

**Patient Satisfaction:
An Innovative Method for Improving
Adherence to HIV Care**

Bich Dang, MD

Background

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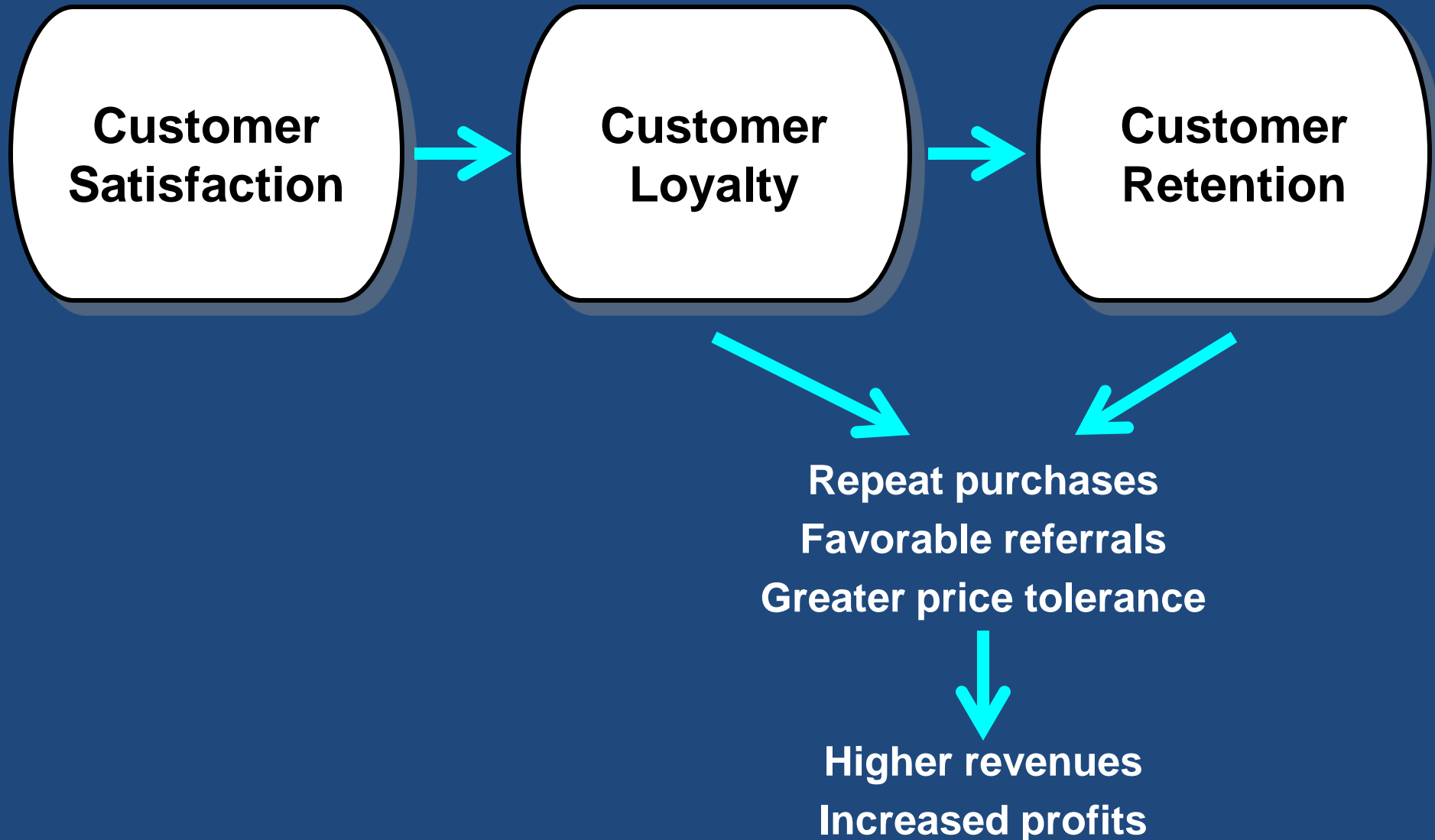
- **Poor retention in HIV care and suboptimal adherence to HAART represent major challenges to maximizing the benefit of effective HIV treatment.**
- **Analogous to the business model of customer satisfaction, patient satisfaction could serve as an innovative focus for increasing retention & adherence**

HAART = highly active antiretroviral therapy

What is Customer Satisfaction?

