Partnerships to Increase Success in the Continuum of HIV Care in Houston, TX

Thomas P. Giordano, MD, MPH
Baylor College of Medicine
Health Services Research and Center for Innovations in Quality, Effectiveness and Safety, Houston VA Medical Center

Camden Hallmark, MPH
Bureau of HIV/STD and Viral Hepatitis Prevention,
Houston Department of Health and Human Services, City of Houston

CFAR/APC Continuum of Care Meeting
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Houston Department of
Health and Human Services

Key Personnel

Baylor College of Medicine
Health Services Research and Center for Innovations in Quality, Effectiveness and Safety, Houston VA Medical Center

Tom Giordano, MD, MPH
(Lead Investigator)

Jessica Davila, PhD
(Epidemiologist)

Charlene Flash, MD, MPH
(Co-Investigator)

Bich Dang, MD, MPH
(Co-Investigator)

City of Houston
Bureau of HIV/STD and Viral Hepatitis Prevention

Marlene McNeese
(Bureau Chief)

Camden Hallmark, MPH
(Data Analyst)

Harris Health System
HIV Services, Thomas Street Health Center

Siavash Pasalar, PhD
(Data Analyst)

Aims

- Examine temporal changes in linkage to care, retention in care, and viral suppression of HIV-infected persons identified by the Harris Health System routine, universal, opt-out HIV testing program (RUSH)
  - Hypothesis: the Harris Health System routine testing program will demonstrate improvements over time in linkage and retention in care rates for HIV-infected persons
- Assess determinants of poor retention in care among patients newly entering care at Thomas Street Health Center
  - Hypothesis: Patient satisfaction with the initial clinic visit will predict early retention in care
- Maintain the Scientific Advisory Council to advise COH HIV activities

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Aim 1: Routine Universal Screening for HIV (RUSH)

- The Harris Health System launched its Routine Screening for HIV in 2008 as part of the CDC's Expanded Testing Initiative. Key features of the program include:

- Emergency Department (ED) based program.

- Use an opt-out process which requires no separate written consent.

- Use a 3rd generation HIV testing assay operated on a "rapid" basis in the hospital laboratory.

- Work closely with the local public health authority to verify "new" or "previous" diagnosis status for each positive result.

- Use our own department's service linkage staff to deliver positive test results and coordinate referrals to follow-up care, minimizing ED workflow changes.

- Only patients who are receiving a blood draw for other reasons (about 40% of ED patients) are tested for HIV, again minimizing ED workflow changes.
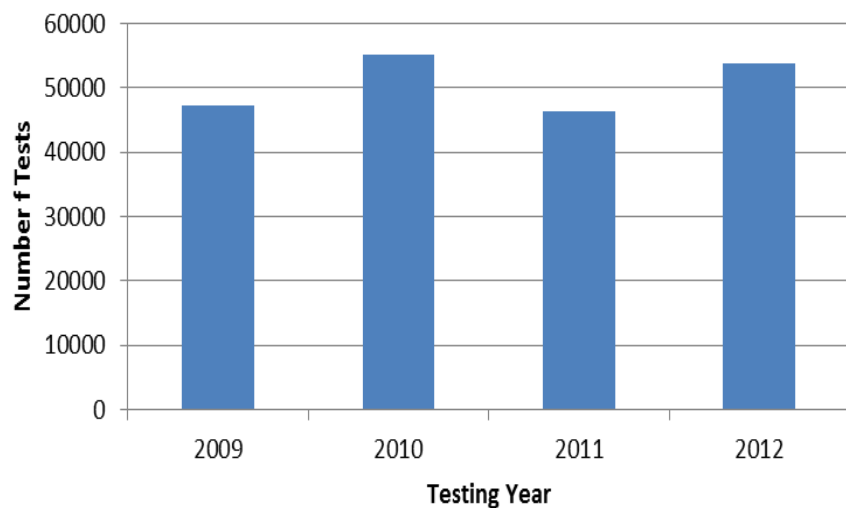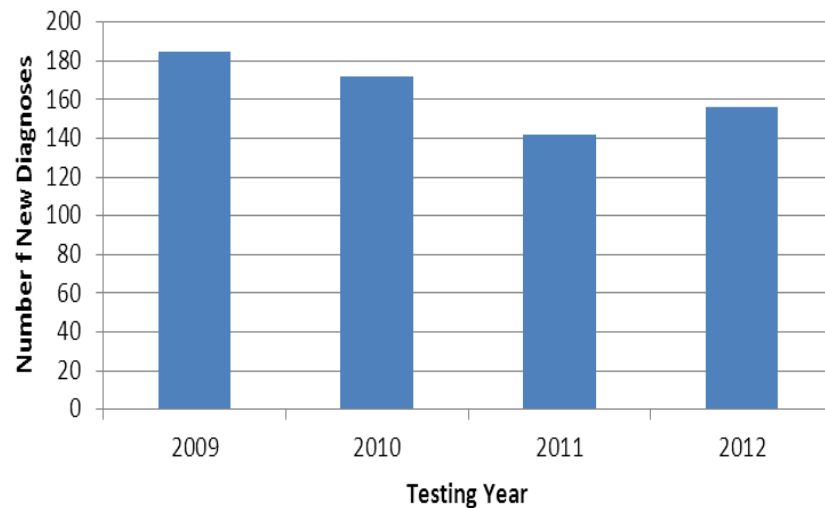
Aim 1 Methods

