Growing Older with the Epidemic: HIV and Aging

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Gay Men's Health Crisis

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Ryan White All Grantees Meeting
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Disclosure

- **I have no financial interest or relationships to disclose.**
- HRSA Education Committee Disclosures
  - HRSA Education Committee staff have no financial interest or relationships to disclose.
- **CME Staff Disclosures**
  - Professional Education Services Group have no financial interest or relationships to disclose

Learning Objectives

By the end of the session, participants will be able to:

1. List how HIV affects older adults in the United States. This will included a presentation about the epidemiology of HIV among older adults and the effect of HIV on aging bodies.

2. Summarize the gaps within policy and existing systems of care for people living with HIV that older adults will face.

3. Identify changes in existing policy and systems of care that if taken would improve health outcomes of older adults living with HIV.

HIV & aging

- I. Epidemiology
- II. Senior services and healthcare
- III. Integrating and prioritizing HIV and “non HIV” care in the cART era
- IV. Policy recommendations

Living longer

- **In 1980s and early 90s, HIV was widely viewed, experienced as a death sentence.**

- Burgeoning population of HIV+ older adults over 50
  - 1/3 of HIV+ persons now over 50 nationally
  - Will be over ½ by 2015

- **People are living longer due to antiretrovirals (ARVs)**
  - Development of comorbidities, a natural part of aging
  - Few answers to critical research questions
    - Interaction of HIV & diseases common among elders
    - Interaction of HIV meds & meds for other critical conditions

I. Epidemiology: Prevalence and incidence

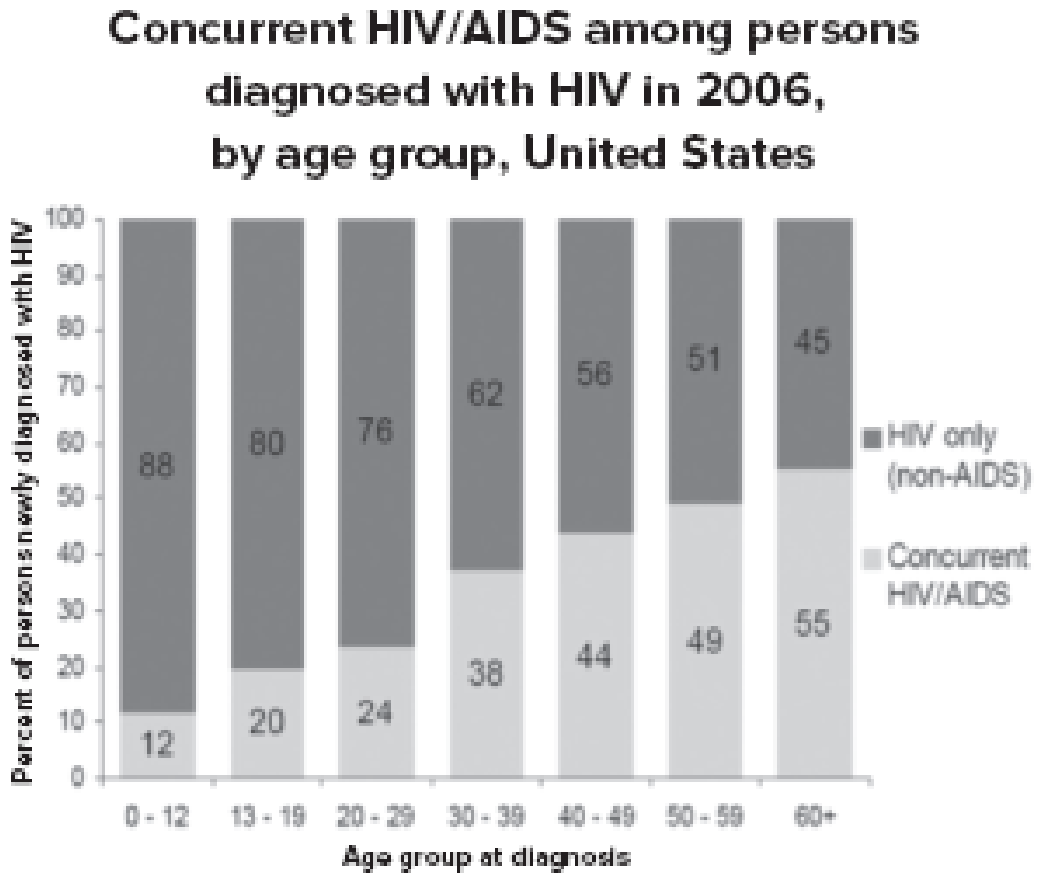
- 28%: PLWHA in the US were 50+ in 2007
- In 2005, persons aged 50+ accounted for:
  - 16% of new HIV diagnoses
  - 19% of all AIDS diagnoses
- 65%: PLWHA in US are 40+