- The customer's evaluation of a particular purchase
- To what extent did the purchase (product or service) provide what the customer was looking for?

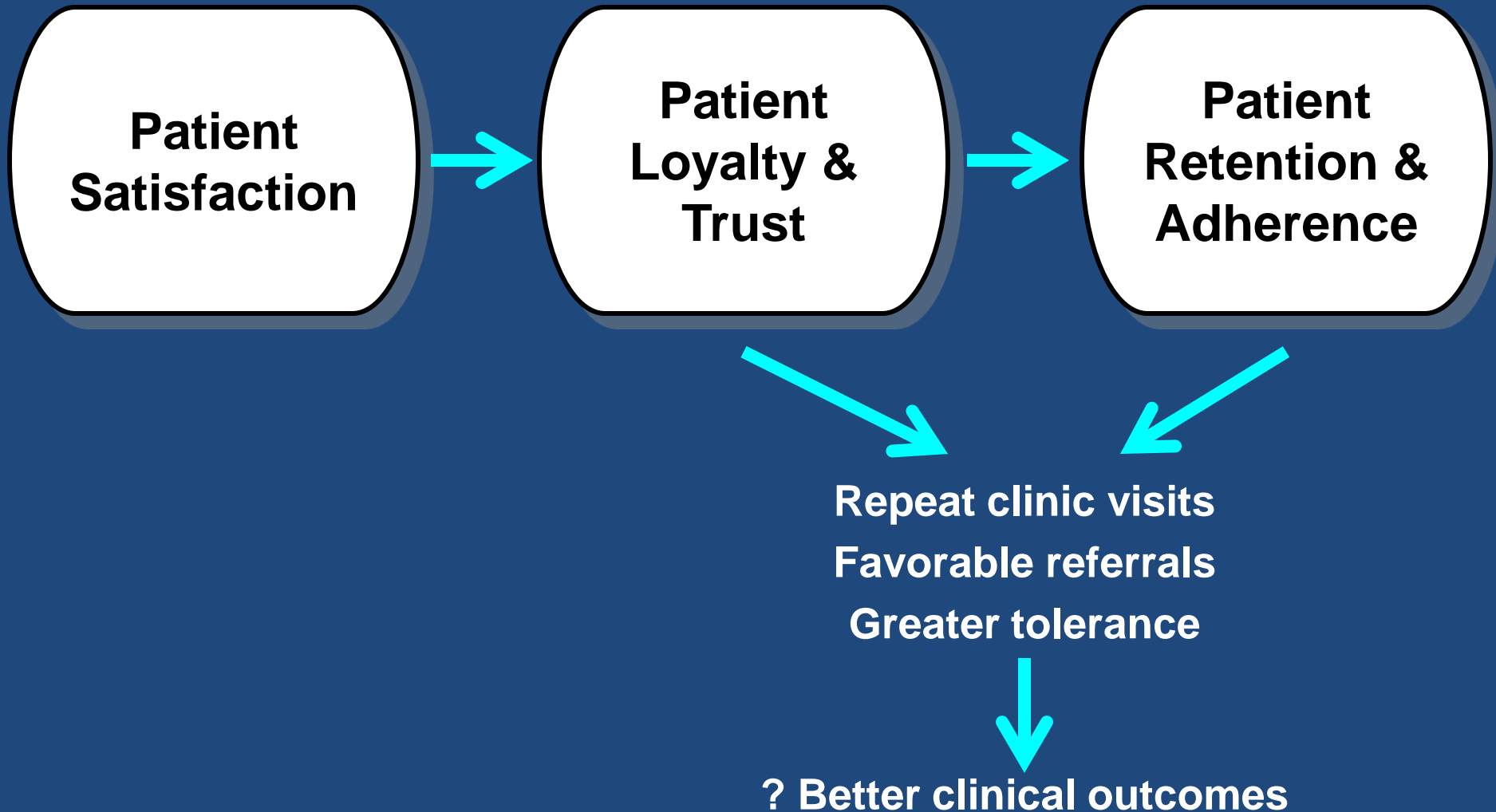
Effects of Customer Satisfaction



What is Patient Satisfaction?

- **Patient's evaluation of a particular health care service received**
- **To what extent did the health care service provide what the patient was looking for?**

Effects of Patient Satisfaction



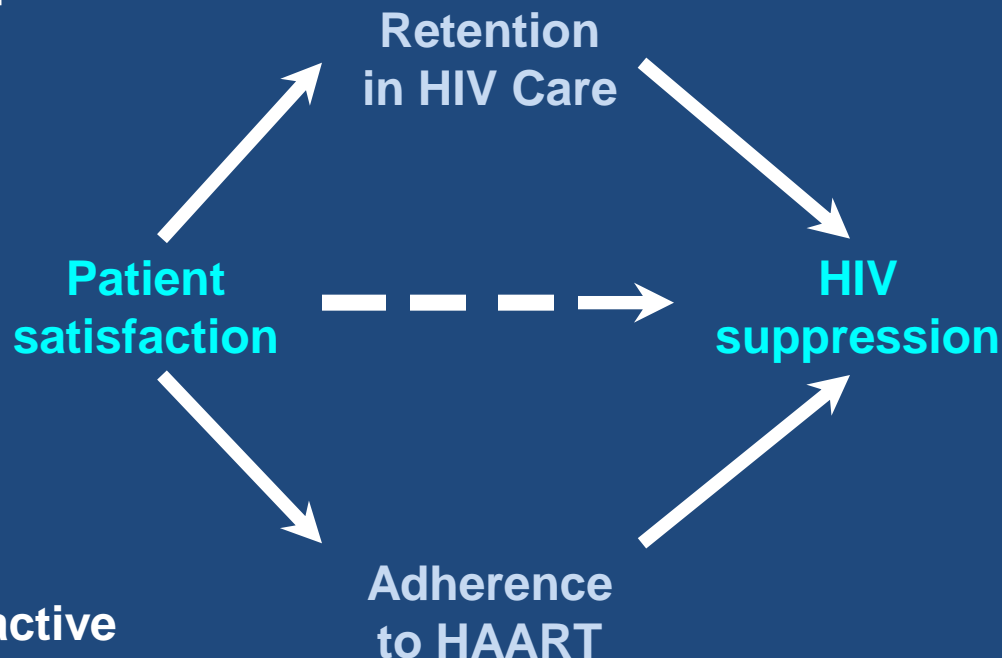
Objective

- To test, through structural equations modeling, a model of HIV suppression in which patient satisfaction influences HIV suppression indirectly through retention in HIV care & adherence to HAART



Hypothesis

- We hypothesized that patient satisfaction positively impacts retention in HIV care and adherence to HAART, which in turn impact HIV suppression



HAART = highly active antiretroviral therapy

Methods

Methods

- **Design & Setting**
 - **Cross-sectional study**
 - **Adults receiving outpatient HIV primary care at:**
 - **Thomas Street Health Center**
 - **DeBakey Veterans Affairs Medical Center**
 - **January to April 2011**

Methods

- **Participants**

- Patients were approached systematically based on check-in times.
- 489 patients (94% of eligible patients) completed a survey while waiting for their provider appointments.

Methods

- Overall Patient Satisfaction

Would you recommend this clinic to other patients with HIV?

