

Are we there yet? YES!

How ARIES meets HRSA's
Client Level Data and
Clinical Performance
Measure Recommendations

Presentation at the Ryan White
HIV/AIDS Program Grantee
Meeting, Washington D.C.
August 27, 2008






ARIES

AIDS Regional Information and
Evaluation System


PRESENTATION OUTLINE

- Introduction
- Brief Background of ARIES Development Process
- Highlights of Current ARIES Features
- ARIES Security Measures
- Client Level Data
- HAB Group 1 Core Clinical Performance Measures
- Using ARIES Data for Program Monitoring
- New and Upcoming Features
- Questions
- Contact Information






Introduction



Introduction of Presenters

- Terry Cunningham, Part A Grantee, San Diego EMA, California, ARIES partner lead for 7 years;
- Daniel Perez, Part A Grantee, Riverside/San Bernardino TGA, California, ARIES partner lead for 5 1/2 years;
- Darla Metcalfe, Part B Grantee, Texas, ARIES partner lead for 8 years;
- Susan Sabatier, Part B Grantee, California, ARIES partner lead for 8 years.



What is ARIES?

- ✓ ARIES is a custom, centralized, Internet browser-based client case management information system that fulfills administrative and reporting needs for HIV/AIDS care.
- ✓ Staff at local HIV/AIDS provider agencies access the ARIES application through an internet connection, where they enter, manage and report back information on their clients.

What does ARIES Do?



- ✓ARIES improves services for clients by creating a single point of entry, centralizing eligibility documents, and creating one comprehensive and coordinated care plan.
- ✓ARIES enables providers to improve service delivery by unduplicating clients, coordinating client services among providers, monitoring health outcomes, tracking staff productivity, and managing contract compliance.

What does ARIES Do? (con't)



- ✓ARIES improves grantees' ability with monitoring fiscal and program compliance (by tracking multiple funding streams, screening for eligibility requirements).
- ✓ARIES generates the CADR and WICY for Parts A, B, C, and D Ryan White-funded providers.
- ✓ARIES assists providers and grantees in generating client-level data reports and facilitating quality management and evaluation activities.

Brief Background of the ARIES Development Process



Identification of the Problem



- Starting in the late 1990s, a few grantees in California and Texas *independently* began discussions on developing a consolidated database for publicly funded HIV care services.
- Analyses to consolidate and improve data systems were partly in response to concerns expressed by clients (multiple intakes) and providers (using multiple client data systems).
- In early 2000, a CA EMA convened a meeting with other grantees using the COMPIS data collection system to explore converting it to a more modern technology.

A Collaborative Beginning



- Four grantees present at that 2000 meeting continued discussions for a year, exploring common system needs and requirements, and the feasibility of converting COMPIS.
- A consultant was hired to assist with the specification process.
- This process concluded that a custom, centralized, web-based system should be developed instead of attempting to modify an existing off-the-shelf system.

Common Needs and Limited Resources



- This process also concluded that the four remaining grantees shared core data collection and reporting needs, basically due to Ryan White reporting requirements.
- Because of the overlap in system needs, it made sense to consider jointly developing a custom client management information system.
- Furthermore, each grantee would have difficulty finding sufficient funds and staff resources to develop a custom system.

ARIES Partnership Formed



- After spending almost a year working with each other in the system specification process, the ARIES partnership was formed between the four grantees: California Office of AIDS, San Diego County (CA), San Bernardino County (CA), and the Texas State Department of Health Services.
- The ARIES partners contracted with the University of California, Office of the President, the California HIV/AIDS Research Program (CHRP) to act as the ARIES Project Manager.
- Each partner initially contributed \$300,000.

Selecting a Developer



- The partners continued with their work to document the system specifications for inclusion in a request for proposal (RFP).
- On December 19, 2002 CHRP released the ARIES RFP. Architier (a San Francisco bay area based company) received the highest score and entered into a contract with CHRP in June, 2003.