- <u>Design</u>: Retrospective cohort study.

- <u>Cohort</u>: All ED patients aged ≥16 years old who had an HIV test performed in the ED between January 2009 and December 2012.

- <u>New diagnoses</u>: Positive results were queried by the City of Houston against surveillance database to identify new diagnoses.

- <u>Linkage to care</u>: Defined as completing a visit at a Ryan White-funded clinic in the Houston area (including Harris Health clinics) within 90 days of diagnosis.

- <u>Retention in care</u>: Defined as meeting modified IOM definition: 2 completed HIV primary care visits in the year after diagnosis, at least 60 days apart.

- <u>CD4 cell counts</u>: The first CD4 cell count result, abstracted from Harris Health databases, from within 6 months of diagnosis.

- <u>Viral Load Suppression</u>: HIV RNA <200 c/ml during the 12±3 month window after diagnosis, abstracted from Harris Health databases.

- <u>Analysis</u>: Statistical testing with the chi-square test.

Aim 1: Tests Performed and New Diagnoses

Aim 1: New Diagnosis Rate
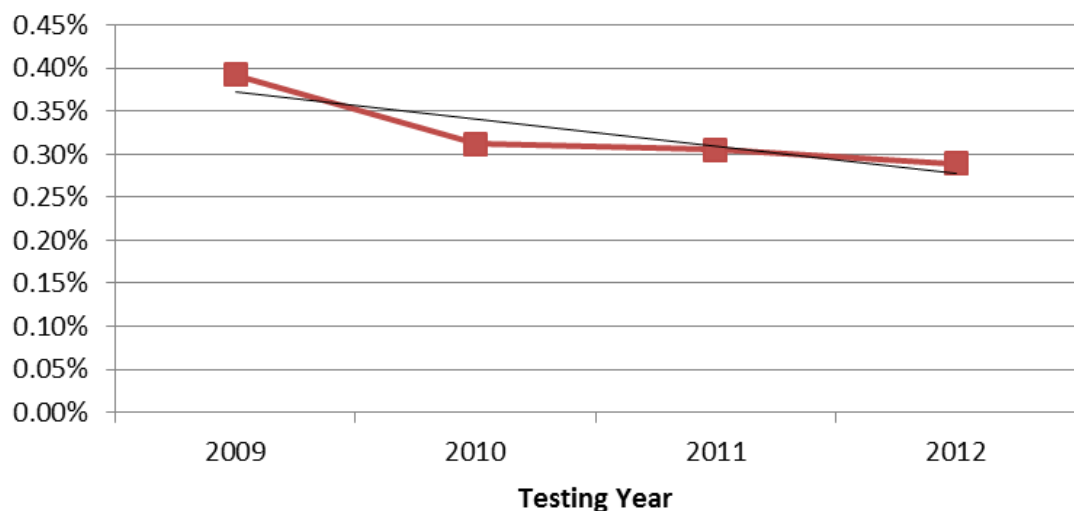
New Positivity Rate