Definitely No Probably No Not sure Probably Yes Definitely Yes

Overall, how do you feel about the care you got at this clinic in the past 12 months?

Completely dissatisfied Mostly dissatisfied Somewhat dissatisfied Mixed feelings Somewhat satisfied Mostly satisfied Completely satisfied

CAHPS clinician & group survey, adult primary care instrument. CAHPS clinician & group survey and reporting kit. Rockville MD: Agency for Healthcare Research and Quality. Andrews FM, Crandall R. The validity of measures of self-reported well-being. Social Indicators Research, 1976; 3: 1-19.

Methods

- Adherence to HAART

1. Many patients find it hard to take HIV medicines as their doctor prescribes them.

In the past 4 weeks, how would you rate your ability to take all your HIV medicines as your doctor prescribed?

Very poor

Poor

Fair

Good

Very good

Excellent

Methods

- **Retention in HIV care**
 - **Visit constancy**
 - # of quarters with at least 1 HIV PCP visit
 - **Dichotomous measure** (adequate vs inadequate)
 - **Adequate retention**
 - 3 or 4 quarters with a visit
 - 2 quarters with a visit & HIV VL <48
 - 2 quarters with a visit & CD4 > 500 & not yet on HAART

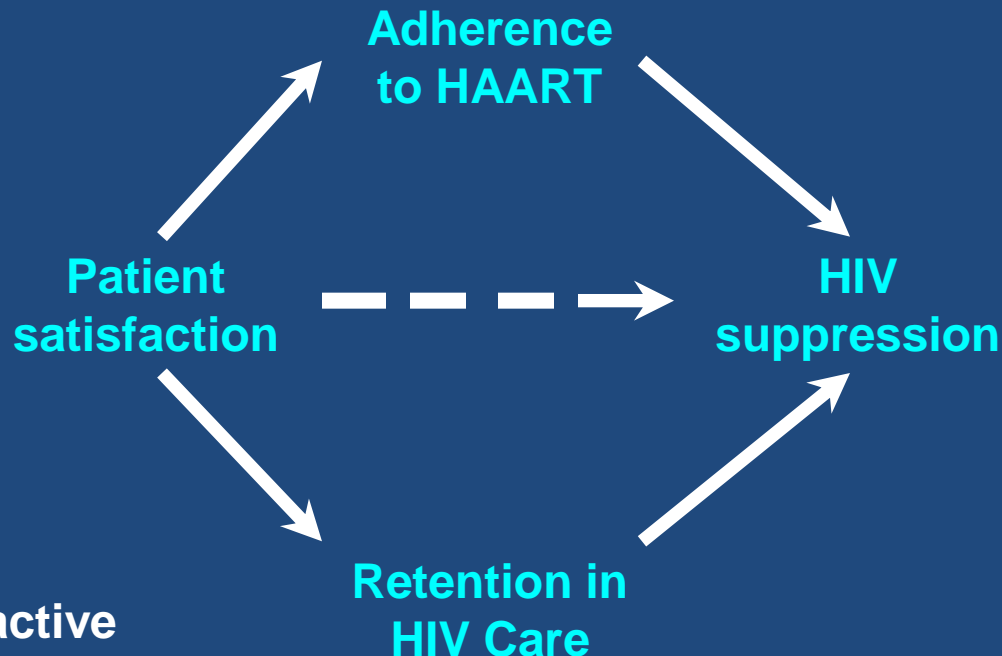
PCP = primary care provider (e.g. doctor, nurse practitioner or physician assistant)

Methods

- **Suppression of HIV replication**
 - HIV RNA < 48 copies
 - Value closest to date of survey completion, ± 30 days

Methods

- **Structural equations modeling**
 - Examined hypothesized relationships
 - Software: AMOS 19.0 (SPSS)



HAART = highly active antiretroviral therapy

Methods

- **Spearman's partial correlation**
 - Calculated for all measures in SEM by controlling for age, race, ethnicity, depression and health status
 - Correlation matrix used as input for the structural model estimation

