



VIRTUAL
2020 NATIONAL
RYAN WHITE
CONFERENCE ON
HIV CARE & TREATMENT

Addressing “No Shows” with an Effort to Retain (ANSWER)

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Disclosures



- The presenters have no financial interests to disclose.

Learning Objectives



At the conclusion of this activity, participants will be able to:

1. Discuss the importance of “no show” events.
2. Standardize approaches to “no show” events.
3. Obtain strategies for retaining patients in care.

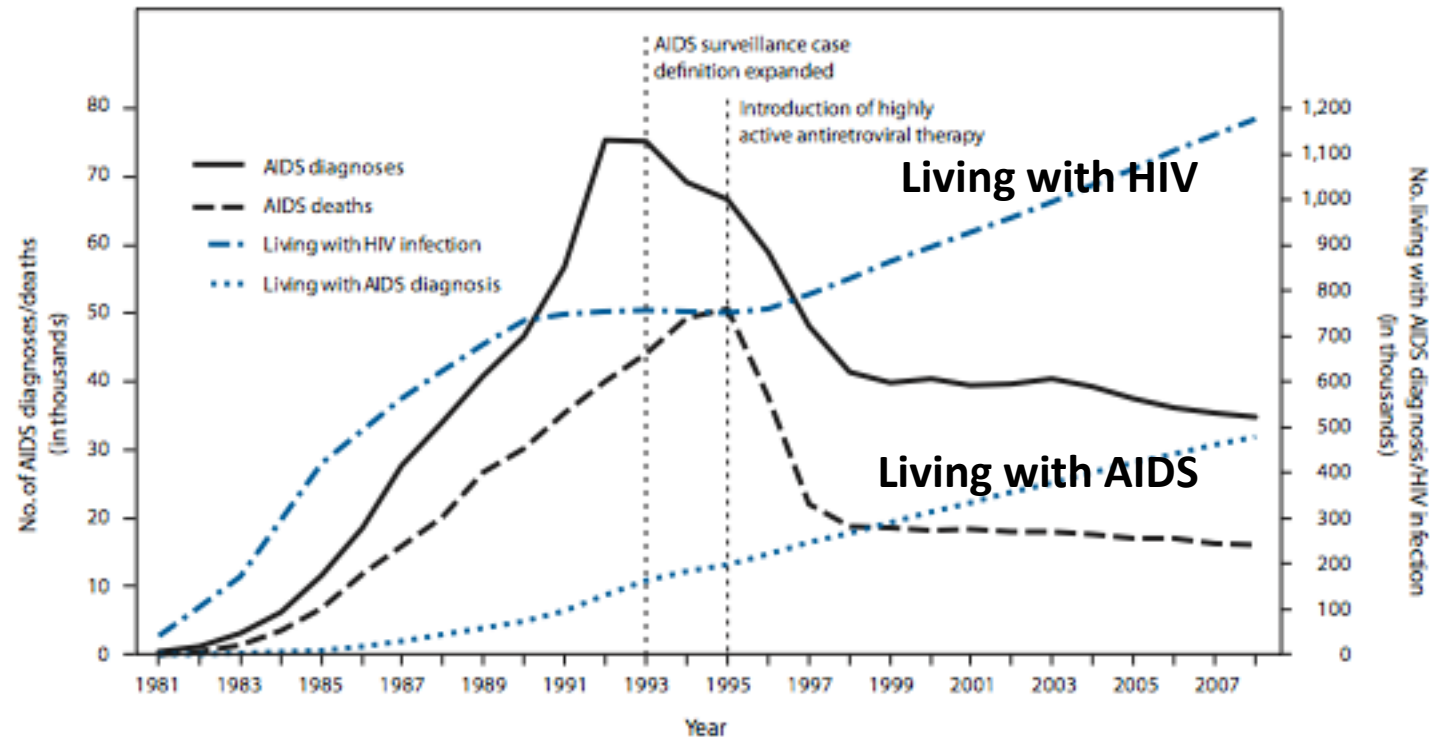
Discuss:

- Importance of retention in HIV care.
- Where have we been, and where are we going?
- Relationship between “no shows” and retention in care.
- ANSWER

HIV/AIDS in the US (1981-2008)



FIGURE. Estimated number of AIDS diagnoses and deaths and estimated number of persons living with AIDS diagnosis* and living with diagnosed or undiagnosed HIV infection† among persons aged ≥13 years — United States, 1981–2008



Abbreviations: AIDS = acquired immunodeficiency syndrome; HIV = human immunodeficiency virus.

* Yearly AIDS estimates were obtained by statistically adjusting national surveillance data reported through June 2010 for reporting delays, but not for incomplete reporting.

† HIV prevalence estimates were based on national HIV surveillance data reported through June 2010 using extended back-calculation.

1.2 million people are living with HIV in the US.

Torian, et al. HIV Surveillance 1981-2008. MMWR. 2011;60;21.

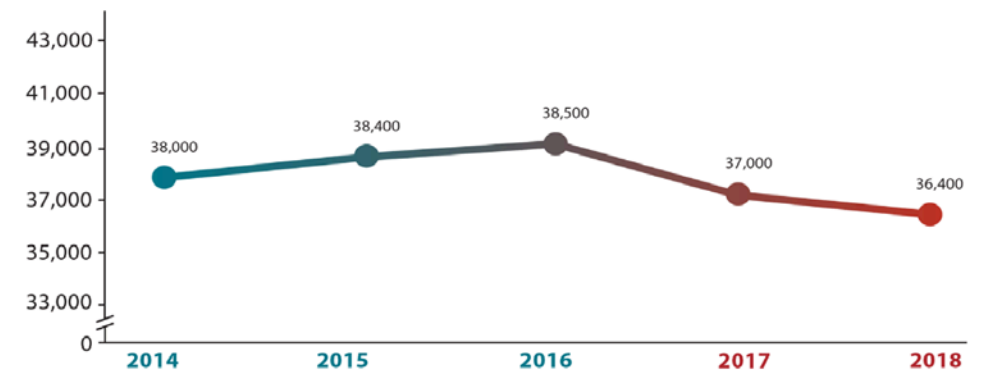
HIV Incidence in US Today



- 2005: 55,000 new infections
- 2008-2014: Number of newly diagnosed with HIV *dropped* from 45,700 to 37,600.
- Since 2014: Number of new infections and diagnosis have remained stable.
- Zero new infections by 2020?? (WHO)



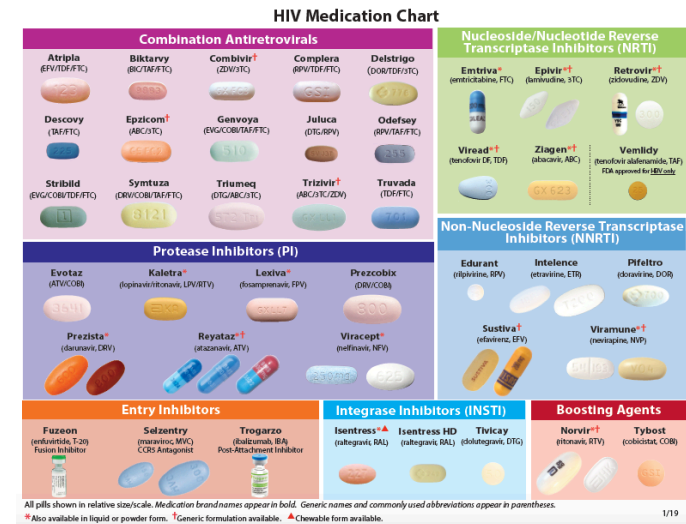
Annual HIV Infections in the U.S., 2014-2018



cdc.gov

What are we doing well?