	Tests performed	New Diagnoses	
		Number	Rate
2009	47190	185	0.39%
2010	55161	172	0.31%
2011	46483	142	0.31%
2012	53933	156	0.29%
TOTAL	**202767**	**655**	**0.32%**

P-Value   0.023

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Aim 1: CD4 at Diagnosis

First CD4 Over 350
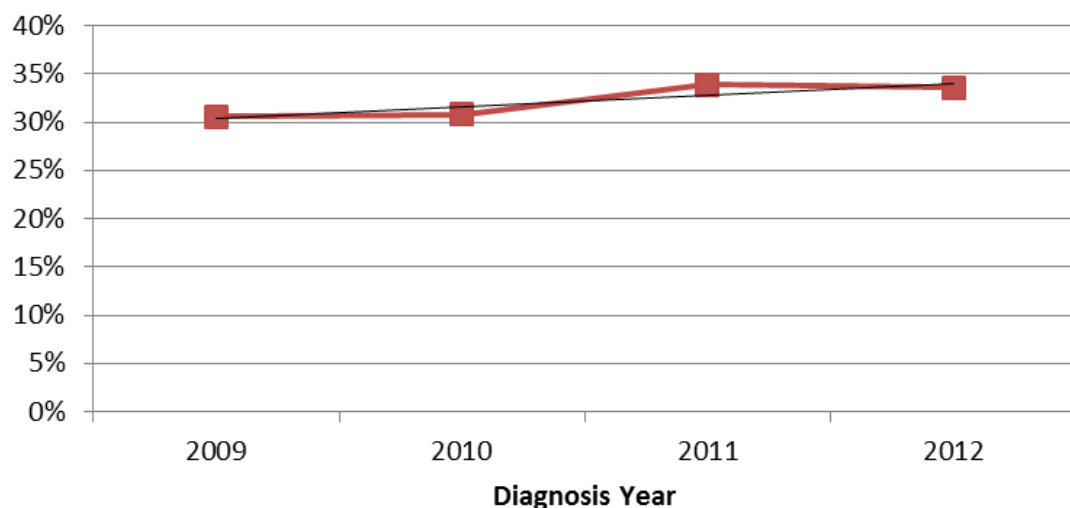
First CD4 Within 180 Days of Diagnosis

	Available	Mean CD4	Over 350	Over 350 Rate
2009	121	265	37	31%
2010	120	280	37	31%
2011	112	297	38	34%
2012	113	287	38	34%
TOTAL	**466**	**282**	**150**	**32%**

P-Value   0.92

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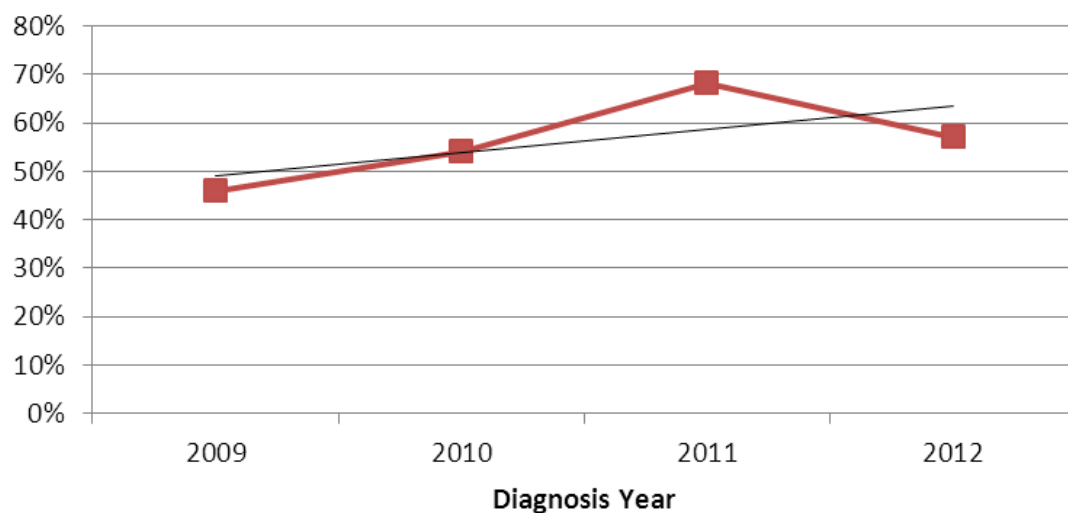Houston Department of Health and Human Services