Results

Table 1. Baseline characteristics of participants at Thomas Street Health Center and the Michael E DeBakey VA Medical Center in Houston, Texas (N=489)

Characteristics	
Age, years – mean (\pm SD)	48 (\pm 11)
Gender – (%)	
Male	71
Female	29
Race ethnicity – (%)	
Non-Hispanic black	61
Non-Hispanic white	15
Hispanic	21
Other	3
Language preference – (%)	
English	90
Spanish	10
Survey mode – (%)	
Self-administered	85
Interviewer-administered	15
Education – (%)	
Some high school or less	22
High school graduate or equivalent	35
Some college or higher	43
Relationship status – (%)	
Married	14
In a relationship and not married	14
Single	71

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Health status – (%)	
Poor/fair	20
Good/very good	65
Excellent	15
HIV risk factor – (%)	
IVDA	16
MSM, no IVDA	33
Heterosexual sex, no IVDA	50
Transfusion	<1
Prescribed HAART – (%)	94
Duration enrolled in clinic, years – mean (±SD)	7.6 (±4.5)
CD4 count ^a – median (25 th , 75 th percentiles)	449 (276, 665)
HIV RNA < 48 copies ^a – (%)	70

SD indicates standard deviation; IVDA intravenous drug abuse;

MSM, men who have sex with men;

