

Centralizing Client Level Data Improvements Using CAREWare: An Atlanta EMA Approach to Maximizing Data Quality

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Disclosures

- Sridevi Wilmore, MPH and Porter Butler, MS
Have no financial interest or relationships to disclose.
- HRSA Education Committee Disclosures
HRSA Education Committee staff have no financial interest or relationships to disclose.
- CME Staff Disclosures
Professional Education Services Group staff have no financial interest or relationships to disclose.

Learning Objectives

1. After completion of this institute, participants will be able to describe activities that can be implemented to enhance the quality of client level data in a centralized database.
2. After completion of this institute, participants will be able to describe the processes required in coordinating and implementing system enhancements.
3. After completion of this institute, participants will understand the challenges in implementing data quality activities and system enhancements for a centralized client level database.

Overview

- Background
- System Enhancements
- Data Quality and Reporting
- Where are we now?



Background



Centralization

- 2007 - 2008 Fulton County Ryan White Part A Program implemented a centralized data system using CAREWare 4.1
 - Center for Applied Research and Evaluation Studies (CARES) at SEATEC coordinated the roll-out
 - Fulton County Government IT designed the system to adhere to internal standards
 - 12 Atlanta EMA providers were migrated to the server using store and forward functionality

2009 in the Atlanta EMA

- 5 new Ryan White service providers created in the centralized system
- 17 Ryan White service providers actively entering services in the centralized system
- 12,224 unduplicated Ryan White clients served

Organizational Roles

Grantee

- Communicate policy and standards
- Provide system administration and data analysis
- Assess needs
- Support infrastructure and system enhancements
- Provide training and technical assistance
- Collaborate with other grantees

Providers

- Ensure connectivity
- Adhere to data and security requirements
- Request technical assistance as needed
- Provide input on training and system needs
- Keep clients informed

Fulton County IT

- Design system
- Maintain system
- Oversee security
- Upgrade application
- Provide input on system improvements

