Integrating Information Systems to Link and Coordinate Clinical, Support, and Housing Services

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Presentation Overview

- The information support needs of Ryan White (RW) HIV/AIDS Program and HOPWA grantees and subgrantees have grown substantially
- Client-level data systems are helpful in addressing those requirements
- We describe the design of Provide Enterprise (PE)
- We review use of PE data to address several topics
  - Reimbursement and monitoring, conduct centralized eligibility determination (ED), linking newly identified HIV+ individuals to care, coordinate core, support, and housing services; adhere to payer of last resort policies, assess subgrantee quality and performance, and evaluate the impact of funded services
- We discuss use of PE to coordinate and link services among RW Program and HOPWA subgrantees (providers)
- Planned changes in PE are discussed
- We illustrate creative ways in which client-level data can be used by other RW grantees and providers

HIV/AIDS Epidemic's Impact on Broward County and Part A Funds

- The HIV/AIDS epidemic has severely impacted Broward
- An estimated 17,389 Broward residents live with HIV/AIDS
- In 2011, newly reported AIDS cases increased 7% and newly reported HIV cases rose 25% over the prior year, or an average of 4.5 new HIV/AIDS cases per day
- At least 1 in every 101 Broward residents is HIV+
- The CDC reports that the Broward ranked highest in the US for population-adjusted living AIDS rates in 2010, and ranked second only to Miami/Dade County for population-adjusted HIV (not-AIDS) rates
  - The FL Department of Health reports that the 2011 Broward population-adjusted living AIDS and HIV (not-AIDS) case rates exceeded Miami/Dade
- In FY 2011, 7,022 clients received Part A-funded services
- Due to increasing HIV+ Broward residents and decreasing inflation-adjusted Part A funds, average Part A per client funds dropped 20% between FY 2008 and FY 2011

Provide Enterprise (PE)

- Client demographic, epidemiologic, clinical, health insurance, household membership, and other characteristics
- Enhanced Care Functionality
  - Automated Medicaid Verification
  - Mental Health Assessments and DSM-IV Multi-axial Assessments
  - TOPS and ACCESS Applications
  - Ride Scheduling
  - PAP Application and Enrollment Tracking
  - Automated Lab and EMR Interfaces
  - Antiretroviral and Other Medication Data Submitted by Outpatient/Ambulatory Medical Care (OAMC) Providers and Local AIDS Pharmacy Assistance Program Claims
  - Linkage to FL ADAP system to Identify Enrollment Status
- Centralized Intake and Eligibility Determination
  - Captured Scanned Copies of Proof of Eligibility (Identification, Residency, HIV Status, Income, Signed Consent)

Provide Enterprise (PE)

- Enhanced Billing System
  - Service Category-Specific Eligibility Management
  - Line-Item Reject Capabilities
  - Grant to Budget to Allocation to Contract Management
  - Budget/Contract Amendment Management
  - Three Tier Part A Medication Formulary
- Enhanced Reporting Functionality
  - Part A-Defined Outcome Measures
  - HAB HIV Performance Measures
  - InCare+ Campaign Report
  - IOM Monitoring HIV Care Report
  - HAB Clinical Outcome Measures Report
- City of Fort Lauderdale HOPWA Program Data
- Future Plan: Integration of HIV Counseling and Testing Data For HIV+ Individuals Referred to Care

Project Methods and Findings to Illustrate Use of PE

- Centralized information and eligibility determination
- Outreach services linking HIV+ individuals to care
- Impact of an HIV Clinic Closure on the Broward Outpatient/ Ambulatory Medical Care (OAMC)
- Quality, Utilization, and Cost of HIV Oral Health Service System
- Integrating RW and HOPWA Data
- Participation in the InCare+ Campaign
- RW and HOPWA Data Systems

Evaluating Centralized Information and Eligibility Determination

Evaluating Centralized Intake and Eligibility Determination (CIED)

- In 2010, the Part A grantee implemented a centralized process for determining eligibility for RW Part A-funded services
- CIED is the single point of entry for HIV+ persons into the Broward HIV care continuum
  - CIED workers are out-posted in high volume OAMC and support service sites
- Conduct initial benefits, annual recertification, and re-determination
- Provide clients with linguistically and culturally appropriate literature about Part A services, third party payers, and other local community resources
- Assist in preparing health insurance application forms
- Provide clients with a list of funded Part A and other community health and social service providers to selecting providers
- Ensure that referrals for Part A services and other community services are completed within 48 hours of the intake appointment.
- Follow up and record the disposition of all referrals made to clients to determine client satisfaction with the services received and adherence with referral appointments
- Monthly follow up with clients enrolled in or eligible for Medicaid and Medicare