- About half of 50+ people diagnosed with HIV also have AIDS

- Dual diagnoses increase with age (most of 30-somethings newly diagnosed don't have AIDS, most of 60-somethings do)

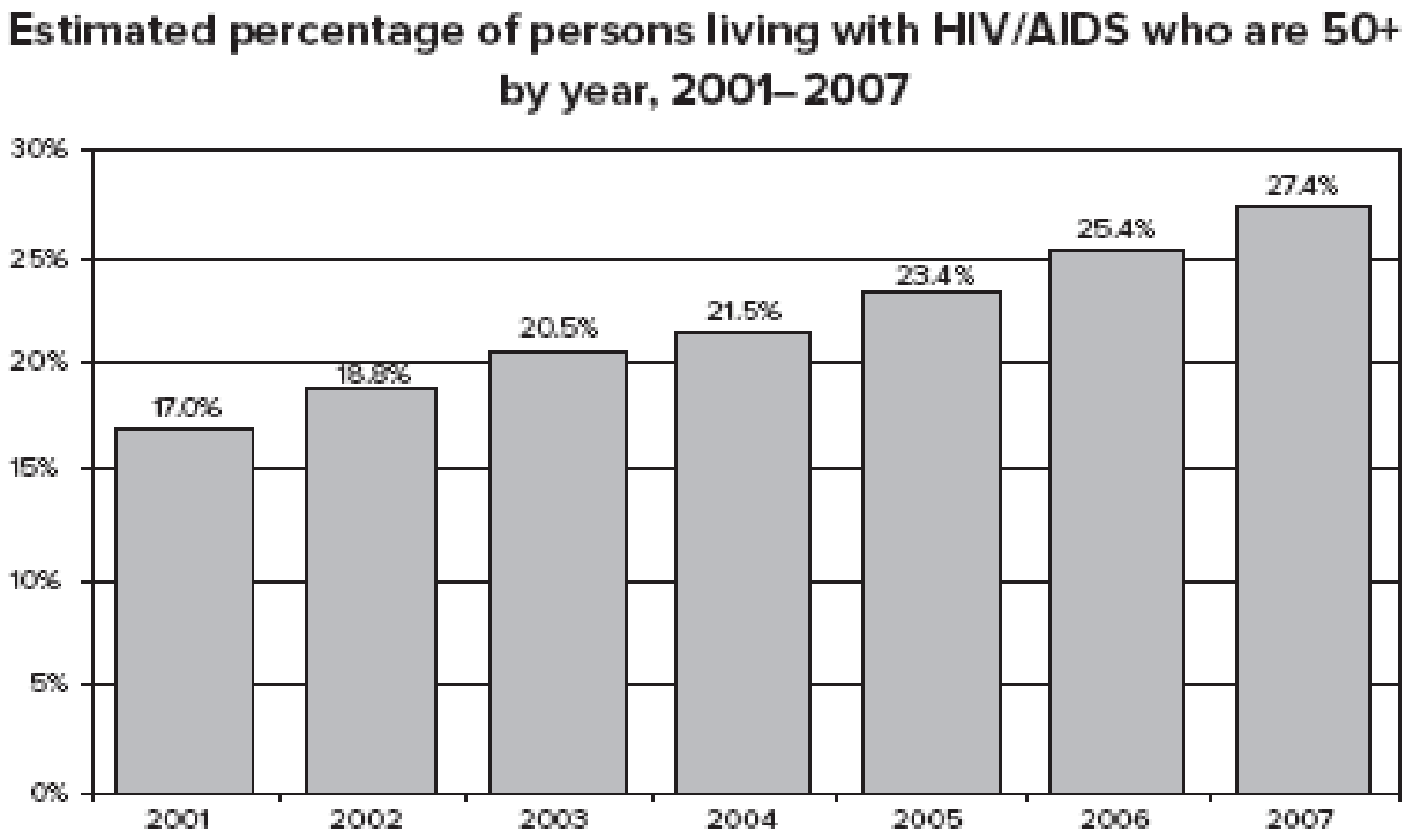
CDC Surveillance Report, 2007

Increased concurrent AIDS diagnosis with age



CDC HIV/AIDS Surveillance Report, 2005.

Aging and HIV over time



CDC HIV/AIDS Surveillance Report, 2005, 2007.