Data System Enhancements

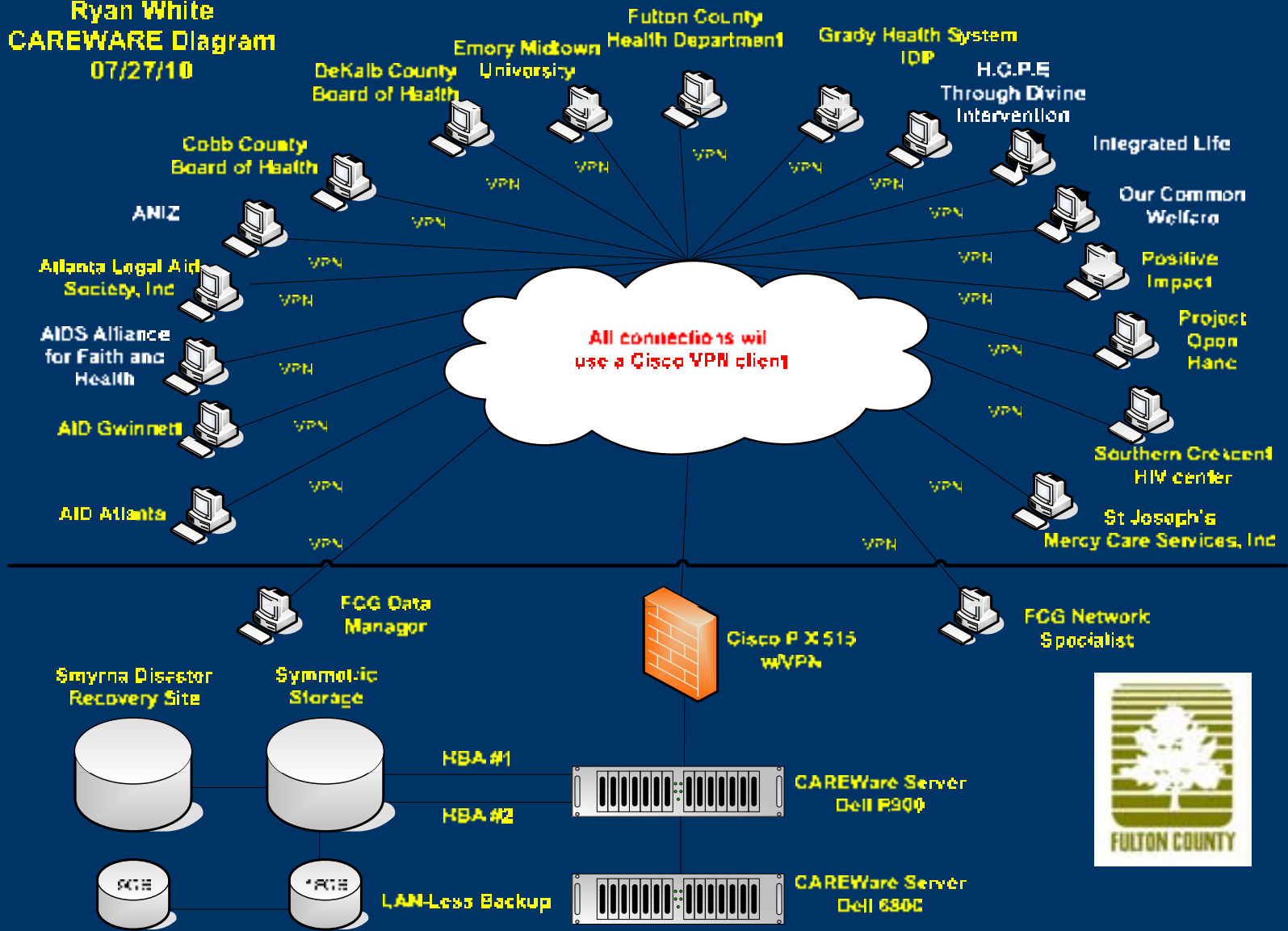


System Design Enhancements

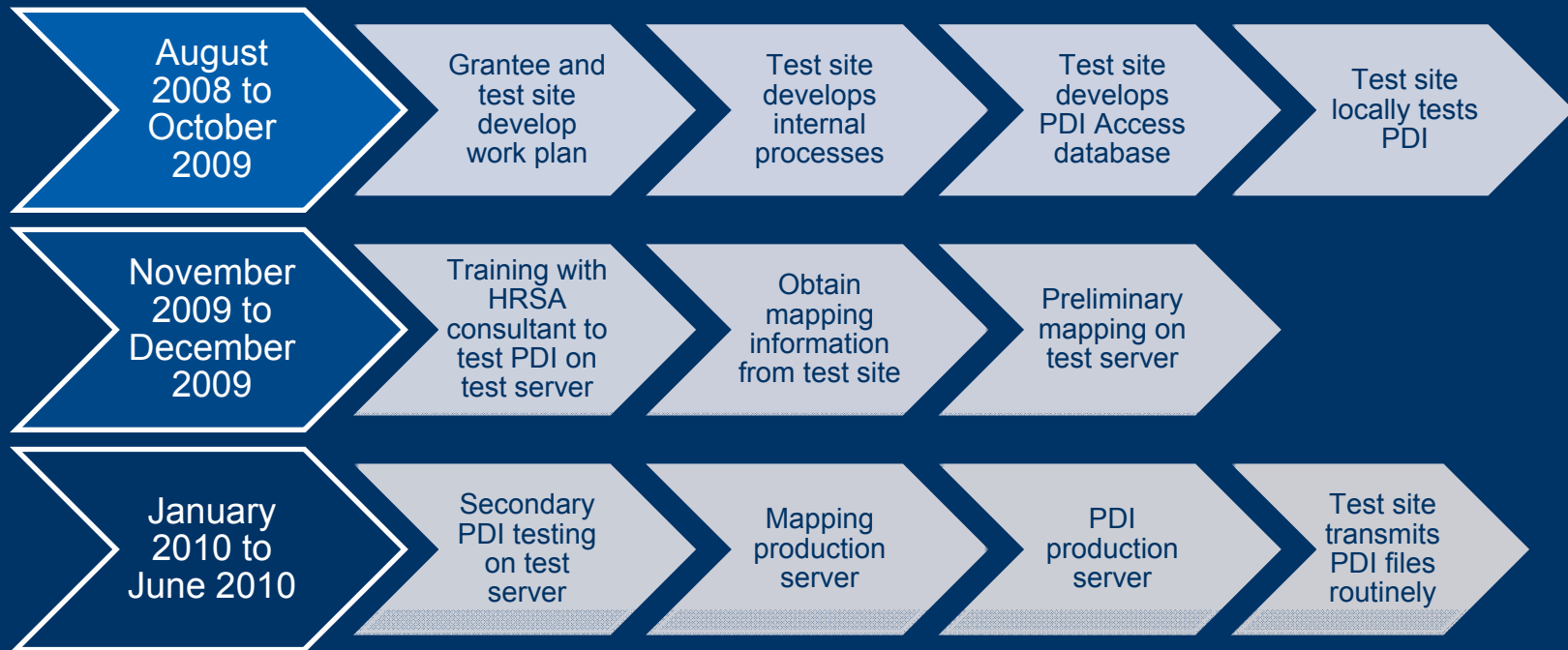
- Upgrade to SQL 2008
 - Increased efficiency
- Test server
 - Testing of new builds
 - Testing of new functionality
 - Provider data import
 - Laboratory data import