Evaluation Design

- CIED intake, assessment, and reassessment records are maintained in PE
- We conducted a purposeful sample of clients receiving CIED intake or recertification services
- Clients were assigned in hierarchical order to one of six sample strata:
  - Young adults 21 years of age or younger
  - Older adults 65 years of age or older
  - Clients reporting household income greater than $2,000 per month
  - Clients reporting household income of $674 per month
  - Household reported to have $0 monthly income
  - Female clients with household sizes greater than two
- 144 clients' PE records were reviewed using a chart review form
  - The review focused on CIED intake and recertification services provided between August 2010 and February 2011

ED Quality Assessment and Improvement: Design Used to Assess ED Activities Funded Five Part A Grantees

Key Facts	Grantee 1	Grantee 2	Grantee 3	Grantee 4	Grantee 5
Region	Southwest	Northeast	South	**South**	South
Service Area	Large urban, and adjoining rural areas	Suburban, and adjoining rural counties	Moderate urban, and adjoining rural counties	**Large urban**	Large urban, and adjoining rural areas
Providers	1 hospital-based HIV clinic, 2 FQHCs, 1 CHC	2 ASO, 2 hospital-based HIV clinic2, 1 FQHC, 1 county health dept	3 ASOs (1 co-located in HIV clinic), 1 county health dept	**Centralized Part A ED Unit**	3 ASOs, 2 community ID practices, 1 county health dept
Assessment Design	Chart review	Chart review	Chart review	**Electronic records**	Chart review
Chart Review Tool	Tool measures attainment of HAB and grantee monitoring standards, and assesses key components of RW Program and third party insurance eligibility				
# Charts Reviewed	285	407	325	**144**	493

Findings of ED Quality Assessments Among Providers Funded by Five Part A Grantees

Average Error Rate	Grantee 1	Grantee 2	Grantee 3	Grantee 4	Grantee 5
Region	Southwest	Northeast	South	**South**	South
Average Household Size	Not Assessed	**38%**	**58%**	**Not Assessed**	Not Assessed
Household Income	Not Assessed	**74%**	**77%**	**35%**	Not Assessed
Health Insurance	**32%**	**39%**	**27%**	**11%**	**44%**

Evaluating the Effectiveness of HIV Outreach Services in Linking HIV+ Individuals to Care

Rationale for Evaluating Part A-Funded Outreach

- In FY 2008, the Part A grantee allocated $626,970 to outreach (5% of direct Part A services funds)
  - The objective for those services was to identify and engage newly identified HIV+ individuals in care
  - The Part A grantee hoped to improve the effectiveness and efficiency of Part A-funded outreach through a thorough evaluation
- At the time, few Part A or Part B grantees were funding outreach because they had insufficient funds for core services, found previous outreach efforts to be ineffective, or had reached clinical capacity in their service areas
- Few studies had rigorously evaluated HIV outreach within the HIV care continuum