Race, sexuality disparities among older adults living with HIV

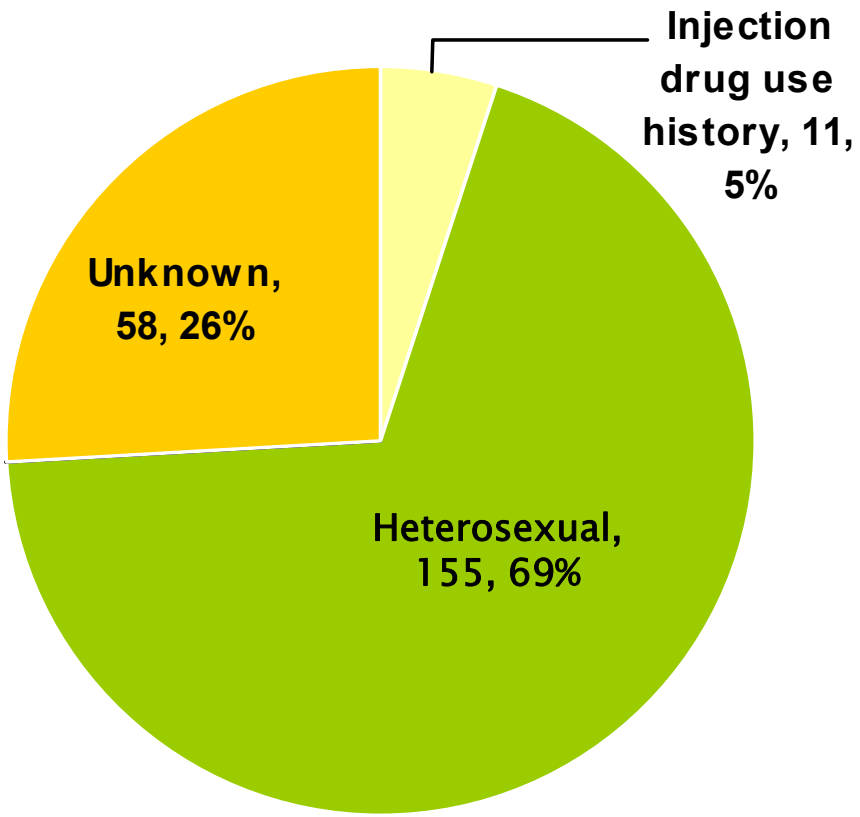
- MSMs, Blacks, Latinos, Transgender women are disproportionately affected by HIV
- Per capita rate of HIV among persons 50+:
  - AA 12x as likely as whites
  - Latinos 5x as likely as whites
- In 2001, African American women made up:
  - 11% of women over 50
  - More than 65% of all HIV infections among all older women in the U.S.

Mode of transmission

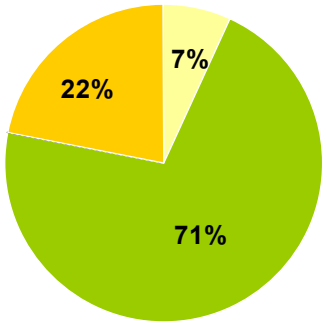
- No national CDC data on mode of transmission among 50+ PLWHA.
- However, according to NYC data:
  - Women: Unprotected heterosexual sex the predominant transmission category among 50+ women.
  - Men: MSM the largest reported risk category followed by injection drug use and then heterosexual sex. Half of 50+ men diagnosed with HIV do not have a documented transmission category.

As reported to the New York City Department of Health and Mental Hygiene by September 30, 2008.