ARIES Local Design Teams



- Each partner put together local project teams consisting of partner staff and local HIV/AIDS service providers.
- Architier met three times with each partner and their local project team to elicit system needs, for a total of twelve multi-day meetings.
- The delineation of provider business workflows influenced the structure of ARIES.
- This process ensured that provider needs were included, and helped with provider buy-in.

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Development Process



- The partners teleconference weekly, facilitated by CHRP, the project manager.
- CHRP oversaw the development work of Architer. Deliverables were received, and the contract concluded in February, 2006.
- The ARIES partners, through CHRP, has contracted with new programmers for system maintenance and continued enhancement activities.
- Contracts are also in place for Quality Assurance and technical writing activities. CA also contracts for Help Desk activities.

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Implementation Status




- On January 3, 2005, Texas was the first partner to implement ARIES.
- Riverside/San Bernardino and San Diego independently implemented ARIES with selected providers in December 2005.
- The California Part B grantee implemented ARIES on July 17, 2006. Riverside/San Bernardino and San Diego joined the CA Part B ARIES hosting installation and shut down their independent systems.
- California and Texas host independent ARIES systems, yet continue the partnership to maintain a single source code and share enhancement costs.

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Current ARIES Usage



- Texas has over 380 providers using ARIES, with an unduplicated client count of over 50,000 and more than 4.5 million services.
- California has 140 providers using ARIES, with an unduplicated client count of over 27,000 and more than 1.3 million services. These numbers are increasing every month as more providers are migrated to ARIES.
- Early in the development process, and to increase provider buy-in, California agreed to build data conversion programs from existing state-supported data collection systems. Conversion programs for CAREWare versions 3.6 and 4.1 have also been developed.



Highlights of Current ARIES Features



Client Read Only Screen

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- Tab and subtab structure.
- Users must have permission to “view” this read only screen.
- Only users with “edit” permissions will see the edit button.
- Read only screens summarize the information found in the edit screens.



Zack J Ashton 

Contact Information 

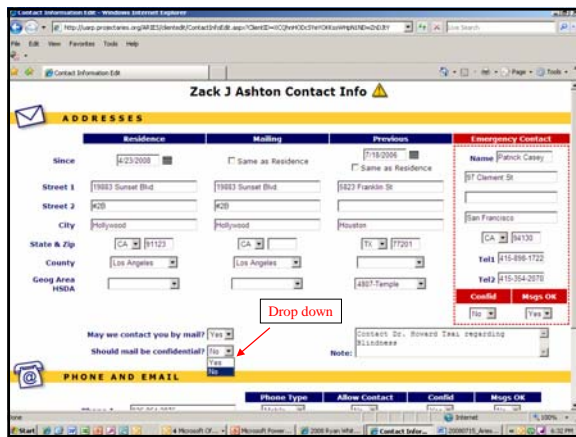
<p>Phones: 936-864-2875 (Mobile) -- do not contact; be confidential; no messages 936-847-3452 (TTY) -- be confidential; messages OK caash@10666.com -- do not contact; be confidential; no messages</p> <p>Residence: as of 4/23/2008 1983 Sunset Blvd. #28 Hollywood, CA 91113 County: Los Angeles Geog Area/HSDA:</p> <p>Previous Address: as of 7/28/2006 5823 Franklin St Houston, TX 77261 County: Geog Area/HSDA: 4807-Temple</p>	<p>Contact by mail: Yes Note: Contact Dr. Howard Tsa regarding Blindness</p> <p>Mailing Address: 1983 Sunset Blvd. #28 Hollywood, CA County: Los Angeles Geog Area/HSDA:</p> <p>Emergency: Patrick Casey 97 Clement St San Francisco, CA 94130 Phone 1: 415-898-1722 Phone 2: 415-354-2070 messages OK</p>
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Features

Client Edit Screen



- User must have permission level to edit.
- Red asterisks (*) signify RDR/CADR data element.
- Use drop down fields, which are configured by the System Administrator.
- Some logic checks (business rules); errors indicated in red at top of screen, user not able to save information until corrections made (or clicks "cancel" button).