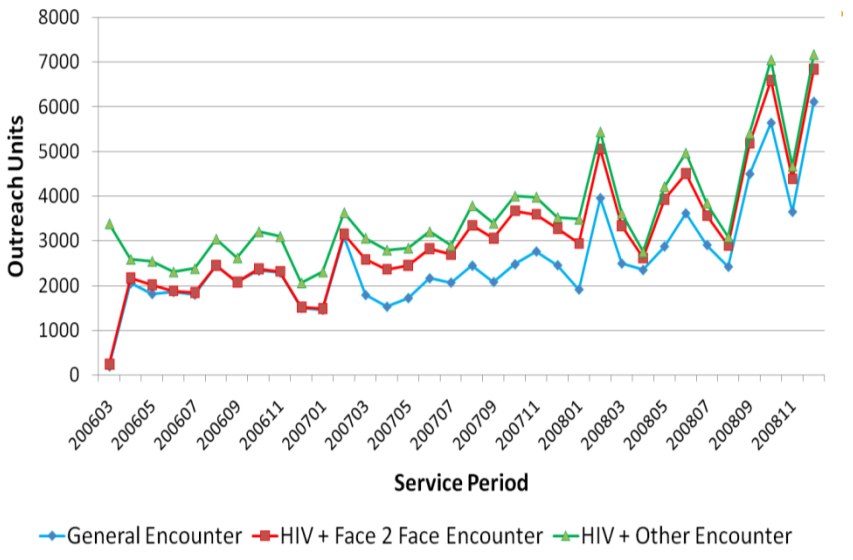
Assessment Objectives

- Define the elements of outreach, linkage, and retention services used by Broward County Part A-funded programs
- Identify key points of entry and other agencies serving Broward County residents aware or unaware of their HIV status and HIV their risk assessment, counseling, and testing practices
- Describe methods used by Part A-funded outreach programs to identify and link HIV+ persons
- Evaluate effectiveness of Part A-funded outreach programs
  - Evaluate outreach activities used to re-engage Broward HIV+ residents who dropped out of or are lost-to-care
- Determine the cost-effectiveness of Part A-funded outreach services
- Identify deficiencies, recommend best practices, develop an implementation plan to carry out the recommendations, and provide TA to address improvement

Assessment Methods

- Analyzed client-level billing records, budgets, and outreach calendars and activity logs
  - Assessed outreach worker turnover, their productivity, and continuity of services
  - Used PE data to determine if clients had been engaged in OAMC prior to receipt of outreach services
- Geoanalysis was used to assess the geographic relationship between outreach sites and the HIV epidemic in Broward County

Trends in Outreach Services Per Month, By Service Category

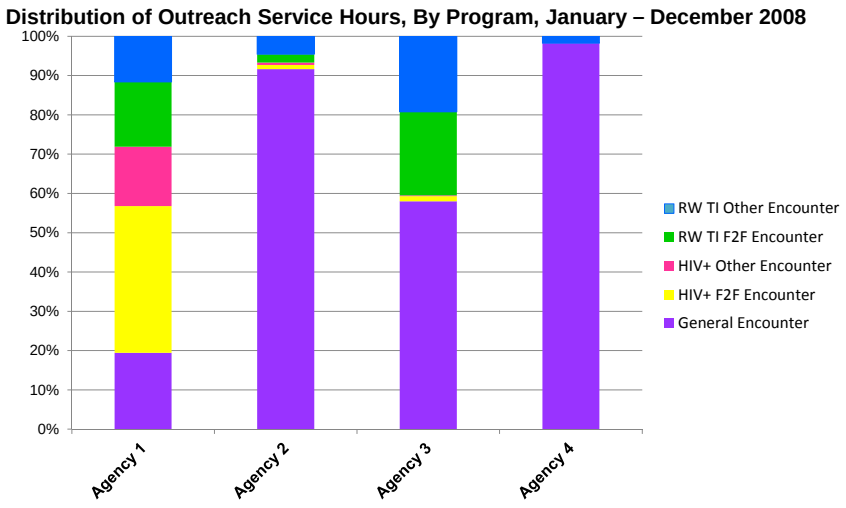


Where is general outreach conducted?

Key Point of Entry?	Part A Outreach Program			Total
	Agency 1	Agency 2	Agency 3	
Yes	87.5%	37.2%	54.8%	42.8%
No	5.8%	21.4%	31.6%	22.2%
HIV Clinic	3.8%	39.0%	13.3%	32.9%
Unknown	2.9%	2.3%	0.3%	2.0%

In-reach?	Part A Outreach Provider			Total
	Agency 1	Agency 2	Agency 3	
Yes	66.3%	23.7%	1.2%	22.2%
No	33.7%	76.3%	98.8%	77.8%

What is the volume of general outreach encounters?



Was outreach the route in which HIV+ Broward residents entered the HIV care system?