Transmission risk category of females 50+ diagnosed with HIV in 2007, NYC



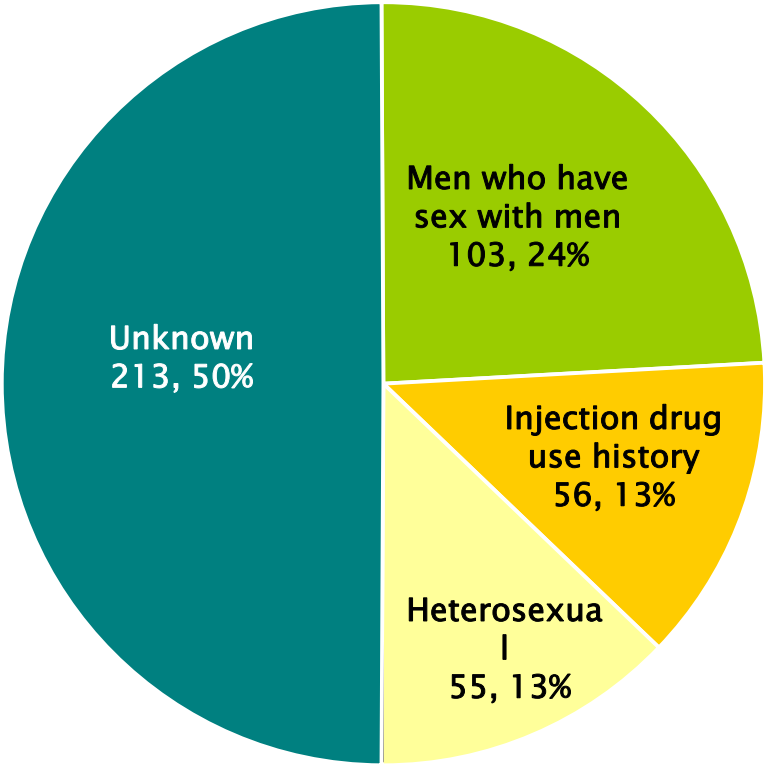
Persons 13-49



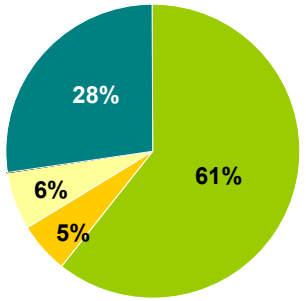
Heterosexual is the predominant transmission category among females diagnosed with HIV who are 50+ years old.

As reported to the New York City Department of Health and Mental Hygiene by September 30, 2008.

Transmission risk category of males 50+ diagnosed with HIV in 2007, NYC



Persons 13-49



Almost half of males diagnosed with HIV who are 50+ years old do not have a documented transmission category. MSM is the largest documented category.

As reported to the New York City Department of Health and Mental Hygiene by September 30, 2008.

Sexual behavior in older adults

- Widespread "sexphobia" in regard to older people, intersects with stereotypes about HIV risk, including anti-gay stereotypes although older adults are sexually active

  - 61% of men and 37% of women >60 yrs are sexually active (NCOA study, 1998)
  - 50% of women 45-59 & 25% of women 60-74 sexually active in last six months
  - Versus 55% of men 45-59 & 31% of men 60-74 (AARP study, 1999)

ACRIA, *HIV and Older Adults*, 2008

Lack of understanding of HIV

- Older persons, especially those resuming sexual relations after a divorce or death of a partner, may not perceive themselves as at risk for HIV and may not take preventive measures such as using condoms or getting tested for HIV.
- 60% of older single women in one study had unprotected sex within the last decade.
- More than half of African American rural women had at least one risk factor, such as unprotected sex.
- Some older adults past child-bearing age don't think they need to use protection.

CDC, 2007.

Older women at elevated risk for HIV due to physiological changes that correlate with aging

- Hypoestrogenism among post-menopausal women causes vaginal dryness.
- This puts older women at greater risk for HIV than younger women during unprotected heterosexual sex.

Prevention

- 40% of Texas patients 50+ have a doctor who rarely/never asks about HIV risk factors, whereas only 7% of people under 30 have experienced the same neglect

Center for AIDS Prevention Studies, UCSF, 1997

- 39% of NYC gay/bi men have not disclosed their sexual orientation with their doctors
  - Huge racial differences:
    - Overall 39%
    - White 19%
    - Black 60%
    - Hispanic 48%
    - Asian 47%

- Men who disclose their sexual behaviors are 2x as likely as those who did not to have been tested for HIV (63% vs. 36%)

NYC DOHMH, 2008

II. Senior Services and health care: The effects of stigma

- High levels of HIV stigma reported by older HIV+ people
  - Unauthorized disclosure of HIV status
  - Fear of casual transmission of HIV
- Older age cohorts hold widespread misperceptions of HIV, less supportive of gay equality
- HIV stigma connected to anti-gay stigma
- Prevents HIV risk awareness
  - Older adults more likely to be diagnosed late, receive co-diagnosis of HIV & AIDS

HIV stigma widespread among elders

- Emlet, *The Gerontologist*, 2006:
  - 56% of those interviewed reported experiencing social rejection due to HIV status.
  - 40% said others feared getting HIV from them (perceived them to be highly contagious)
  - 24% of participants reported unwanted and unauthorized sharing of their HIV status.