Features

Other Client Content Features



- HIV Related Medical Indicators/History
- Needs Assessments;
- Track Referrals and Referral Outcomes;
- Care Plans;
- Case Notes;
- Comprehensive Assessment Tools (includes psychosocial, functional status/quality of life, and behavioral risk); and
- Outcome Tracking and Quality Management Indicators.

Features

Agency and Staff Features



- Agency contact information available to other ARIES providers to facilitate referrals and coordination of client care.
- Set up agency funding sources, contracts, and services provided. These elements link to the service line item screen.
- Include agency staff; assign staff to clients; use canned reports to track staff activity.

Service	Unit	Default Quantity	Default Price	DDC Goal	Budget	Notes
Contract 04 - 05 RW 2 -> Ryan White -> Case Management Services -> Case Management Services	Case Management Services	15 Minutes	1	\$0.00	0	\$0.00
Contract 04 - 05 RW 2 -> Ryan White -> Case Management Services -> Social Case Management	Social Case Management	15 Minutes	1	\$0.00	0	\$0.00
Contract 6MCWP 2005 -> MCWP -> Attendant Care -> Attendant Care	Attendant Care	Hour	1	\$0.00	0	\$0.00
Contract 6MCWP 2005 -> MCWP -> Case Management -> Face-to-Face Case Management	Face-to-Face Case Management	15 Minutes	1	\$0.00	0	\$0.00
Contract 6MCWP 2005 -> MCWP -> Case Management -> Non-Face-to-Face Case Management	Non-Face-to-Face Case Management	15 Minutes	1	\$0.00	0	\$0.00
Contract 6MCWP 2005 -> MCWP -> Equipment and Physical Adaptations -> Equipment and Physical Adaptations	Equipment and Physical Adaptations	Item	1	\$0.00	0	\$0.00
Contract 6MCWP 2005 -> MCWP -> Foster Care -> Foster Care	Foster Care	Hour	1	\$0.00	0	\$0.00
Contract 6MCWP 2005 -> MCWP -> Homemaker Services -> Homemaker Services	Homemaker Services	Hour	1	\$0.00	0	\$0.00

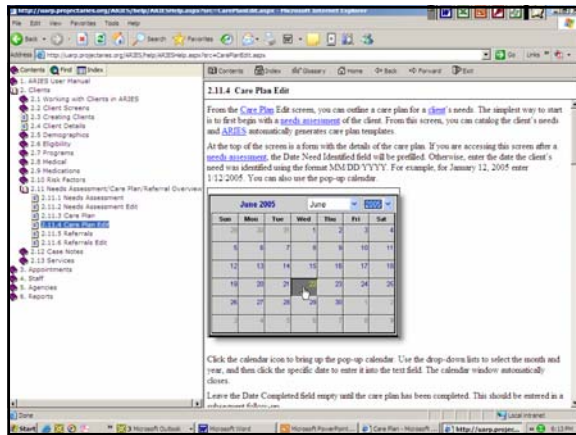
Client Name: Jack Ashton
 Client: Jack J Ashton
 Staff: Cooper, Joe
 Date of Service: 05-2008
 Contract Name: Ryan White Part A 05-08
 Program: Ryan White
 Primary Service: Medical Case Management (including Treatment Adherence)
 Secondary Service: Case Conference
 Agency Subservice: Case Conference
 Units of Service: 1 @ \$0.00 per 15 Minutes = \$0.00 Total
 Client Payment: CARE/HIPP Co-Payment
 Actual Minutes Spent:
 Service Notes:
 Finalize (record will be uneditable after changes are saved)
 Buttons: Save + Done, Save + Another, Cancel

Features

Online Help



- ARIES contains a context-sensitive help manual. When a user presses F1 within the ARIES application, it takes the user to that area of the help manual.
- The help feature also includes a glossary, index and find features.