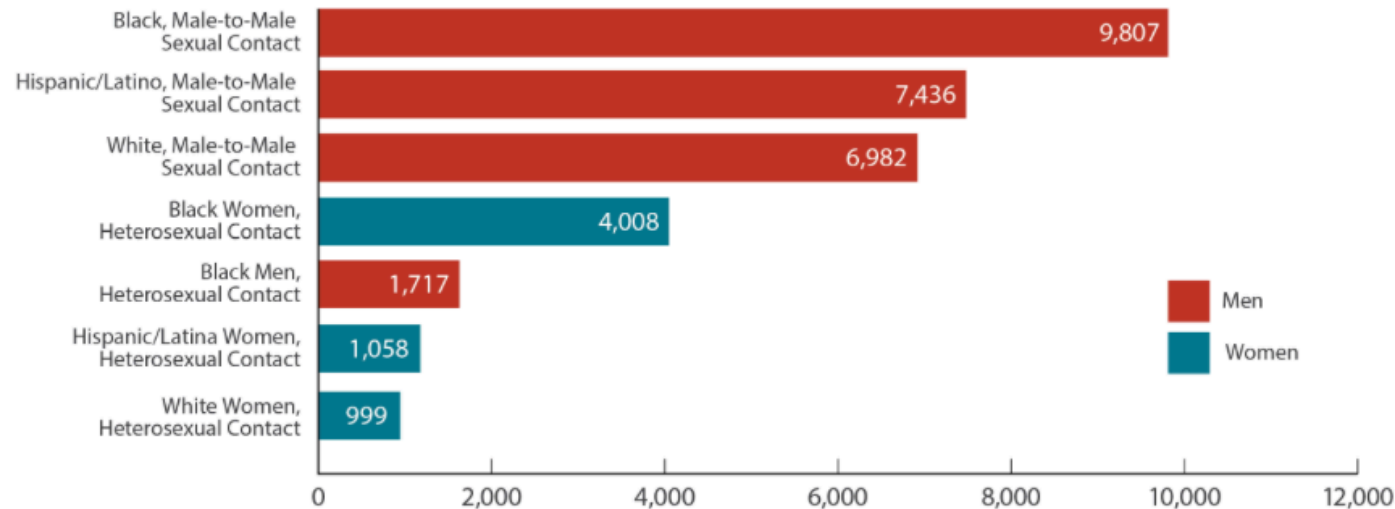
- Identifying HIV infections
 - 2006 Opt out testing recommended (no written consent)
 - 2013 HIV testing recommended for all ages 13-64
- Treating those engaged in care
 - 2012 Treatment as prevention (HPTN 052)
 - 2015 WHO recommends ART for all regardless of CD4 ct
- (PReP)
 - 2016 WHO recommends PReP for “substantial risk”



Then, why?

- 38,000 new HIV infections each year in the US
- 1 in 2 African American MSM will acquire HIV
- 17,803 with AIDS in 2017.

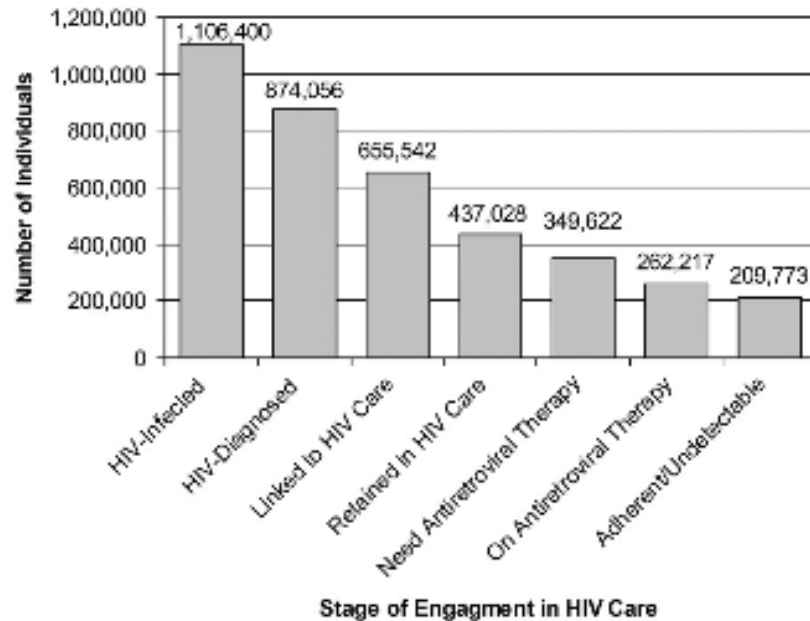
New HIV Diagnoses in the US and Dependent Areas for the Most-Affected Subpopulations, 2017



<https://www.cdc.gov/hiv/statistics/overview/ataglance.html>

HIV Treatment Cascade

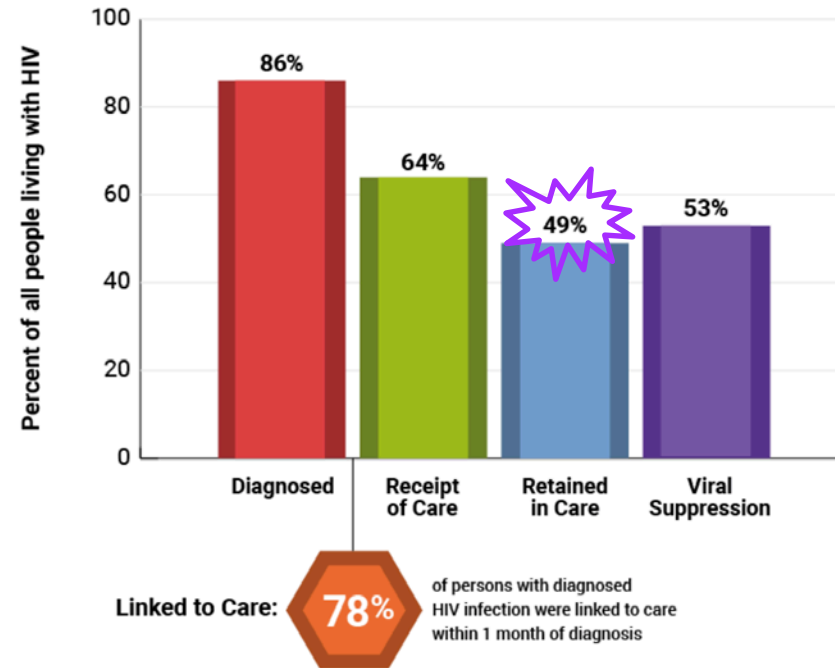
★ HIV Treatment Cascade, US 2008



Gardner, et al. CID 2011;52(6):793–800.