Aim 1: Linkage to Care
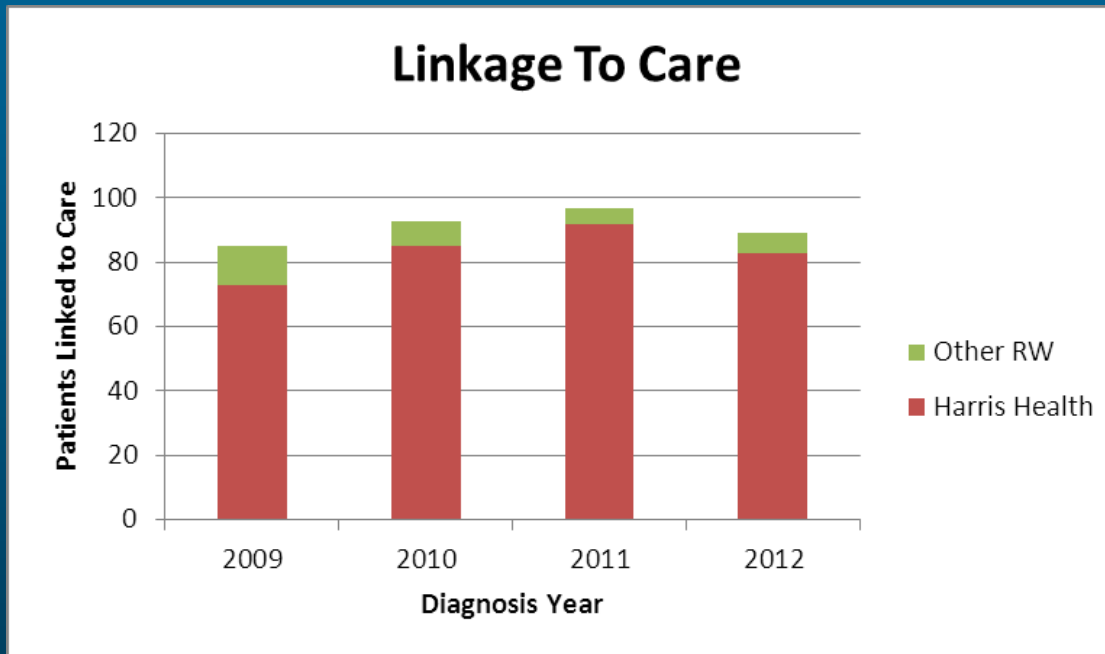
Linkage To Care

- Number of new diagnoses linked to care in 90 days per year of diagnosis
- Location of linkage
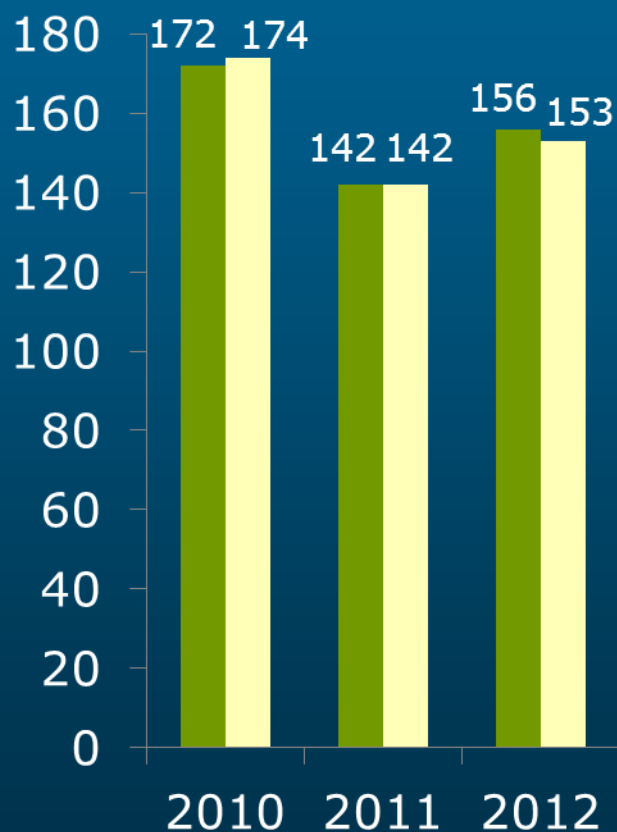
Aim 1: Linkage to Care Rate

Linkage To Care Rate

Linked to Care Within 90 Days

	Harris Health	Other RW	Total	Rate
2009	73	12	85	46%
2010	85	8	93	54%
2011	92	5	97	68%
2012	83	6	89	57%
TOTAL	**333**	**31**	**364**	**56%**

P-Value   0.0009

Comparison to City of Houston Public Health Data (2010-2012)

New Diagnosis

Year	Harris Health Data	City of Houston Data
2010	172	174
2011	142	142
2012	156	153