Social isolation

- Social isolation a significant vulnerability for HIV+ older adults.
- ACRIA's Research on Older Adults with HIV study (2006):
  - 70% of HIV+ older NYers live alone
  - 39% of all New Yorkers 50 and older live alone
- Lack of social support networks leaves HIV+ elders with less resources, making them more susceptible to depression, bereavement, poor mental health, substance abuse.
- Older gay, trans may be partnered at lower rates.
  - Since half or more older adults living with HIV are gay/bi men, trans women, worth looking at these data as well (National Gay and Lesbian Task Force, LGBT Caregiving, 2005).
  - Implications for caregiving

Congregate living facilities

- Nursing homes and assisted living facilities may not be supportive environments for older adults with HIV to live.
- Concerns re: discrimination, ostracism of LGBT elders, feeling like they need to go back “in the closet” while in senior housing, or in other senior settings
- Long-term relationships may be devalued and unrecognized. Some nursing home staff are homophobic and treat clients presumed to be gay in a discriminatory manner.
- Transgender elders may not be allowed to live in their appropriate gender identity.

Veterans' benefits

- Some kicked out of military for alleged homosexuality who challenge this dismissal are dishonorably discharged.
- Many of these can't access VA healthcare, housing benefits.

III. Integrating and Prioritizing HIV and "non HIV" Care in the cART Era

Amy Justice, MD, PhD

A Decade into Combination Antiretroviral Treatment (cART)

- Achieve viral suppression with a single pill
- AIDS events are rare
- Life expectancy after cART >20 years, many are aging with HIV
- 50-60% of deaths[1]
  - Attributed to “non AIDS” causes
  - Occur above 200 CD4 cells

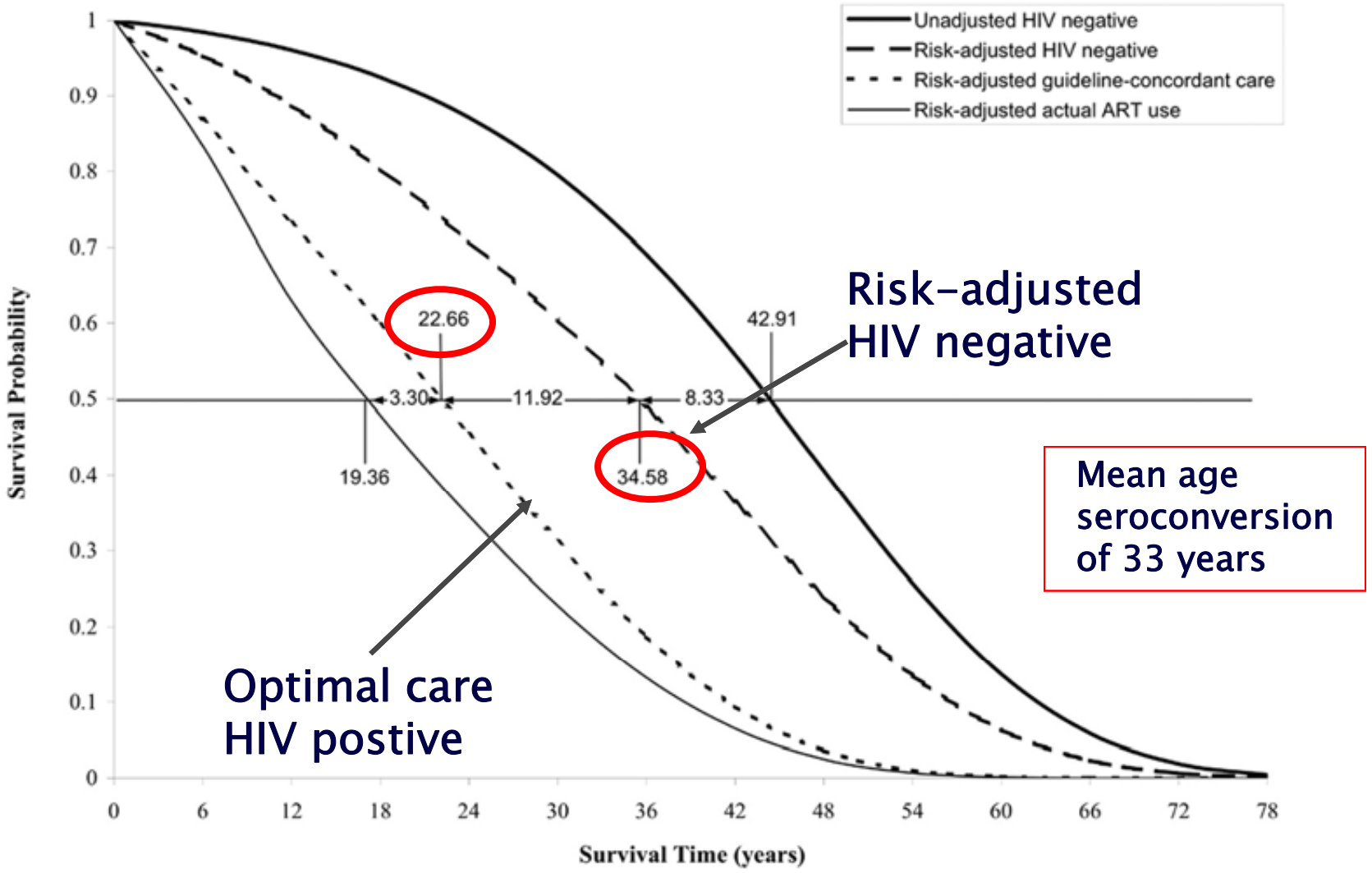
1. ART-CC Collaboration. Causes of Death in HIV-1-Infected Patients Treated with ARV, 1996-2006: Collaborative Analysis of 13 HIV Cohort Studies CID 2010:1387-96