- Linkage= VL/CD4 within 30 days of diagnosis
- Retention= Seen 2x within 12 mo at least 3 mo apart
- **Pivotal to ending the HIV epidemic**

U.S. Prevalence-based HIV Care Continuum, 2016



<https://www.hiv.gov/federal-response/policies-issues/hiv-aids-care-continuum>

Why is Retention in Care Important?

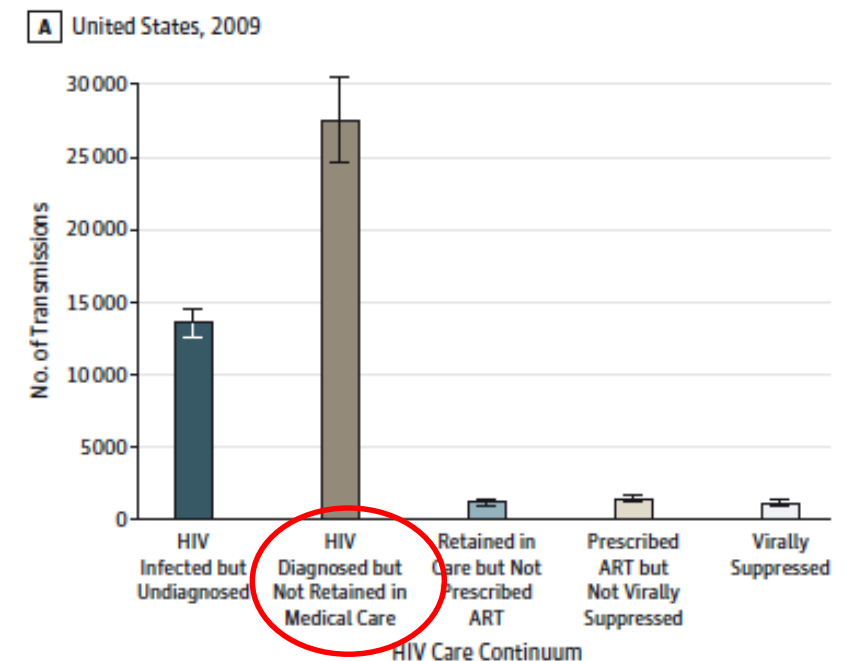
Patients:

- It is necessary for counseling, proper monitoring, and prompt delivery of ART.
- Medication persistence improves patient outcomes.
- Poor retention in care is associated with increased mortality.

Public health:

- Retention in care/ART prevents secondary transmission of HIV.

Figure 2. Estimated Number of Human Immunodeficiency Virus (HIV) Transmissions Along the HIV Care Continuum



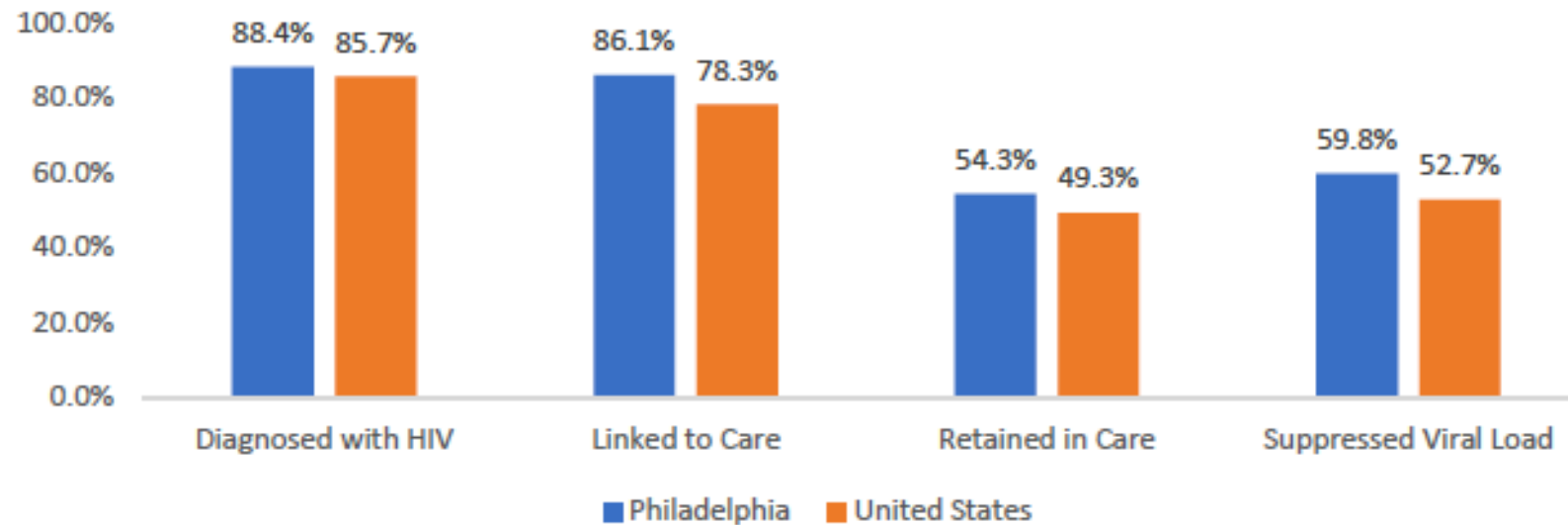
Why is Retention in Care Important?



HIV Care Continuum in Phila



Chart 3: Modified HIV Care Continuum Philadelphia vs. the United States 2018



2,395 PLWH in Philadelphia were not in care in 2018, and accounted for transmission of 35% of new infections.

Source: PDPH



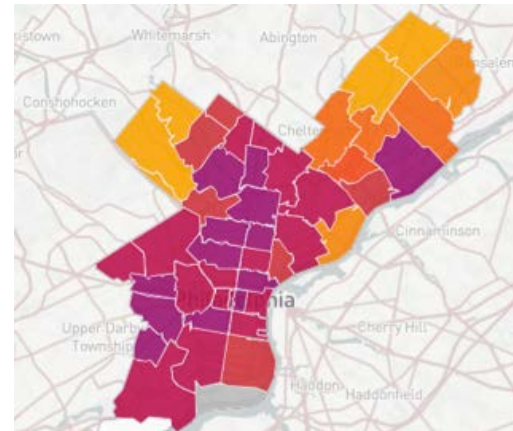
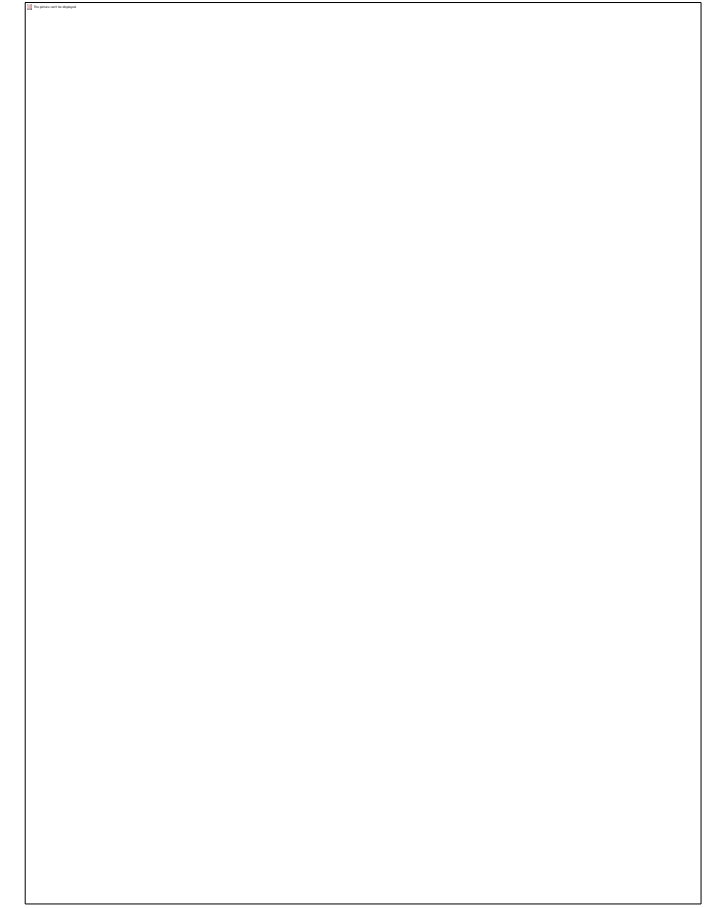
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- Provide care for 1700 patients.
- Celebrated 25th Anniversary Sept, 2018.
- 8 Providers, pharmacist, RN, nutritionist, BHS, 8 MCM's, MA's, outreach team, psychiatry, women's health...