Linkage to Care Rate

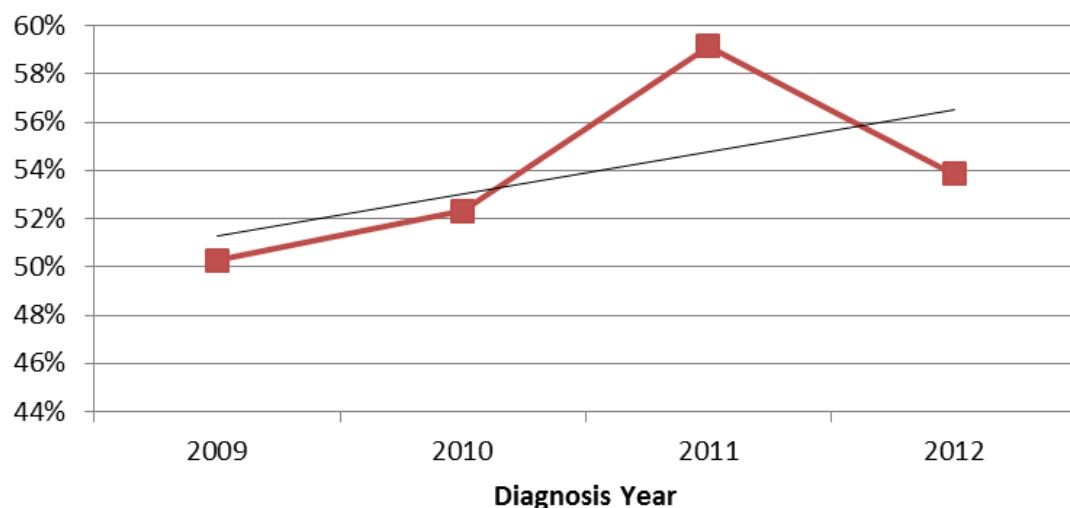| Year	Harris Health Data	City of Houston Data
2010	54%	61%
2011	68%	79%
2012	57%	69%