**Ryan White
CAREWARE Diagram
07/27/10**



Provider Data Import Process



Provider Data Import Successes



- Screenings = 99 records added
- Screening Labs = 8,226 records added
- Labs
 - CD4 = 2,091 records added
 - Viral Load = 946
- Medications = 7,082 records added

Provider Data Import Challenges and Lessons Learned

- Working with the test site in developing routine processes to obtain and compile data from various internal data systems to produce the PDI database
 - CAREWare upload function allows PDI database to be sent securely from test site to the production server
- Ensuring that values from test site data systems are mapped to the appropriate values in CAREWare
 - Work collaboratively with data and clinical staff at test site

Where are we with laboratory data import?

- Upgraded to CAREWare 5.0
- Collaborative discussions with LabCorp, jProg, test site
- Establishing contracts with LabCorp
- Installation of HyperSend on production server
- Schedule training with jProg
- Develop processes with test site

Laboratory Data Import Challenges and Lessons Learned

- Ryan White specific account between laboratory and provider required
- Legal contracts put in place between laboratory, provider, and Grantee
 - Language includes provider permission allowing laboratory to transmit data to Grantee
- Transmission of data via HyperSend in a VPN environment
 - Fulton County IT confidentiality non-disclosure agreement required
 - Open TCP/IP port on firewall to allow traffic

Data Quality and Reporting



Georgia Ryan White Parts A, B, C, & D CAREWare Sub-Services and Definitions

- Purpose
 - Consistent and accurate service data capture among Georgia Ryan White service providers
 - Ensures subservice definitions adhere to federal reporting requirements
 - Allows subservice level analysis across providers
- Subservice guide finalized April 2008 and revised July 2010

RYAN WHITE CORE MEDICAL SERVICES

Outpatient/ambulatory medical care

Subservice Name	Definition	Unit	Funding Sources
Initial Primary Care Visit	Intensive initial HIV primary care visit for a new client provided by a physician, physician's assistant, or advanced practice registered nurse. Includes chief complaint; history of present illness (HPI); past medical, family, and social history; complete review of systems (ROS); comprehensive physical exam; diagnosis/treatment plan; counseling and referrals as appropriate.	Visit	A,B,C,D
Comprehensive Primary Care Visit	Intensive HIV primary care visit provided by a physician, physician's assistant, or advanced practice registered nurse. Includes re-enrollment client visit with detailed and updated history; extended or complete ROS; detailed or comprehensive physical exam; diagnosis/treatment plan; counseling and referrals as appropriate. Takes more time than routine interim visit.	Visit	A,B,C,D
Interim Primary Care Visit	Routine HIV primary care visit provided by a physician, physician's assistant, or advanced practice registered nurse. Includes routine follow-up of chief complaint and history or problem focused history; review of HIV-related symptoms; routine physical exam; update treatment plan; and counseling and referrals as appropriate.	Visit	A,B,C,D
Acute Primary Care Visit	"Sick visit." Client requires prompt evaluation because of new symptoms, acute illness, medication side effects or adverse reaction, or other urgent reason. Usually seen within 24 hours of contacting clinic and seen by the physician, physician's assistant, or advanced practice registered nurse.	Visit	A,B,C,D
Limited Service Visit	"Nurse visit." Limited service visits may include immunizations, STI treatments, birth control, blood pressure checks, injections, and TB skin test readings.	Visit	A,B,C,D
Lab Reviews	Phone or face-to-face lab review with provider. Letters to clients are not included.	15 Minutes	A,B,C,D