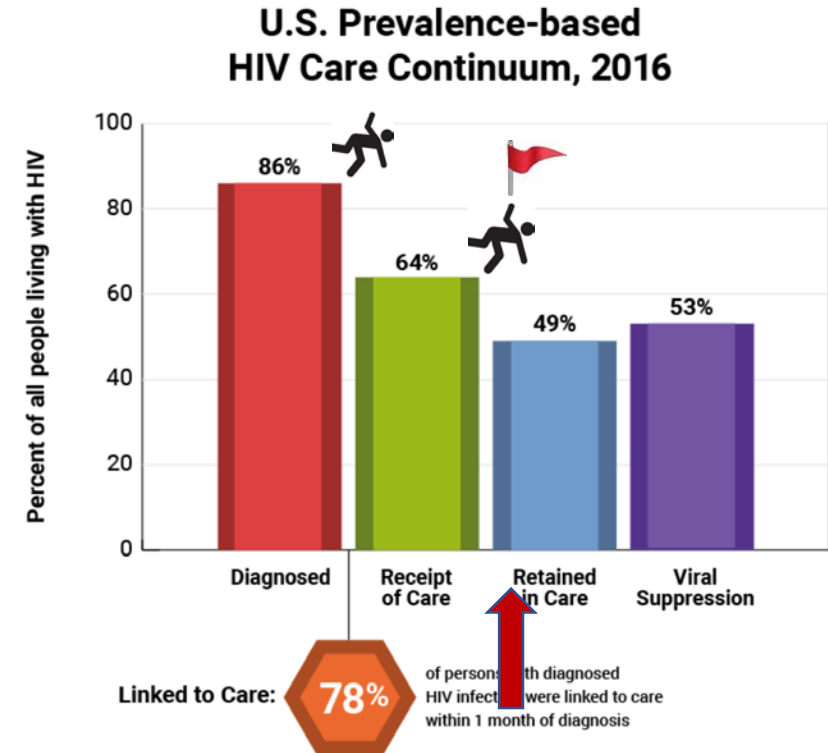




- ~ 10,000 visits/year
- ~ 3,000 “no shows”
- ~ 200 patients out of care/year
- **“No show”**= Appointment not attended, cancelled or rescheduled.
- **Out of care**= Not seen by an HIV provider in 6 months.

“No Show” Events

- “Missed visits matter.”
- **“No show” event is a red flag.**
- Passed missed visits predict future missed visits.
- Any “no show” event can be the beginning of out of care status.



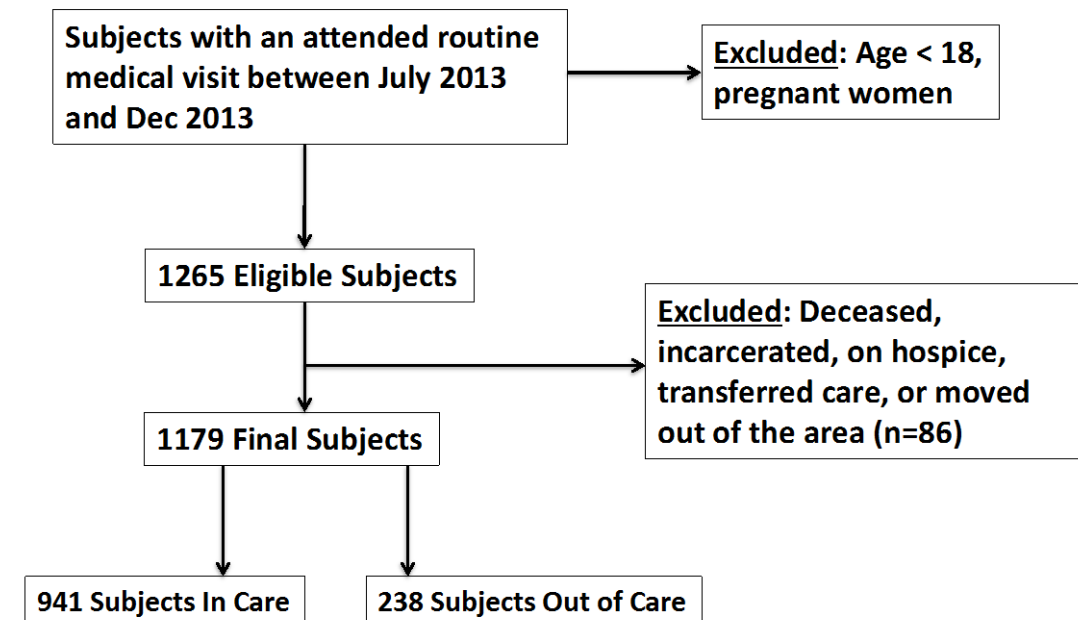
“No show” abyss

Are “No Show” Events Associated with Patients Falling Out of Care?