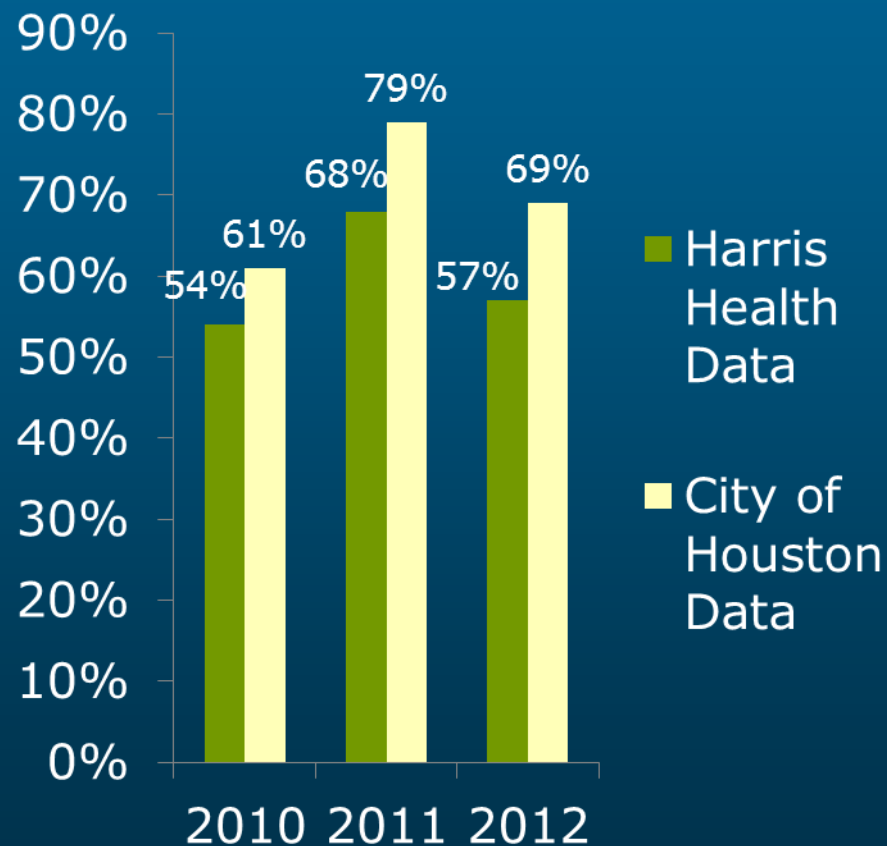
Aim 1: Retention in Care
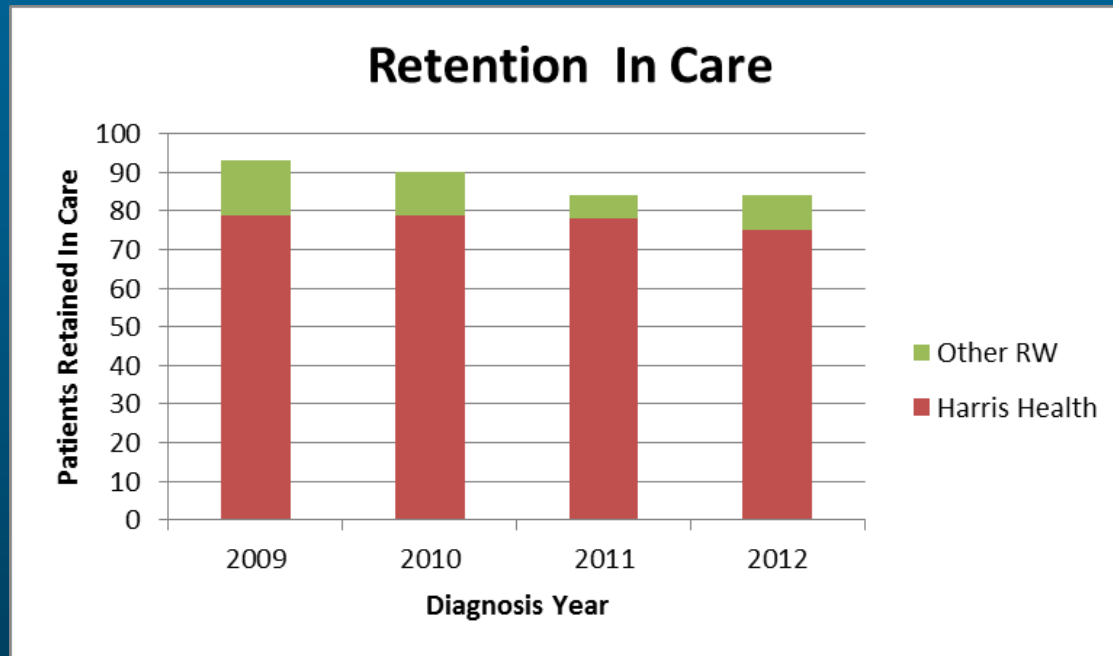
Aim 1: Retention in Care Rate