- Outreach was the first Part A-funded service received by 73% of outreach clients, while 27% were enrolled in the "Part A system" before outreach was initiated
  - 13% were enrolled in medical case management
  - 6% in pharmaceutical assistance
  - 3% in outpatient/ambulatory medical care
  - About 1% or less respectively in food, oral health, mental health, nutrition, substance abuse, complementary therapy, or support groups

Sequence Between Dates of First Outreach Encounters and Core Services, March 2006 to December 2008

Sequence	Outpatient/ Ambulatory Medical Care	Pharma-ceutical Assistance	Medical Case Manage-ment
	% of Clients		
Had Other Service Before First Outreach Encounter	33.5%	39.0%	42.8%
Had Other Service On Same Day as Outreach Encounter	2.8%	2.5%	1.2%
Had Other Service After First Outreach Encounter	63.7%	58.5%	56.1%

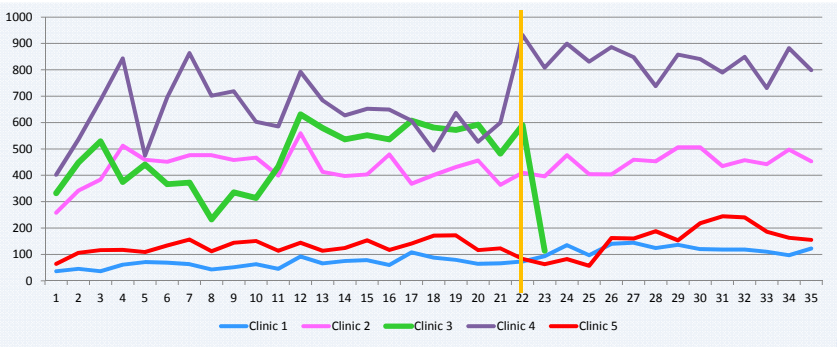
Some clients were enrolled in Medicaid, Medicare, and/or commercial insurance and may have been in HIV medical care before enrollment in outreach

Impact of an HIV Clinic Closure on the Broward Outpatient/ Ambulatory Medical Care (OAMC)

Introduction and Methods

- In 2011, a Part A-funded agency providing OAMC was closed
- Patients were referred prior to and following the closure to other HIV providers in Broward
- Monthly PE visit data were used to track unduplicated clients to determine if they successfully relocated to other HIV providers
- The impact of the closure on monthly total OAMC visits was also assessed

Trends in Monthly OAMC Visits Prior to and Following Closure of Clinic 3



Mean Monthly Visits		Change in Mean	Difference in Mean Monthly	
12 Months Before Closure	12 Months After Closure	Monthly Visits	Visits FY 2011 Versus FY 2010	
79	122	55.1%	43	Clinic 1
423	458	8.2%	35	Clinic 2
531	0	-100.0%	-531	Clinic 3
667	829	24.3%	162	Clinic 4
127	167	32.0%	41	Clinic 5
1827	1719	-5.9%	-108	Total Visits

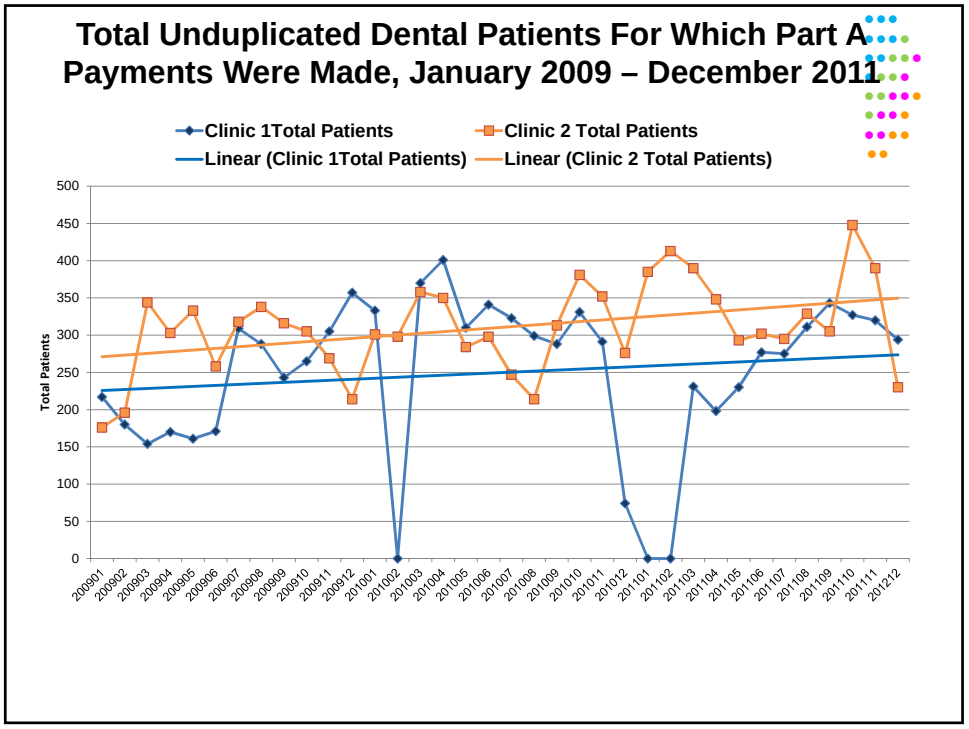
Assessing Quality, Utilization, and Cost of HIV Oral Health Services