Methods

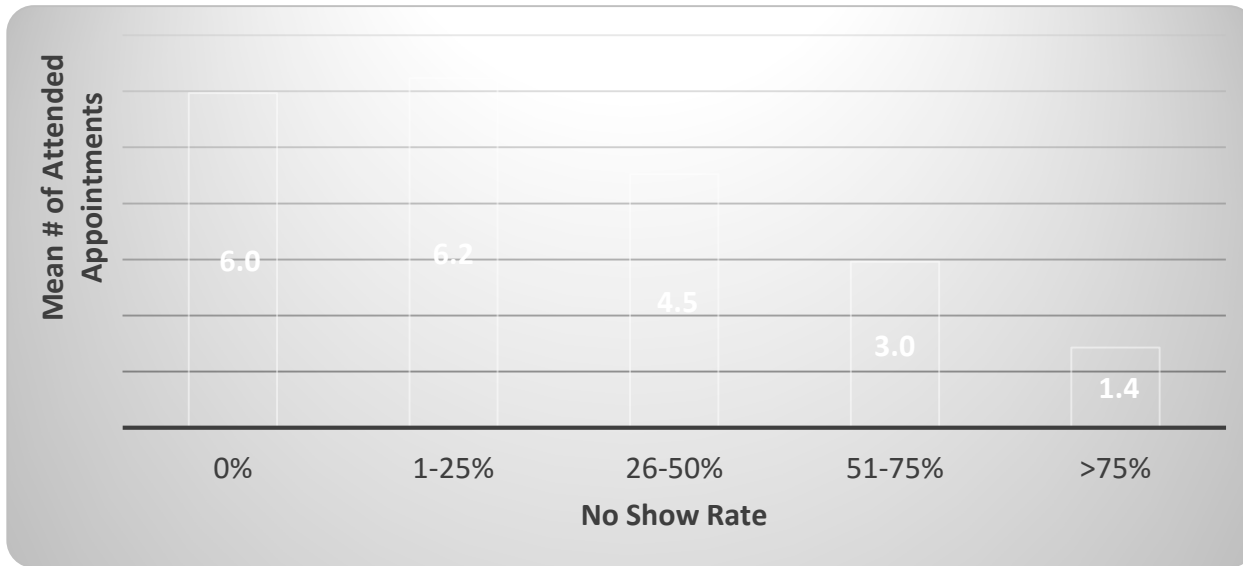
- Chart review of 1,179 patients.
- Determine predictors of:
 - **“No Show” Rate** = # no show events/
scheduled appointments
 - **Retention in care**= Attended visit 1/2015-
7/2015
 - **Viral suppression**= VL <200 copies/mL
- Appt outcomes 7/2013- 12/2014

Subject Disposition



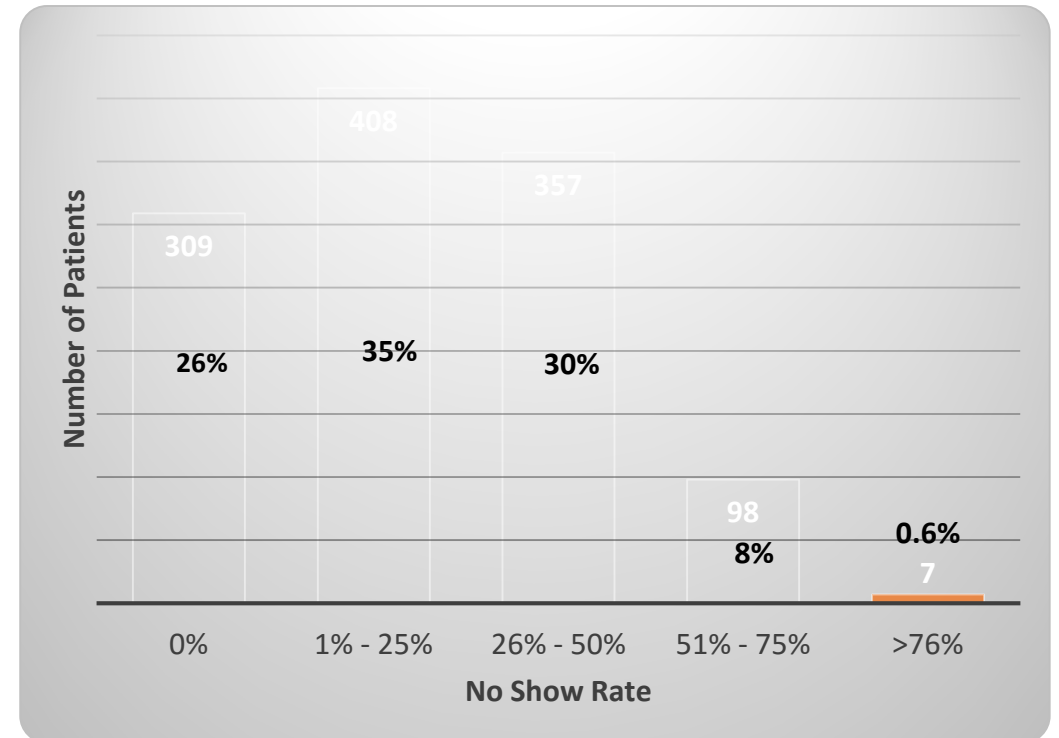
Are “No Show” Events Associated with Patients Falling Out of Care?

Mean # Attended Appointments versus NSR



Patients with higher “no show” rates attended fewer visits.

Distribution of Patients and NSR



Most patients (84%) had at least one “no show” in 18 months.

Demographic and Predicting Factors	OR	95% CI
Age	1.00	0.99 - 1.01
Male	1.85	1.52 - 2.25
Race/ethnicity	1.00	0.99 - 1.01
Insurance	1.00	0.99 - 1.01
Mental Health	1.52	1.28 - 1.81
Substance Use	1.88	1.54 - 2.30

Outcome 2: Viral Suppression	OR	95% CI
Medicine Only	1.00	0.99 - 1.01
Private Insurance	1.00	0.99 - 1.01
Insurance, No Other	1.00	0.99 - 1.01
Insurance, No Other	1.00	0.99 - 1.01
History of substance use	1.00	0.99 - 1.01
Mental health diagnosis	1.00	0.99 - 1.01
No Other Health Conditions	1.00	0.99 - 1.01
Substance in Care	1.00	0.99 - 1.01

Characteristic	Value
University of PA	827.50
University of PA	827.50
History of Substance Use	315.2675
Mental Health Diagnosis	648.17625
Average CD4 count (cells)	413.8152525
Viral Suppression	997.88425

ographics



- 66% male
- 78% African-American
- 84% stably housed
- 73% public insurance
- 56% mental health diagnosis
- 27% substance use disorder

