagement

% Users Engaging

- Logging In: 84%
- Have points (XP): 77%
- More than 200 points: 45%
- Have tokens or "Red Tickets": 41%
Despite having little experience with technology, the rate of adoption, satisfaction, and perception of value are high.

Would Recommend
- 88%

Agree Helps Manage Medication
- 80%

Agree Helps Manage Condition
- 82%

*68% male, 29% female, 2% trans,
Distributed across age, 61% unemployed

“Apps can be a dime a dozen, and after reviewing thousands this one was a comprehensive platform. ...customized so our clients/patients can see incredible health improvements!”

Paul G. Loberti, MPH
Administrator for Medical Services, RI Medicaid
Director of the HIV Provision of Care & Special Populations Unit RI Executive Office of HHS
“Advanced digital technology must be conscientiously placed in the hands of patients and clinical providers, as well as case managers in order for any application to work. Coupled with a comprehensive platform, and a specific interest in helping vulnerable populations attain connectivity and excellent health outcomes – this is where TAVIE stands unique.”

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Quality and Data
MACRO/MICRO VIEW
A High Level Systems Approach and an Agency Level Approach
Bits and Pieces of CoEXIST

CoEXIST is a
- Center of Excellence that focuses on integration & synergy among us.

Integration of physical health into Behavioral Health into HIV system of care; and then integration of BH into PCP.

CoEXIST key areas; #behavioral health, #primary care, #sexual health, #housing continuum, #early intervention services, #health education/rr, #HIV ContinuumPlus+, #Intensive Case management Teams, #higher ed, #state partners, #innovative care & treatment, #medication adherence and telehealth, #social media, etc...

Path towards a total reinvention of the HIV system of care and treatment via Ryan White.
CoEXIST Domains

Inherent evaluation and quality components are in each agency agreement

1. Behavioral Health/Recovery Integration Characteristics of Participating Providers
2. Early Intervention Services (EIS)
3. Intensive, Integrated Care/Case Management
4. HIV Workforce Development/Transformation
5. Data Analytic Capacity & Deployment
6. Quality Management/Quality Improvement
7. Evaluation Schema/Methods Defined
8. Commitment to Social Determinants of Health & HIV System Transformation

HRSA Service Categories
- Represent Official HRSA Service Categories

CoEXIST System Categories
- Represent either:
  - HRSA Requirements
  - Specific grant related focus areas
  - BOTH HRSA Requirements and Specific Grant Focus Areas
<table>
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<tr>
<th>CoEXIST focuses upon system level quality improvement as well as individual agency QM performance measures data</th>
<th>CoEXIST key areas of effort include behavioral health, substance use, primary care, sexual health, health education, early intervention services, housing, interdisciplinary intensive case management teams, innovative care and treatment and social media campaigns.</th>
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<tbody>
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<td>Sample Domains that indicate Quality to Follow…</td>
<td>Emphasis upon QI, whereby data collected across qualitative and quantitative outputs is reviewed regularly so change can happen quickly and effectively</td>
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5. Data Analytic Capacity & Deployment

5.1. **Definition**
- To transform the mechanisms by which we assess RI data system capacity/capability and:
  - develop and determine metrics
  - create state-of-the-art data management/analysis systems to analyze data endpoints for Ryan White service categories
  - enhance Ryan White reporting and evaluation of Ryan White endpoints

5.2. **Potential Metrics**
- Data infrastructure and processes documented
- Number of data analyses completed with sources or processes documented (e.g., APCD)

5.3. **Successes**
- Improved surveillance system to better identify those PLWH who are out of care & return them to care
- Enhanced Ryan White data system to track quality performance measures and continuum of care (i.e., Care Ware)
- Plan to access to APCD

5.4. **Challenges**
- Accessing various data sources; data sharing agreements
- Defining framework, identifying measurable objectives

5.5. **Opportunities**
- Comprehensive system evaluation
- Developing process for data sharing across systems and agencies
6. Quality Management/Quality Improvement

6.1. Definition
   • Metrics that measure:
     • Healthcare transformation processes, outcomes, patient perceptions, and/or systems associated with the ability to provide high-quality HIV care and treatment

6.2. Potential Metrics
   • Documented QM committee and processes
   • Quality Performance Measures finalized

6.3. Successes
   • Quality Measures Committee
   • RW performance measures

6.4. Challenges
   • Measurement definition
   • Coordinated and aligned data gathering/analysis

6.5. Opportunities
   • Methodology for measuring the Integration of Medical, Behavioral, and Social Supports
Conclusions
Data System Results

Active Implementation Process

- Establishment of an interoperable database
- Ability to pour a variety of data into our system – example client based TAVIRE RED platform [app plus] can speak with CAREWare and an exchange of data can occur. Portal Lifia needed.
- Data foundation became active and both interoperability and transferability became easier/possible.

Now Data is Driving Program in REAL Time

- Ya’ll know we have many reports due for HRSA. However those reports may not be useful to drive program change and development (e.g., RSR, ADR, unmet need, etc.)
- We set forth to have usable data that speaks to us in real time so that change can be effective and efficient. Example, What HRSA needs for QM gets translated to what RI needs to set the stage for continuous quality management.
Data System Results, Continued…

• Intelligence is now solid and within our control.

• Real-time data outputs through consoles/dashboards for such things as ADAP, TAVIE RED (based upon client data via app.

• Decision making now based on intelligence we receive- daily.

• Daily data dumps from CW Part B services

• Ability to look at resource allocation more assertively, in real time

• Monitoring and review of agency deliverables made easier – better project management

• Linking it all to Quality! QM program has been enhanced by quicker and more effective analysis of performance measures
Thanks!

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