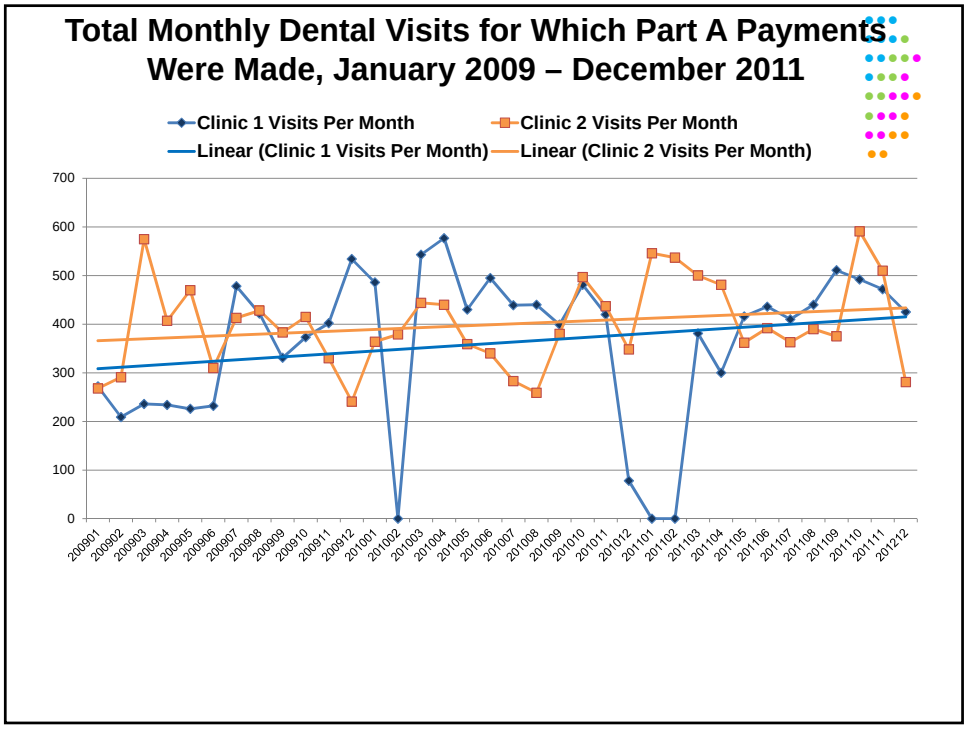
Assessment Objectives

- Assess the quality and completeness of client-level data reported in Provide Enterprise (PE)
- Use client-level Part A billing records to assess
  - Differences in utilization patterns among oral health patients, time required to complete oral care plans, extent to which Part A-funded providers meet or exceed HAB and grantee performance measures and the Part A Service Delivery Model, HIV oral health outcomes, relationship between use of medical and oral health care, retention in oral health services, disparities in outcomes, and costs of care
- Interview key staff of Broward County Part A-funded HIV oral health programs and review program-related materials to understand better:
  - Their programs' design and staffing
  - Dental service cost structure
  - Quality management (QM) methods and the results of quality improvement projects (QIPs)
  - Current or planned activities to expand access to their services, refine their programmatic service delivery models, and/or improve individual dental provider performance
- Identify and contact other Part A and Part B-funded grantees that fund HIV oral health services, and obtain information about their methods for delivering and financing those services