Is Our Work Finished?

No, but its fundamental nature has changed.

Rather than focusing exclusively on preserving CD4 count and preventing AIDS illnesses we need to embrace the complexity of the whole patient.

Life Expectancy is not "Normal"



Losina et al CID 2009

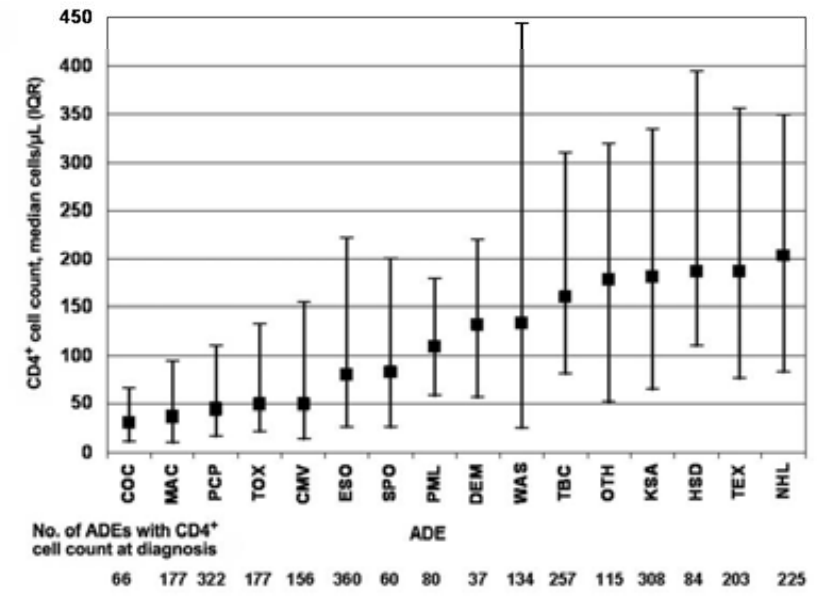
Non AIDS Events Are Associated with HIV Disease Progression*

	Rx. Sparing	Rx. Intensive	Total
All Cause Death	55	30	85
Serious OI	13	2	15
Nonserious OI	63	18	81
Major CAD, Renal, or Liver Disease	65	39	104

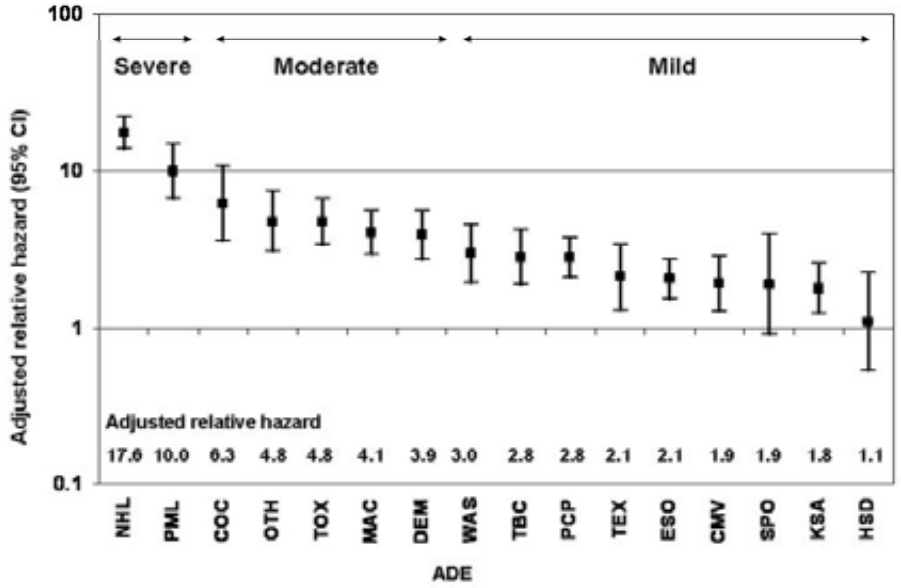
***More AIDS and "Non-AIDS" Events Among Rx. Sparing Arm (HR 1.7 in SMART)** *NEJM 2006;355:2283–96*