Retention In Care Rate

Retained in Care 2 Visits 60 Days Apart

	Harris Health	Other RW	Total	Rate
2009	79	14	93	50%
2010	79	11	90	52%
2011	78	6	84	59%
2012	75	9	84	54%
TOTAL	**311**	**40**	**351**	**54%**

P-Value   0.44

Aim 1: Linkage and Retention
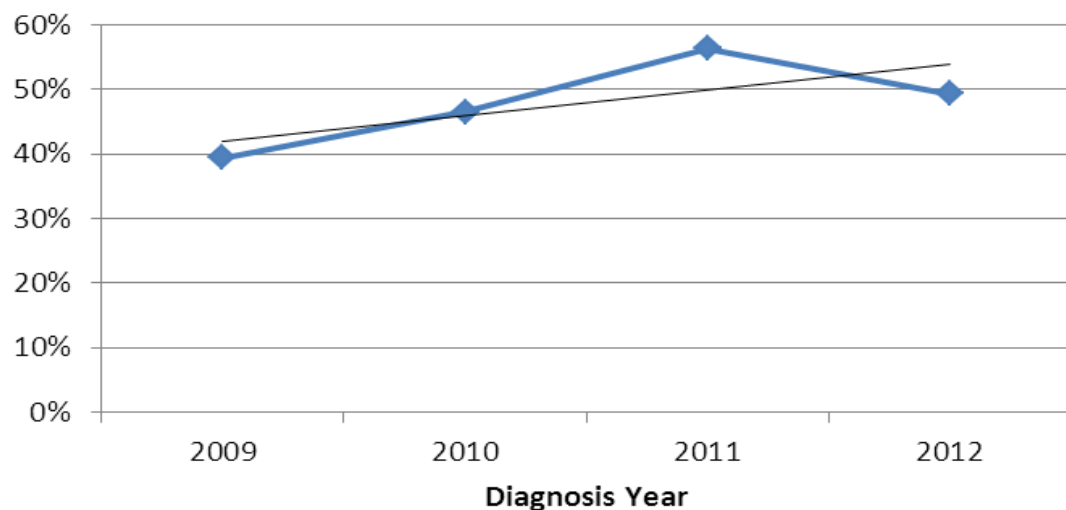
New DX Patients Linked AND Retained in Care

	New DX	Linked AND Retained	Rate
2009	185	73	39%
2010	172	80	47%
2011	142	80	56%
2012	156	77	49%
TOTAL	**655**	**310**	**47%**