Oral Health Patient Characteristics

- A total of 4,690 HIV+ patients were treated by the two HIV dental clinical providers in Broward County in 2009 to 2011
- 51% of patients were served by Clinic 1, 39% by Clinic 2, and 9% by both Clinic 1 and Clinic 2
- Among HIV+ patients served in the three-year period
  - 3% were Hispanic females, 3% were White non-Hispanic females, 20% were Black non-Hispanic females, 13% were Hispanic males, 25% were Black non-Hispanic males, and 36% were White non-Hispanic males
  - Over two-thirds of patients were permanently housed
  - Almost one-half (48%) were heterosexual, 44% were homosexual or lesbian
  - Less than 1% of patients were reported to be illiterate, while 1% had a fourth grade or lower literacy level, 7% had a fifth to eighth grade literacy level, 48% had a ninth to twelfth grade literacy level, and 40% had a literacy level greater than the twelfth grade level
  - 7% had eighth grade or lower educational attainment, 61% had between eighth and twelfth grade educational attainment, and 31% had attended college
  - 36% of patients were permanently or temporarily disabled, 30% unemployed, 15% employed full-time, and 15% employed part-time


Total Unduplicated Dental Patients For Which Part A Payments Were Made, January 2009 – December 2011
Clinic 1Total Patients
Clinic 2 Total Patients
Linear (Clinic 1Total Patients)
Linear (Clinic 2 Total Patients)
Total Patients
500
450
400
350
300
250
200
150
100
50
0
200901 200902 200903 200904 200905 200906 200907 200908 200909 200910 200911 200912 201001 201002 201003 201004 201005 201006 201007 201008 201009 201010 201011 201012 201101 201102 201103 201104 201105 201106 201107 201108 201109 201110 201111 201212


Total Monthly Dental Visits for Which Part A Payments Were Made, January 2009 – December 2011
Clinic 1 Visits Per Month
Clinic 2 Visits Per Month
Linear (Clinic 1 Visits Per Month)
Linear (Clinic 2 Visits Per Month)
700
600
500
400
300
200
100
0
200901 200902 200903 200904 200905 200906 200907 200908 200909 200910 200911 200912 201001 201002 201003 201004 201005 201006 201007 201008 201009 201010 201011 201012 201101 201102 201103 201104 201105 201106 201107 201108 201109 201110 201111 201212

Oral Health Patients With Only One Visit

- 18% of Clinic 1 and 19% of Clinic 2 had only one visit in the study period
- We compared the characteristics of patients with only one oral health visit with patients with two or more visits
  - Only 2% of patients with only one visit had an extraction during the visit
- Patients with only one oral health visit were
  - Slightly more likely to be White non-Hispanic females, Black non-Hispanic females, and slightly less likely to be male than patients with more than one visit
  - Significantly more likely than other patients to be non-permanently housed, be enrolled in Medicare, have ninth grade level literacy or higher, have a high school or college education, have HIV but not AIDS than other patients, be on dual ARV therapy or not receive HIV therapy
  - Significantly more likely than other patients to not be in OAMC

Differences Found in Types of Procedures Conducted

Following aggregation of procedure records into CDT classes, 35% of procedures for services provided in 2010 or 2011 were diagnostic, 22% preventive, 17% restorative, 9% periodontics, 6% removable prosthodontics, 4% adjunctive general services, 6% oral and maxillofacial surgery, 2% endodontics, and less than 1% were implant services

Percentage of Dental Procedures Provided in 2010 and 2011, by Dental Procedure Class, Provider, and Year of Service	Clinic 1			Clinic 2		
	2010	2011	Total	2010	2011	Total
Total Procedures	7,880	12,786	20,666	5,119	6,251	11,370
Diagnostic	30.0%	39.8%	36.0%	33.6%	33.3%	33.4%
Preventive	28.7%	29.8%	29.4%	6.9%	7.2%	7.1%
Restorative	17.1%	10.7%	13.1%	22.2%	24.3%	23.3%
Endodontics	0.4%	0.5%	0.4%	4.7%	4.4%	4.6%
Periodontics	6.5%	7.7%	7.3%	10.0%	12.4%	11.3%
Removable Prosthodontics	6.6%	3.7%	4.8%	9.6%	8.6%	9.1%
Implant Services				0.2%	0.0%	0.1%
Oral and Maxillofacial Surgery	4.8%	4.0%	4.3%	9.2%	6.6%	7.8%
Adjunctive General Services	5.8%	3.9%	4.6%	3.4%	3.2%	3.3%