AIDS Events are Variably Associated with CD4 and Survival

By Median (IQR) CD4

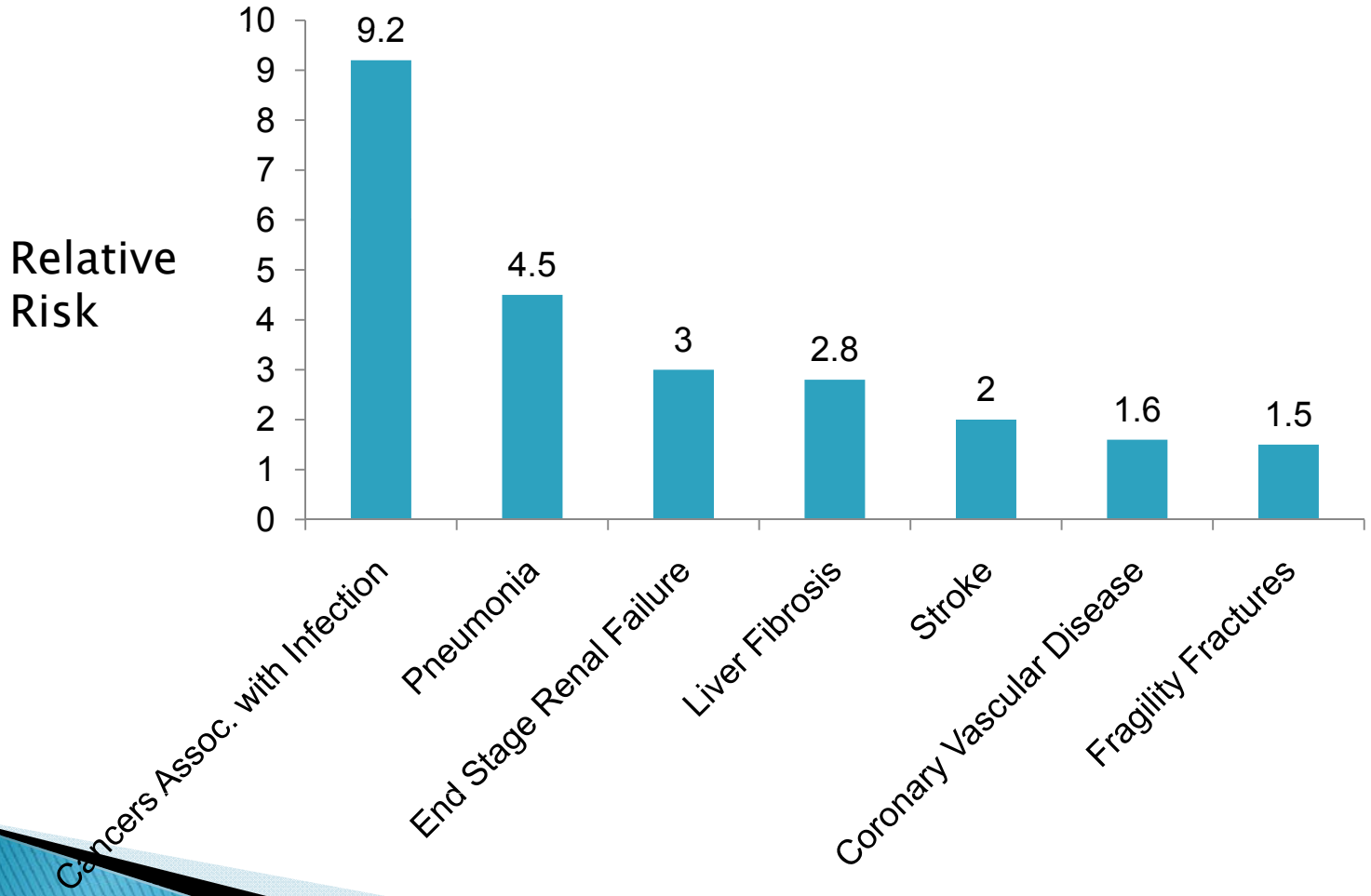


By Relative Hazard of Death



ART-CC, CID 2009;48:1138-51

Non AIDS Events Associated with HIV



HIV Associated Non AIDS Events *Are Variably Associated with CD4*

- CD4 count did not “explain” excess risk for non AIDS events in SMART
- After adjustment for CD4, independently associated with mortality