HAART, highly active antiretroviral therapy

^a Value closest to date of survey completion, ± 30 days; CD4 and

HIV RNA values available for 85% and 84% of participants, respectively

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Results

- **Constructs**

- **Overall patient satisfaction (scale 0 to 10)**

- Mean 8.5

- Median 9.2

- **Adherence to HAART**

- 46% excellent, 28% very good, 16% good, 6% fair, 4% poor or very poor

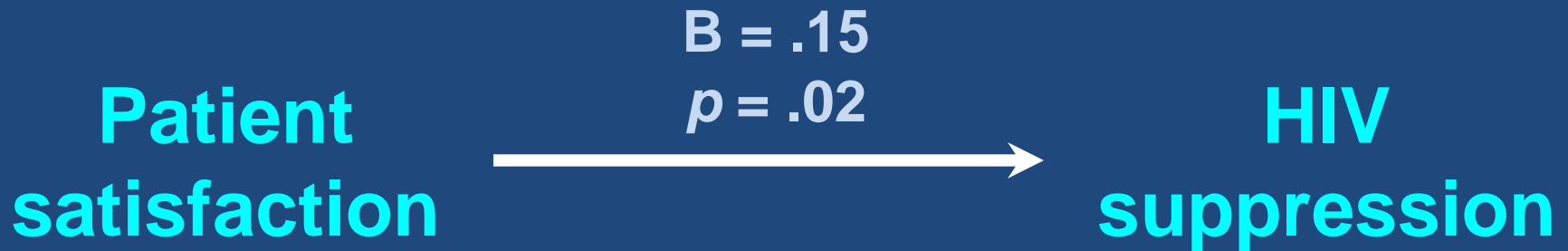
- **Retention in HIV care**

- 76% adequate

- **HIV suppression**

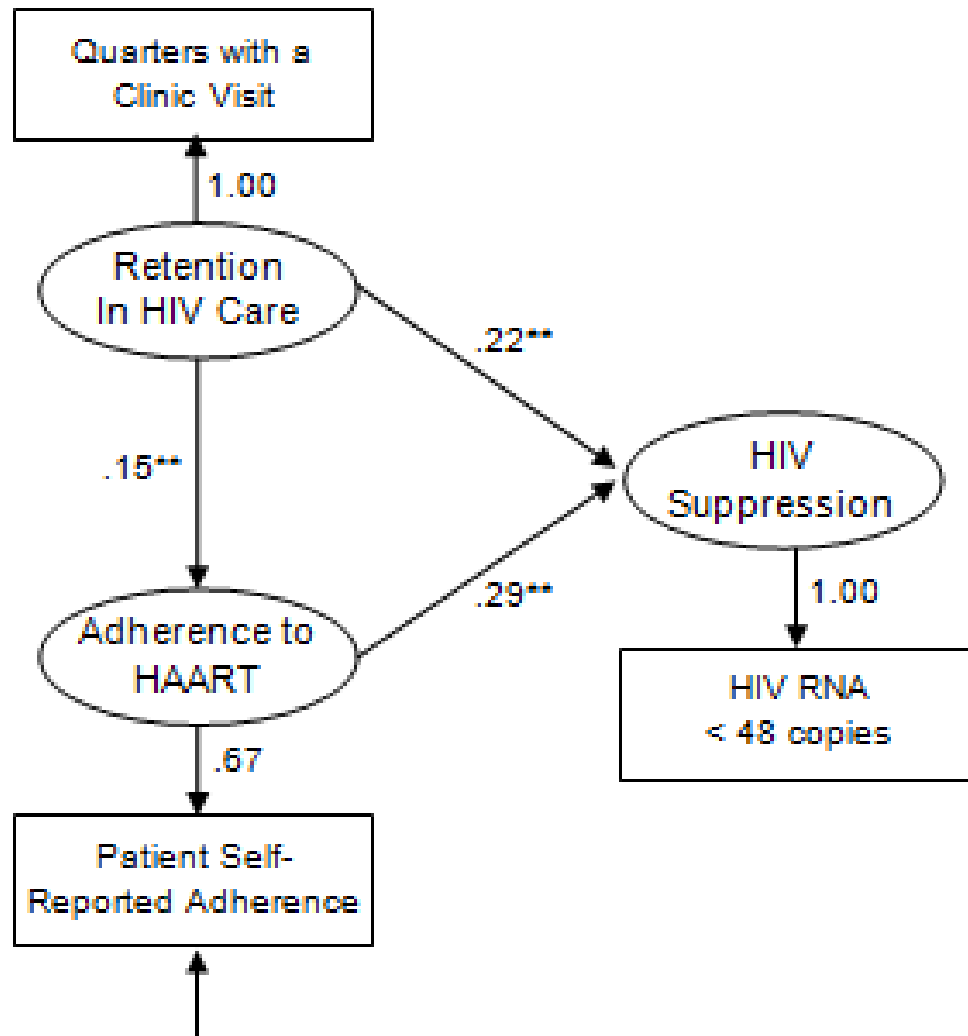
- 70% undetectable

Beginning Model



* Controlled for age, race, ethnicity, depression, and health status

Baseline Model of Retention in HIV Care, Adherence to HAART and HIV Suppression (N=489)