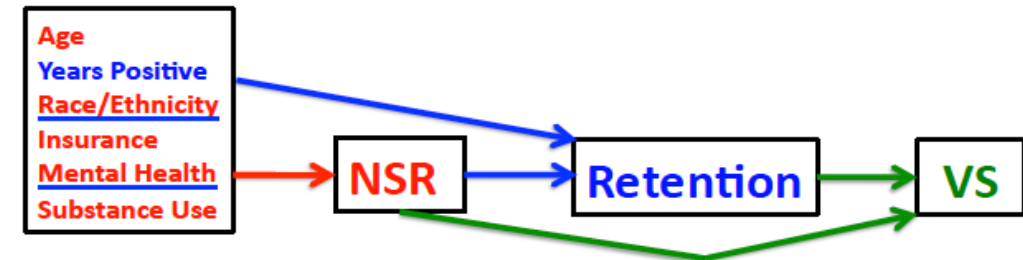


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Multivariate Analysis

Independent Variables	Outcome 1: No Show Rate			Outcome 2: Retention in Care			Outcome 3: Viral Suppression		
	B	p	CI	OR	p	CI	OR	p	CI
Age	-0.4	<0.001	(-0.596) - (-0.204)	1.013	0.1	0.997 - 1.029	1.008	0.412	0.990 - 1.026
Years with HIV diagnosis	-0.1	0.259	(-0.296) - 0.096	1.036	0.003	1.012 - 1.06	0.995	0.719	0.970 - 1.021
Gender									
Male (ref)	-	-	-	-	-	-	-	-	-
Female	-0.2	0.845	(-2.552) - 2.152	1.227	0.251	0.866 - 1.74	0.867	0.457	0.597 - 1.262
Race/Ethnicity									
Non-Hispanic Black (ref)	-	-	-	-	-	-	-	-	-
Non-Hispanic White	-6.1	0.001	(-9.628) - (-2.572)	0.47	0.001	0.295 - 0.749	1.747	0.106	0.887 - 3.442
Hispanic	-2	0.348	(-6.116) - 2.116	0.533	0.021	0.313 - 0.909	1.868	0.1	0.887 - 3.935
Insurance									
Medicare (ref)	-	-	-	-	-	-	-	0.147	-
Medicaid	1.4	0.288	(-1.344) - 4.144	1.021	0.915	0.700 - 1.491	0.686	0.074	0.454 - 1.037
Private insurance	-4.6	0.014	(-8.324) - (-0.876)	1.383	0.234	0.811 - 2.356	1.106	0.762	0.574 - 2.133
Uninsured, SPBP	-0.5	0.821	(-5.204) - 4.204	1.055	0.867	0.565 - 1.972	1.489	0.355	0.641 - 3.458
Uninsured, No SPBP	4.7	0.135	(-1.572) - 10.972	0.826	0.631	0.379 - 1.799	1.151	0.779	0.432 - 3.068
History of substance use	7.4	<0.001	4.852 - 9.948	1.336	0.141	0.908 - 1.966	1.318	0.192	0.87 to 1.997
Mental health diagnosis	2.5	0.038	0.148 - 4.852	1.614	0.005	1.159 - 2.248	0.783	0.208	0.534 - 1.147
No Show Rate (%)	x	x	x	0.976	<0.001	0.968 - 0.984	0.969	<0.001	0.96 - 0.978
Retention in Care	x	x	x	x	x	x	1.563	0.037	1.028 - 2.378

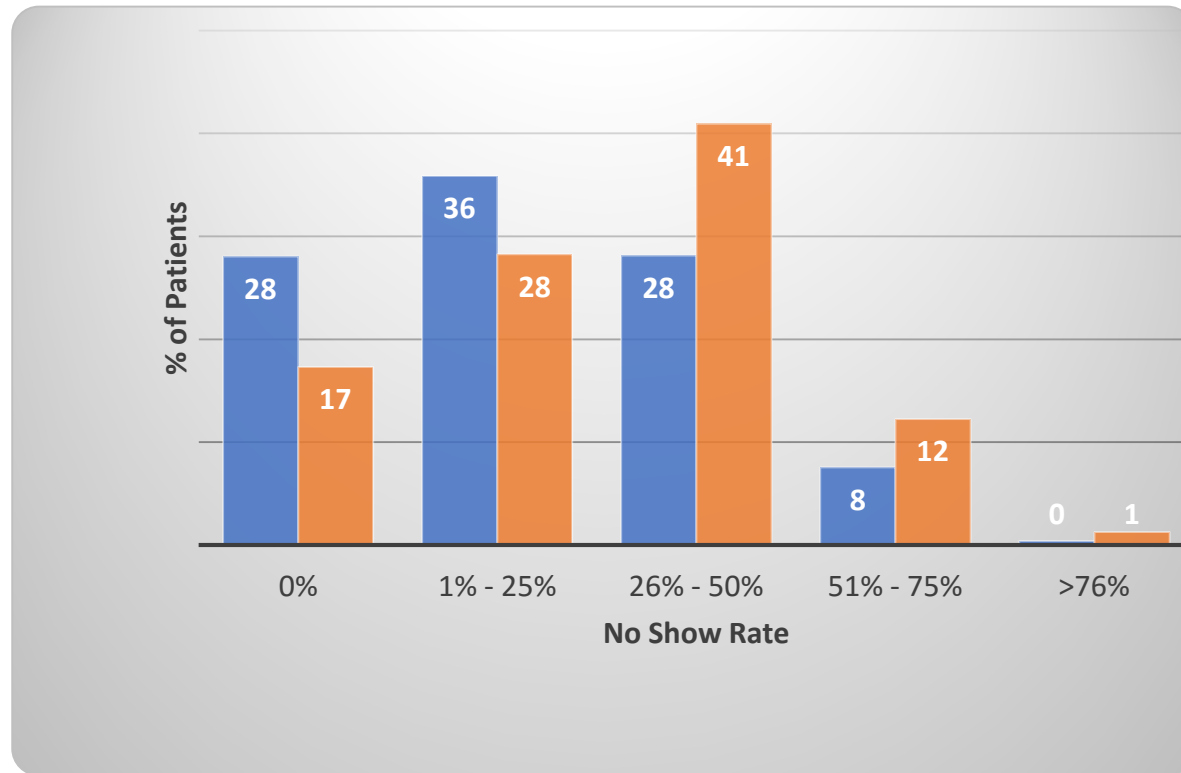
Demographics and Predisposing Factors:



Higher NSR was a strong and independent predictor of *not* being retained in care. Only a lower NSR and retention in care increased the odds of achieving viral suppression.

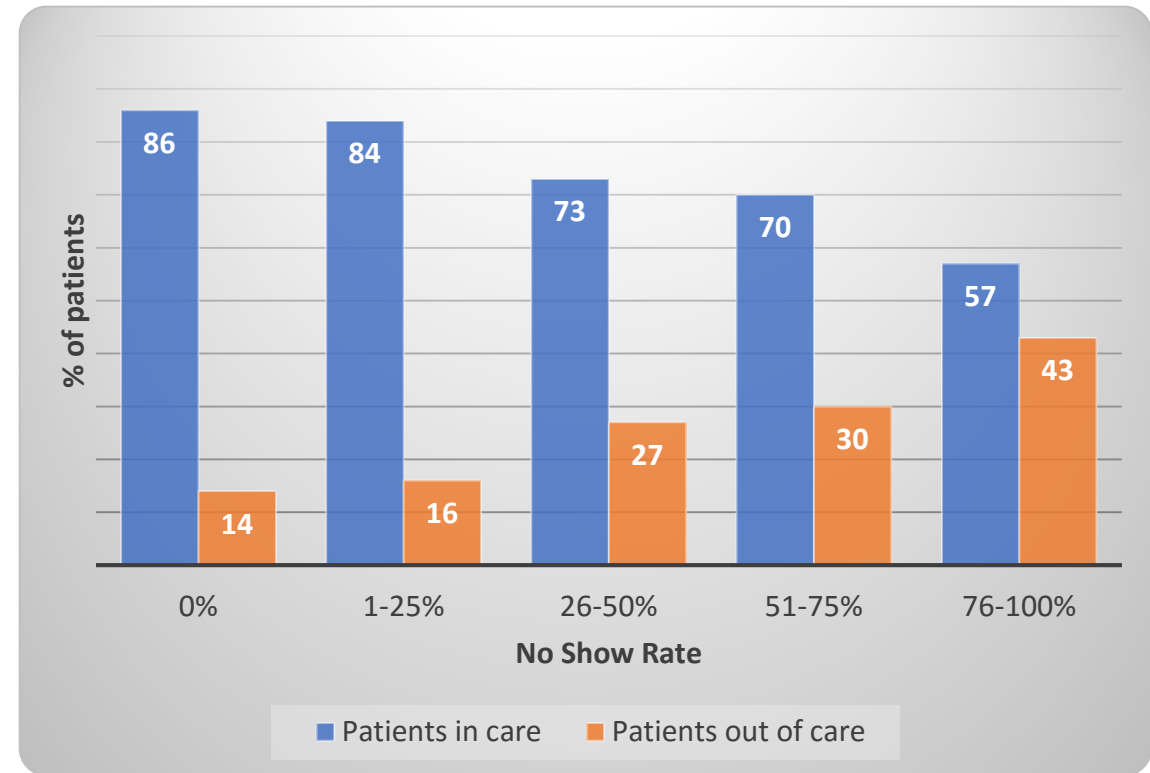
Are “No Show” Events Associated with Patients Falling Out of Care?