Adoption of Primary Dental Care Versus Specialty Dental Care Models Identified

Percentage of Dental Procedures Ineligible for Payment by the Part A Program in 2010 and 2011, by Procedure Class and Provider	Clinic 1	Clinic 2
Diagnostic	54.0%	46.0%
Preventive	91.6%	8.4%
Restorative	69.5%	30.5%
Endodontics	33.3%	66.7%
Periodontics	75.4%	24.6%
Removable Prosthodontics	50.4%	49.6%
Oral and Maxillofacial Surgery	54.1%	45.9%
Adjunctive General Services	80.0%	20.0%
Total	59.7%	40.3%

Retention in Oral Health Care

- We assessed retention in care among HIV+ patients served by Clinic 1 and/or Clinic 2 in 2009 to 2011
- HIV+ patients were identified as being retained in care if they had at least one dental visit in both 2009 and 2010, in both 2009 and 2010, or in all three years studied
- **Among all patients studied, 39% were retained in care in both 2009 and 2010, 41% were retained in both 2010 and 2011, and 19% were retained throughout the three-year study period**
- The characteristics of patients retained in dental care differed significantly when controlling for oral health program
- Among Clinic 1 patients, there was no statistically significant difference in the gender, race, or ethnicity of retained and non-retained patients in the 2009 to 2010 or 2010 to 2011 retention periods
- In contrast, Clinic 2 patients retained in the 2009 to 2010 and 2010 to 2011 retention periods tended to be more likely than non-retained patients to be White non-Hispanic males

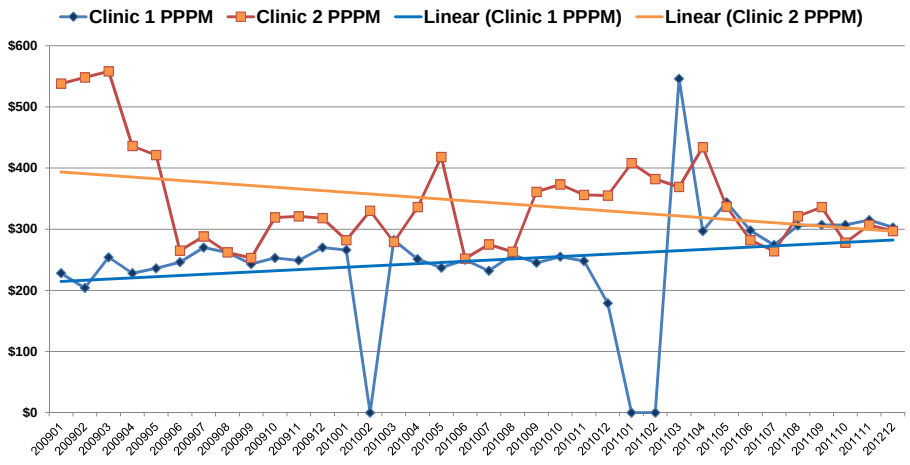
Two-Year Retention Rates of Dental Patients	Clinic 1			Clinic 2		
	2009 - 2010	2010 - 2011	2009 - 2011	2009 - 2010	2010 - 2011	2009 - 2011
Total Patients	1,094	1,170	2,397	922	932	1,854
Not Retained in Care	44.3%	41.6%	84.6%	35.2%	26.6%	79.7%
Retained in Care	55.7%	58.4%	15.4%	64.8%	73.4%	20.3%

Summary Of Part A Oral Health Payments

Summary of Part A Payments Made for Oral Health Services, 2009-2011	Number of Patients	Total Part A Payments	Minimum Payment Per Patient	Maximum Payment Per Patient	Mean Payment Per Patient	Std. Deviation	Median Payment Per Patient
Total	4,541	$6,292,899	$166	$22,787	$1,386	$1,608.866	$836
Clinic 1 Only	2,288	$2,095,016	$166	$6,295	$916	$826.871	$668
Clinic 2 Only	1,815	$3,263,314	$166	$22,787	$1,798	$2,067.340	$1,011
Clinic 1 & Clinic 2	438	$934,570	$166	$13,069	$2,134	$1,774.458	$1,671

Trends in Per Patient Per Month Payments

Mean Per Patient Per Month (PPPM) Part A Payments, January 2009 – December 2011



Integrating RW and HOPWA Data Systems

Participation the InCare+ Campaign RW and HOPWA Data Systems

in +care

Questions And Discussion