ARIES Security Measures



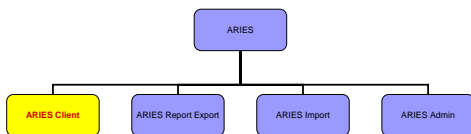
Security at ARIES Forefront



- Security of confidential client data has been of primary concern throughout the entire life cycle of the ARIES project.
- Revisions and discussions on additional security enhancements continue to occur between the partners.
- In September 2007 ARIES was reconfigured into an n-tier architecture, and migrated to Microsoft SQL 2005 and the .NET 2.0 Framework.

Security Measures in ARIES

- ARIES is divided into four separate applications: ARIESClient, ARIESReportExport, ARIESImport, and ARIESAdmin. Users must have the appropriate authorization to access each of the four applications. This division was motivated by security precautions and limiting access to data.



Security Measures in ARIES



- ARIES uses dual factor authentication: 1) User logins and passwords and 2) computers must have digital user certificates for each application. ARIES will configure these certificates for both the user and the machine.
- Encryption is used in ARIES to: 1) secure communication over the network; 2) secure files used by SQL server; 3) secure the ARIES user password; 4) secure database connection strings stored on the web server; 5) secure the ARIES client ID; and 6) secure client identifiers in the database.

External Security Reviews



- All coding changes go through a review process with the Information Technology Services Division within the California Department of Public Health. These code reviews ensure ARIES meets established architectural and security standards.
- Additionally, the ARIES partners contracted with a company to conduct a vulnerability assessment of ARIES. ARIES passed with flying colors, with the vendor only able to suggest a couple of minor improvements.

Role Based User Permissions




- Within ARIES, there are set user group permissions to determine which screens and data elements users can view and edit. In other words, users will only be granted permission to view the screens that they need. This is implemented through a configurable role-based security mechanism.


Clients Choice to Share



- ARIES contains a “client share status” option. This option gives clients control as to whether their information is shared across multiple service providers. For clients opting to share, a provider will be able to view relevant information on their clients that were entered by other ARIES providers serving the same clients. Because clients must give providers the “keys” to unlock their ARIES record, providers will only have access to information on clients they serve. For clients opting not to share, providers will only see the information entered by their staff.




Client Level Data



New HRSA Requirements

Client Level Data Development

- Beginning in 2009, Ryan White Program grantees and service providers will use a new online data collection and reporting system to biannually report to HAB information on their programs and the clients they serve.
- ARIES is a client level data collection system, and thus already meets 90% of the HAB requirements.
- Analyses of the HAB proposed data collection forms indicate that ARIES must add a handful of new data elements to meet the new requirements.



Client Level Data Pilot


Client Level Data Development

- Both California and Texas are participating in the Client Level Data pilot.
- Pilot participation allows us to learn the steps we must take to ensure that the ARIES data can be extracted, converted and reported via HRSA's Electronic Handbook.
- During the pilot we are converting the data externally. Ultimately the extraction and conversion process will become a routine function built into ARIES for each provider to run and report.


Lessons Learned to Date



- Participating in the pilot has allowed us to better understand the new reporting requirements.
- In particular, HRSA's expectation that we report on Ryan White funded—and not eligible—services has generated much discussion among the partners (and a TA request to JSI!).
- As we complete the CLD pilot steps and await the OMB-approved CLD collection forms, we anticipate enhancing ARIES by November 2008 to include the new, required data fields.



HAB Group 1 Core Clinical Performance Measures




Clinical Performance Measures

- On December 21, 2007, HAB published the *HIV/AIDS Core Clinical Performance Measures for Adults and Adolescents: Group 1*.
- The measures in Group 1 include five core clinical measures that HAB deemed as critical for HIV programs to monitor.
- Additional performance measures are expected to be released in 2008.