P-Value	0.023

Aim 1: VL Suppression
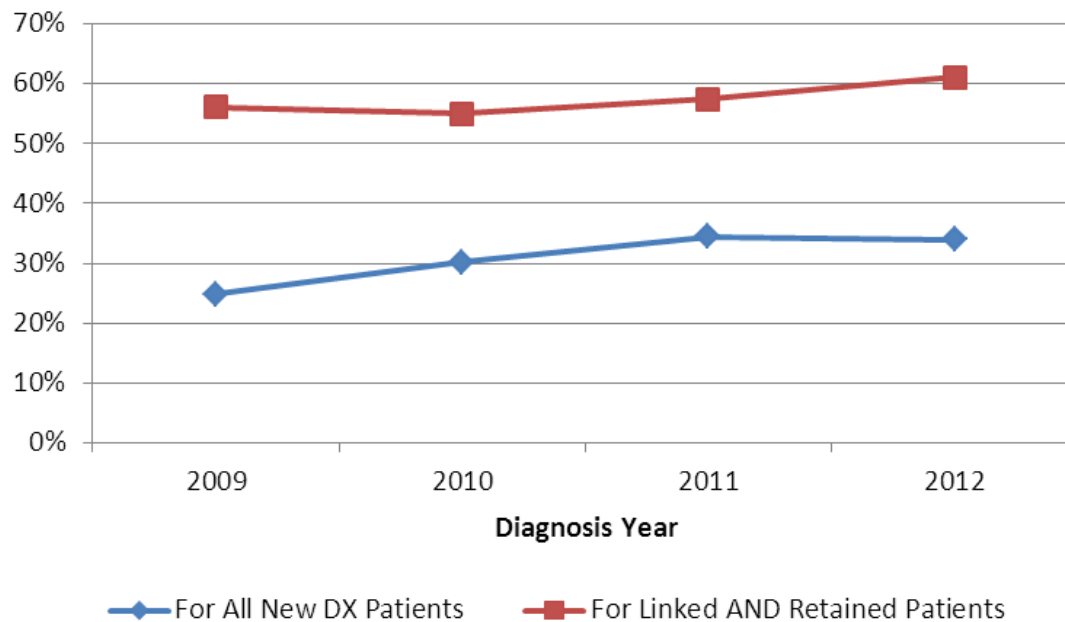
Viral load suppressed in the 12 ± 3 month window from diagnosis

	For all New DX Patients	For Linked AND Retained Patients
2009	25%	56%
2010	30%	55%
2011	35%	58%
2012	34%	61%
TOTAL	**31%**	**57%**
P-Value	0.19	0.88

Aim 1: Discussion

- New positivity rates are declining
  - Suggests we are achieving the goal of reducing the undiagnosed.
  - CD4 cell counts at diagnosis have not increased, however, so still testing too late in disease process.
  - Justifies expanding program to target all ED patients, not just those getting blood drawn for other reasons, and patients in other Harris Health System venues.
  - The rate remains above CDC threshold for routine testing.
- Among a population newly diagnosed with HIV in the ED, viral load suppression is highly dependent on linkage and retention in care, as expected
- Linkage to care rates have improved, with an apparent dip in 2012 in both Harris Health and City of Houston data that is difficult to explain

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Discussion (Cnt'd)

- Retention in care rates have not improved and show the same dip in 2012
  - Retention is more complex than linkage, and will be more difficult to impact
- It is critical to partner with the public health authority for accurate data on the continuum of care
  - "New diagnosis" reasonably close; linkage rates quite different

Aim 2: Determinants of Retention in Care

- Lead investigator: B. Dang, MD, MPH
- Focus on patient satisfaction with provider and clinic services as modifiable determinant of retention in care among persons entering care
- Assess determinants of poor retention in care among patients newly entering care at Thomas Street Health Center
  - Hypothesis: Patient satisfaction with the initial clinic visit will predict early retention in care
- Methods: Pilot prospective observational cohort study
- Participants: persons completing their first ever physician visit at Thomas Street Health Center
- Status
  - Fully enrolled with 150 participants completing the baseline survey
  - 6-month follow-up windows just now opening
  - Medical record review for one year

Aim 3: Scientific Advisory Council

- National HIV/AIDS Strategy demands comprehensive view of HIV prevention, diagnosis, and treatment
- Established with ECHPP-1 in 2012, meets monthly
- Supplements COH in-house expertise with academic health services research, behavioral science, epidemiology, clinical infectious diseases, laboratory science, and other ad hoc expertise
- Major recent foci include:
  - Potential benefits and challenges to PrEP and nPEP implementation in Houston
  - Health disparities in relation to new HIV diagnoses
  - Barriers and utilization of HIV services by HIV-positive transgender Houstonians

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Questions ?