Distribution of Patients Retained vs. Lost to Care over NSR's



Of patients retained in care (blue), 92% had a NSR of \leq 50%.

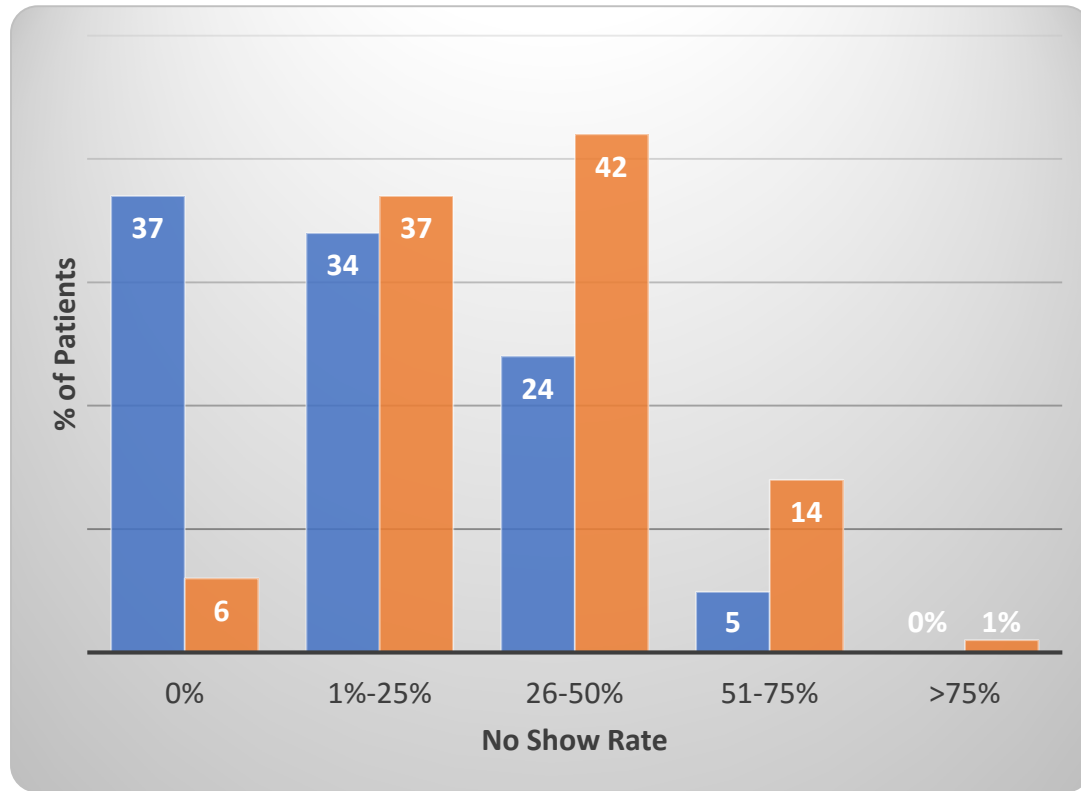
Likelihood of Patients Retained vs. Lost to Care by NSR



As NSR increases, the likelihood of being retained in care decreases.

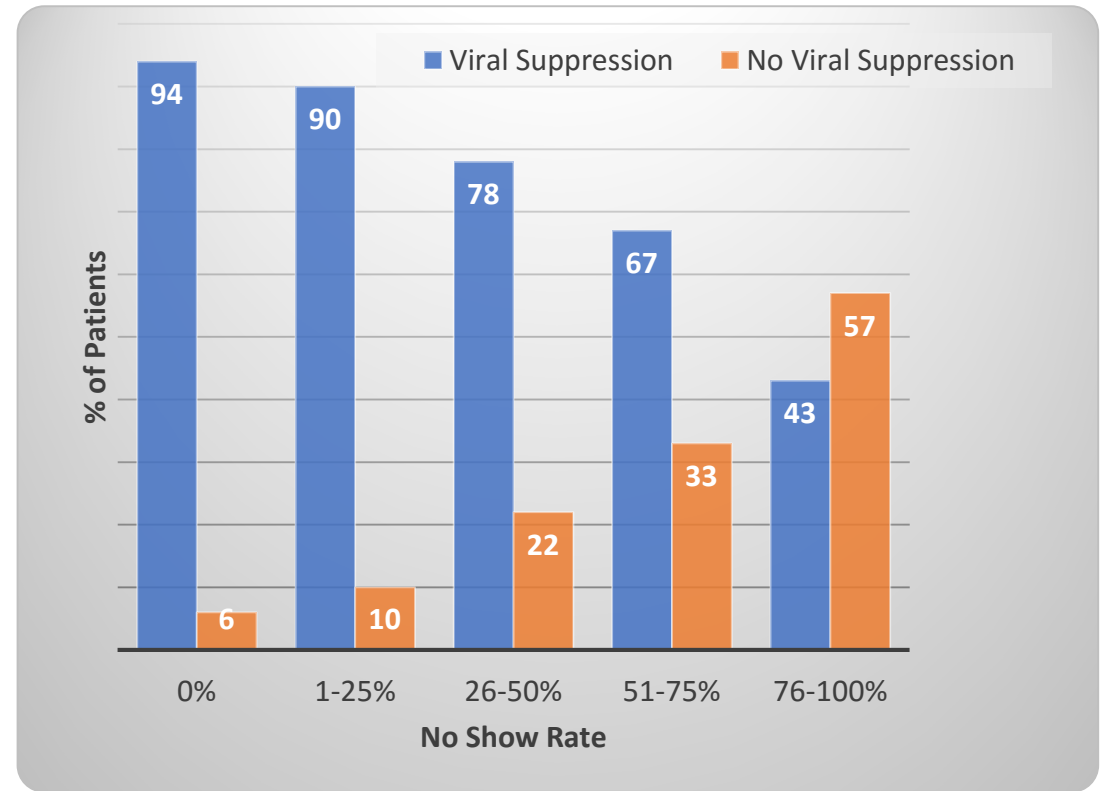
Are “No Show” Events Associated with Viral Suppression?

Distribution of Patients with vs. without VS over NSR's



Of patients with viral suppression, 71% had NSR \leq 25%.

Likelihood of Patients with vs. without VS by NSR



As NSR increases, the likelihood of VS decreases.

Are “No Show” Events Associated with Viral Suppression?