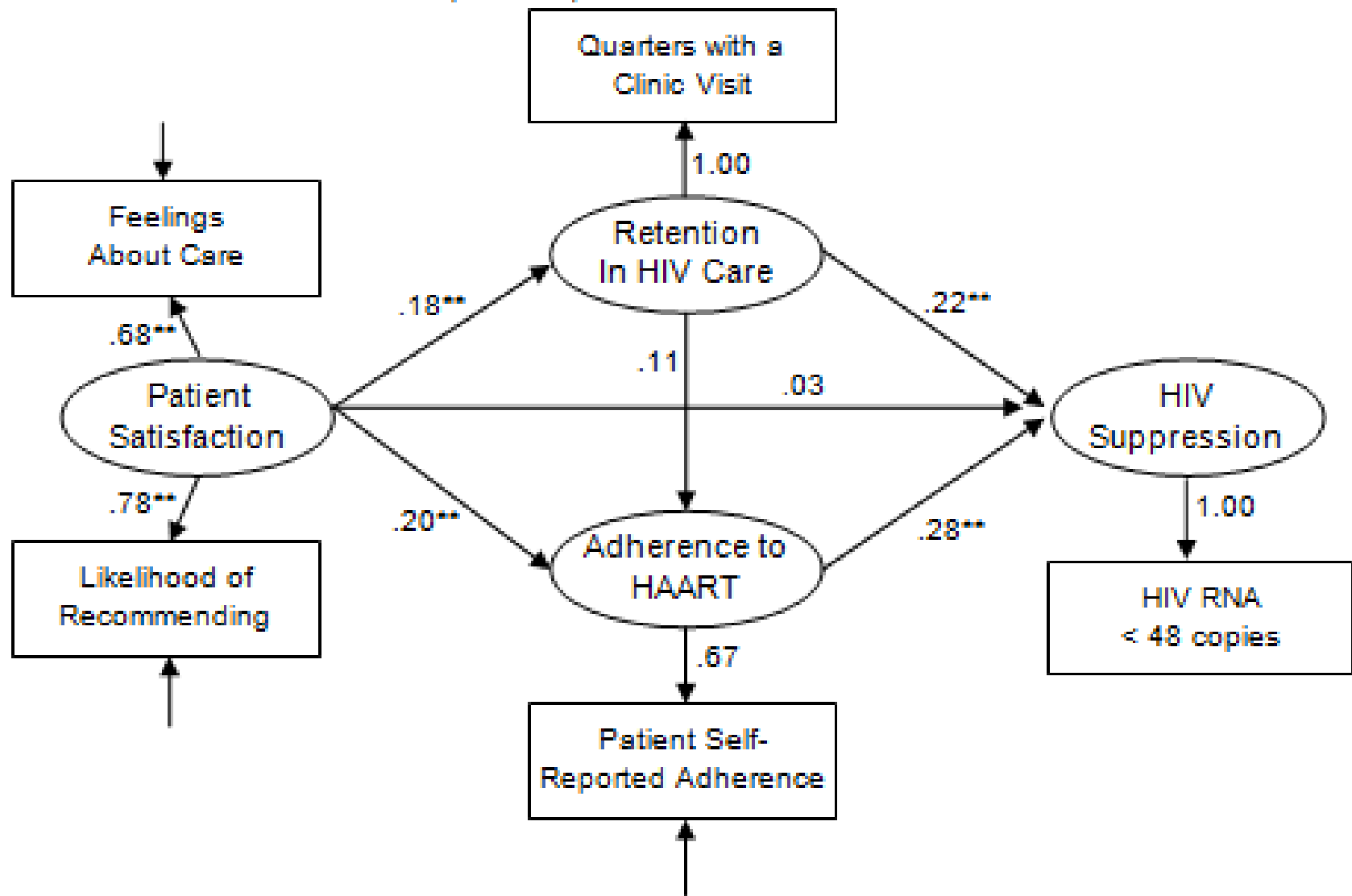


Values represent standardized coefficients

* Significant at .05 level

** Significant at .00 level

Patient Satisfaction Model (N=489)



Values represent standardized coefficients

* Significant at .05 level

** Significant at .00 level

Limitations

- **Cross-sectional study**
- **Participants enrolled in care at the VA & a public clinic → findings may not be generalizable to other populations**
- **Selection bias**
- **Model's explanatory power is limited by its included constructs**

Conclusions

- **Patient satisfaction may have direct effects on retention and adherence**
- **Interventions to improve the care experience, without necessarily targeting specific clinical performance measures, could serve as an innovative method for optimizing HIV outcomes.**

Thank you

Acknowledgement

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 - Thomas Giordano, MD, MPH
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 - Hina Budhwani, MPH
- **Research Assistants**
 - Tanisha Darko
 - Teal de la Garza
- **Spanish Translation**
 - Marisela Weaver
 - Teal de la Garza

Extra Slides

Method

- **Inclusion criteria**
 - 18 years or older
 - had ≥ 1 HIV primary care visit in the past year
 - had an “index” visit at least 1 year prior
- **Exclusion criteria**
 - incarceration > 30 days in the past year
 - mental or physical inability to complete survey
 - inability to do survey in English or Spanish