Agency Funding Document

Funding Received	Outpatient/ambulatory medical care	Possible Funding
	Initial Primary Care Visit	A,B,C,D
	Comprehensive Primary Care Visit	A,B,C,D
	Interim Primary Care Visit	A,B,C,D
	Acute Primary Care Visit	A,B,C,D
	Limited Service Visit	A,B,C,D
	Lab Reviews	A,B,C,D
	Lab Visit	A,B,C,D
	Medication Pick Up	A,B,C
	Enrollment/Intake/Re-enrollment	A,B,C,D
	Routine HIV/TB Primary Care Visit	A,B,C
	Specialty Care Visit	A,B,C
	ADAP Stop Gap Prescription	A,B,C
	Primary Care Prescription (non-HIV)	A,C
	Primary Care Client Education	A,C

CAREWare Contracts and Reporting

Part A Grantee

Service Providers Report Funded Subservices/ Service Categories

Part B, C, and D Review

Part A Review AND Provider and Grantees Conference Calls

Provider Funding Documents Finalized AND CAREWare Contract Set Up

Provider Funding Documents Utilized to Complete RSR Grantee and Provider Reports

Quarterly Quality Checks

- CAREWare custom reports identify data quality issues
 - Created centrally and copied to providers
 - Address all mandatory federal and local data requirements
 - Providers required to run reports quarterly and address identified issues

Missing Annual Review Fields



RW CAREWare Report Viewer

File

Print... 100% 1/55 Lockward Forward

RSR Missing Annual Review

Data Scope: Fulton County Health and Wellness

URN:	Ins.Type:	Prm. Medical Care:	Housing Arr:	HH Income:	HH Size:	Counseled about HIV risks:	Annual Mental Health Screening:	Annual Substance Abuse Screening:
	No Insurance	Publicly-funded clinic or health dept.	Permanently Housed	6408	1		Not Specified	Not Specified
	No Insurance	Publicly-funded clinic or health dept.		1200	1		Not Specified	Not Specified
	No Insurance	Publicly-funded clinic or health dept.	Permanently Housed		1		Not Specified	Not Specified
	No Insurance	Publicly-funded clinic or health dept.	Permanently Housed	6408	1		Not Specified	Not Specified

Missing ARV Indication



RW CAREWare Report Viewer

File

Print... 100% 1/1 Backward Forward

RSR Missing ARV Indication

Data Scope: Dekalb County Board of Health

URN:	Medication:	Indication:
	Combivir (zidovudine/lamivudine)	
	Sustiva (efavirenz)	

Local CAREWare User Manual

- Atlanta EMA specific user manual developed in 2009
- Highlights new RSR requirements
- How to use the subservice guide in conjunction with CAREWare financial reports to monitor service data entry and internal processes
- How to use quality check reports

Where are we now?



We've come a long way!!!

- Minimized missing values
- Improved service data entry
 - More accurate capture of services under appropriate service categories
 - Increased compliance with service unit entry
 - Increased data completeness
- Increased analysis capabilities

Next Steps

- Data Import
 - Implement laboratory data import with test site
 - Implement provider data import with additional providers
- Quality Checks
 - Develop custom reports specific to HRSA performance measures
- Revise CAREWare user manual
 - CAREWare 5.0 functionality
 - New quality check reports

Questions??????