Higher “No Show” Rates Are Associated with Lower Rates of Retention in Care and Viral Suppression

Althoff, A., MD, Dwyer, M., Class of 2020, Chew, V., Class of 2019, Wilson, A., MPH, Gracely, E., PhD
Drexel University School of Medicine, Philadelphia, PA



- *Presented at ID Week 2018*
- *Manuscript in preparation*

Now what??

ANSWER:

Addressing “No Shows” with an Effort to Retain



- Goals:
 - Identify patients who “no show.”
 - Determine possible barriers.
 - Reschedule visits in a timely manner.
 - Prevent patients from falling out of care.



ANSWER: Outreach Protocol

- **Outreach workers: Rhonda Ferguson and Taneesa Franks**
- Generate *daily* a list of “no shows” from preceding day.
- Attempt to contact all patients who “no show” *within 24 hours* of their missed appointment.
- Record call outcomes and barriers to care.
- **Make new appt to be seen within 2-4 weeks.**
- Document appointment outcome.
- Records efforts in patient chart if patient is unreachable after 3 attempts and patient has not been seen in 3 months or more.



ANSWER: Outreach Protocol

• Call Outcomes:

- S (Spoke to patient)
- VM (Left voicemail)
- FM (Left message with family)
- NVM (No answer and no voicemail available)
- NIS (Number not in service)
- WN (Wrong number)
- NC (No call- patient rescheduled)



• Barriers:

- F (Forgot)
- U (Unaware of appointment)
- T (Transportation)
- W (Work conflict)
- A (Appointment conflict)
- S (Sick)
- C (Childcare)
- W (Weather)
- H (Hospitalized)
- O (Other)
- N (Not obtained)
- NA (Not applicable)



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ANSWER: Protocol



- Once barrier is identified provide referral if needed.
 - Task Provider for high risk patients
 - Arrange transportation call Logisticare 1-877-835-7412
 - Task Eligibility Specialist for insurance issues
 - Task Case Management, if patient needs to be connected
 - Task Behavioral Health Consultant as needed

ANSWER: Next Steps

- Protocol initiated 2/2018 and current.
- Analyzing demographics of patients who “no show.”
- Evaluating the relationships among patient characteristics, NSR, retention in care, and viral suppression.



- **Compare ANSWER intervention group to historical controls:**
 - “No show” rate for historical controls versus ANSWER group.
 - Mean time interval between “no show” events and *attended visits* for controls versus ANSWER group.
 - Frequency of visits between historical controls and ANSWER group.
 - Retention in care for historical controls versus ANSWER group a) overall, and b) as a function of demographics and “no show” rate.
 - Viral suppression rate for historical controls versus ANSWER group a) overall, and b) as a function of demographics, “no show” rate, and retention.

ANSWER: Subject Disposition



- Inclusion criteria: Patients with at least one attended routine medical scheduled visit with an HIV provider between September, 2017 and February, 2018.
- Exclusion criteria:
 - Age < 18, pregnant women
 - Patient with only "Urgent" visits during inclusion period.
 - Patients found to be deceased, incarcerated, transferred care, or moved away.
- Primary Outcome: Retention in Care defined as an attended appointment between March, 2019 and August, 2019.

ANSWER: Preliminary Data

- # Patients included= 1,344
- March, 2018 - February, 2019 (12months)
 - “No show” events= 3,559
 - Phone calls= >4,000
 - New appointments= >3,000
 - Attended= 1,591
 - “No show”= 1,299



ANSWER: Table 1

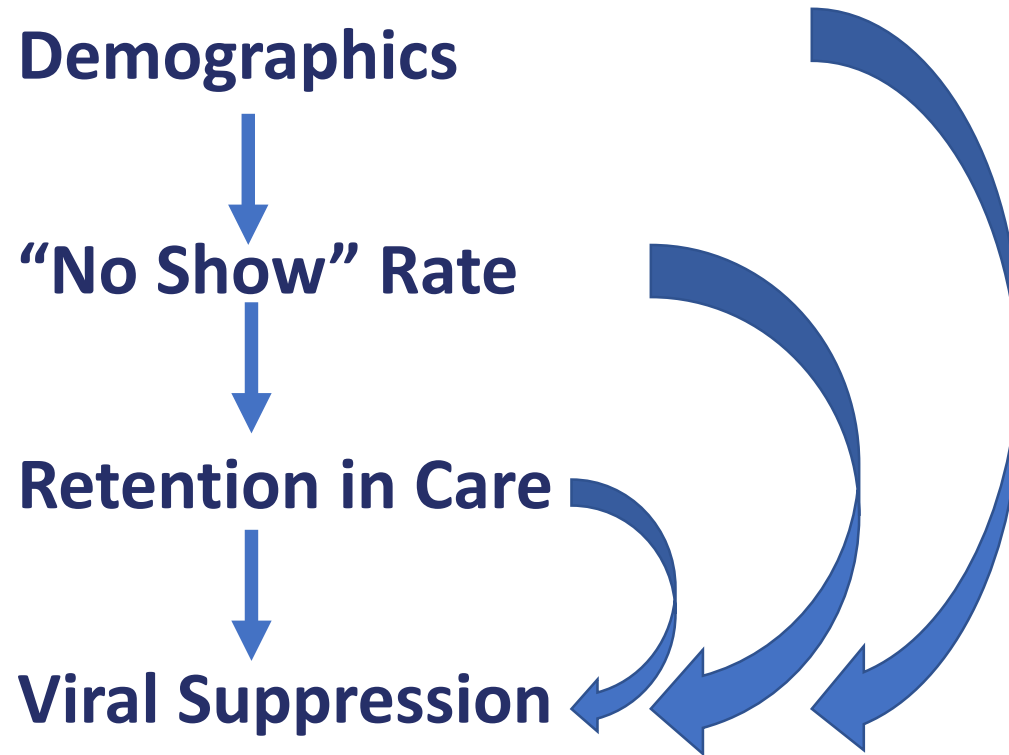
Awaiting data for:

Years with HIV
Mental health
Substance use

Address missing data.

Mean age, years (SD)	47 (12.5)
HIV Risk Factor	
Heterosexual	603
MSM	525
IDU	168
MSM and IDU	29
Perinatal	11
Other	8
Gender	
Male	909
Female	420
Transgender, male to female	15
Race/Ethnicity	
Non Hispanic Black	1050
Non Hispanic White	174
Hispanic	105
Other	15
Housing	
Stable or Permanent	1100
Temporary	60
Unstable	123
Insurance	
Medicare	310
Medicaid	669
Private	329
Uninsured	31
CD4 Count	
>/ 200	1233
< 200	92
Viral Suppression	
<200 copies/mL	974
>/ 200 copies/mL	364

ANSWER: Study Outcomes



ANSWER: Amidst COVID... Telemedicine



- Significantly fewer “no show” events.
- Re-engaging patients who were lost to care.

Barriers



SHAME

Mental health

Homelessness

POVERTY

RACISM

Substance use

Trauma

Recidivism

Stigma

Discrimination



Thank you!

Acknowledgements



- Rhonda Ferguson, Outreach Specialist
- Taneess Franks, Patient Navigator
- Justin Shilling, Data Manager
- Akshata Yalvigi, MPH, Drexel Dorsife Class of 2019
- Zsofia Szep, M.D., Medical Director, Outreach Co-Director
- Our patients



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