Performance Measures


The Five Group 1 Measures



- Percentage of clients with HIV infection who had two or more CD4 T-cell counts performed in the measurement year (OPR #2).
- Percentage of clients with AIDS who are prescribed HAART (OPR #12a).
- Percentage of clients with HIV infection who had two or more medical visits in an HIV care setting in the measurement year (OPR #1).
- Percentage of clients with HIV infection and a CD4 T-cell count below 200 who were prescribed PCP prophylaxis (OPR #3).

Performance Measures


The Five Group 1 Measures (con't)



- Percentage of pregnant women with HIV infection who are prescribed antiretroviral therapy (OPR #17).
- More detail, definitions, benchmarks and data sources can be found on HAB's website:
<http://hab.hrsa.gov/special/habmeasures.htm>

Performance Measures

Implementation in ARIES




- The ARIES partners and business analyst have spent considerable time operationalizing the five HAB measures for inclusion in ARIES.
- Consensus on assumptions was required for some factors, such as defining which clients had a medical visit with a provider with prescribing privileges and whether to count CD4 tests only entered by the provider running the report.
- The ARIES programmers are currently working on this enhancement, and deployment is expected in September 2008. Sample screenshots follow.



ARIES
 MONITORING
 REPORTS


Inclusion of Future HAB Indicators

➤ As HAB releases future groups of performance indicators the ARIES partners will evaluate the requirements and expect to incorporate them—as much as feasible—into ARIES, following the same structure as the Group 1 indicators.



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 REPORTS

Using ARIES Data for Program Monitoring



Where We Were: *Pre-ARIES*



- Providers pulled data from their other systems (service utilization by client) to determine sample (list of charts by service category).
- Conducted chart reviews (significant sample size) for a variety of elements.
- Reviewed data and documentation in several provider data systems, other than ARIES.

Where We Were: *Pre-ARIES* (con't)



- Challenges:
 - Less reliable data (depend on providers to produce list of clients; limited transparency)
 - Resources only allow for monitoring once a year
 - Labor-intensive (on-site reviews)
 - Unable to conduct desk audits of any kind (extensive on-site monitoring required)

Where We Are: *Hybrid of ARIES and Old Process*



- Utilize ARIES report/export function:
 - Extract full export of TGA data via .xml
 - Import into Access
 - Format data fields
 - Link tables
 - Unduplicate records to create complete, unduplicated client list
 - Develop provider-specific client sample lists, including services utilized
 - Write queries to determine completeness of data in ARIES related to required elements

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Where We Are: *Hybrid of ARIES and Old Process* (con't)



- Utilize ARIES report/export function (con't):
 - Develop provider-specific completeness reports to be shared with providers during on-site visit
 - Review ARIES report with providers during on-site visit and communicate expectations for next year's monitoring process.
- Review charts (reduced sample size) for a variety of elements.
- Review data and documentation in only a couple of provider data systems.

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Where We Are: *Hybrid of ARIES and Old Process* (con't)



- Challenges:
 - Not yet entirely automated
 - Due to the current inability to merge duplicate URNs, the process to unduplicate clients can be lengthy
 - Currently unable to document evidence of case notes
 - End users still have some difficulty entering data accurately (correct contracts, service categories, etc.). **Learning Curve**

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Where We Are: *Hybrid of ARIES and Old Process* (con't)



- Improvement over previous year:
 - Increased transparency: double billing for same service, payer of last resort issues, etc.
 - Reduction of on-site monitoring time (example: monitoring of one agency took six days four years ago and took only three days this year).

Where We Want to Be: *Increased Utilization of ARIES*



- Conduct more complete program 'desk audits' using ARIES
- Conduct increasingly limited on-site document reviews to verify data in ARIES
- Providers conduct own audits using ARIES at multiple times during the year to continuously monitor and improve documentation
- Improvements that will increase efficiency:
 - Improved ARIES reporting module
 - Increased end user knowledge/skills to increase accuracy
 - Increased communication within provider agencies (fiscal to program, admin to end users, etc.).

New and Upcoming ARIES Features



Continuing to Improve ARIES

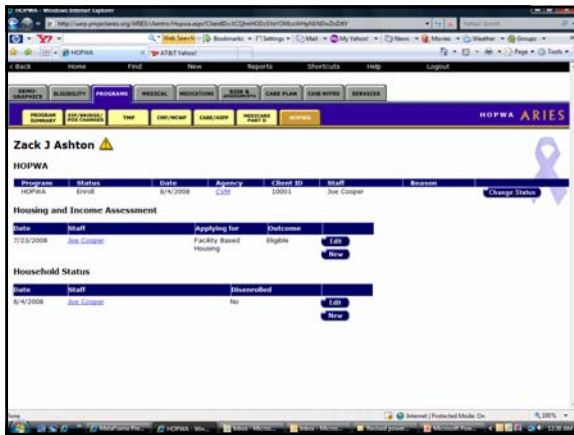


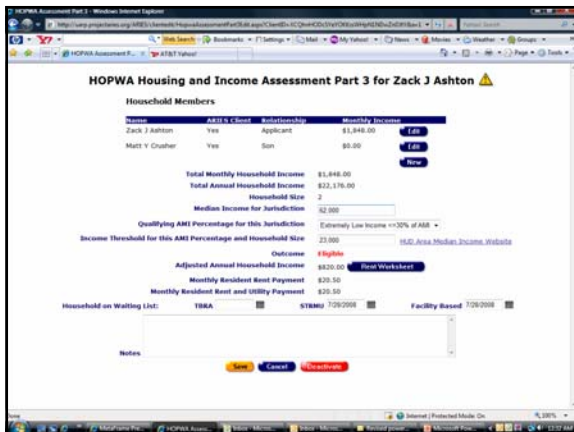
- The four partners continue to work together to improve ARIES.
- Additional EMAs/TGAs in California are in the process of adopting ARIES. These new collaborators will form the ARIES Governance Committee, along with the original four partners.
 - Ideas for enhancements come from grantees, user feedback/meetings, users calling into the Help Desk, and changing requirements.
 - Enhancements are voted on and prioritized for future deployment.

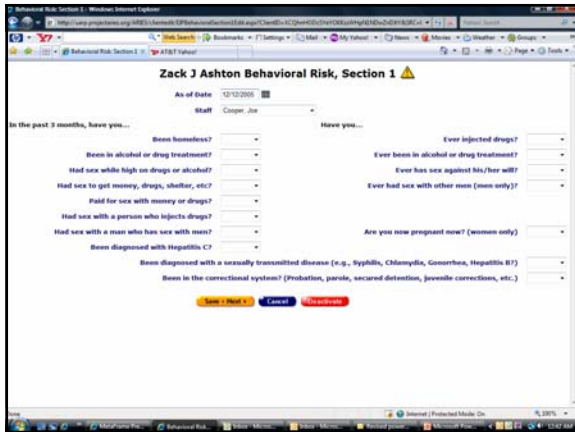
New HOPWA Screens



- Over the last six months, the ARIES partners and the business analyst have analyzed HUD's new data collection and reporting requirements.
- On July 26, 2008, a new release of ARIES was deployed, including seven new screens for HOPWA data collection.
- Analytical work is beginning to program ARIES to facilitate reporting of the APR/CAPER.








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Additional Scheduled Anchor Enhancements




- The ability to schedule and conduct batch data imports will be available in the September 2008 release.
- The November 2008 ARIES release will include changes to be compliant with California ADA requirements for State web pages.
- Enhanced reporting capability, using SQL Server 2005 Reporting Services technology, is scheduled for an early 2009 release.


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ARIES Booth for Demonstration and Materials






Questions




Contact Information




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