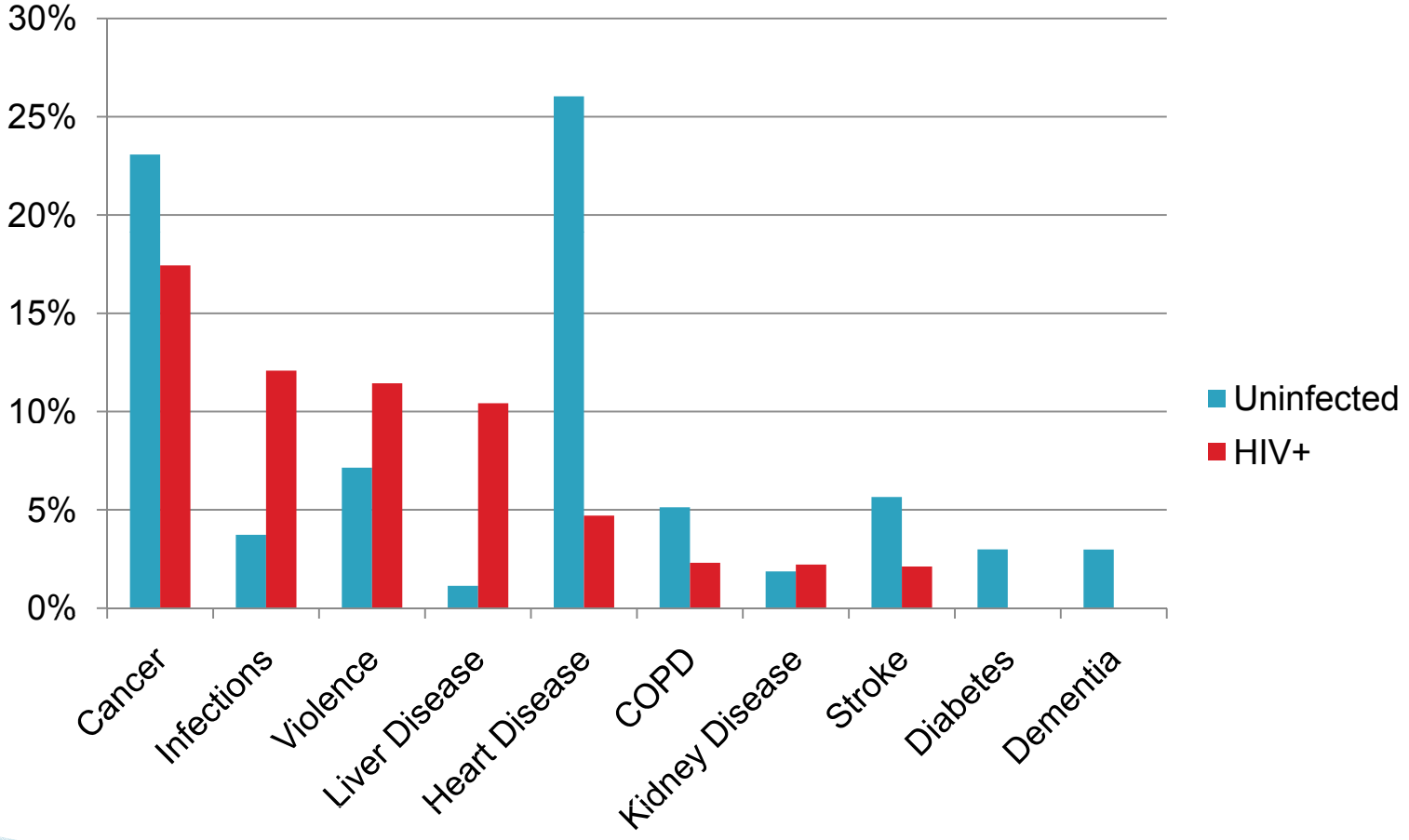
How Should We Prioritize Care?

- Forget about AIDS “vs.” non AIDS
- Expand clinical focus to consider any condition that:
  - Is common among those with HIV infection
  - Has a major impact on morbidity or mortality
  - There are ways to modify its harmful effects

What is common and has a major impact?

Simple question, answer depends on how you measure it.

Top non AIDS Causes of Death Uninfected Vs. HIV Infected*

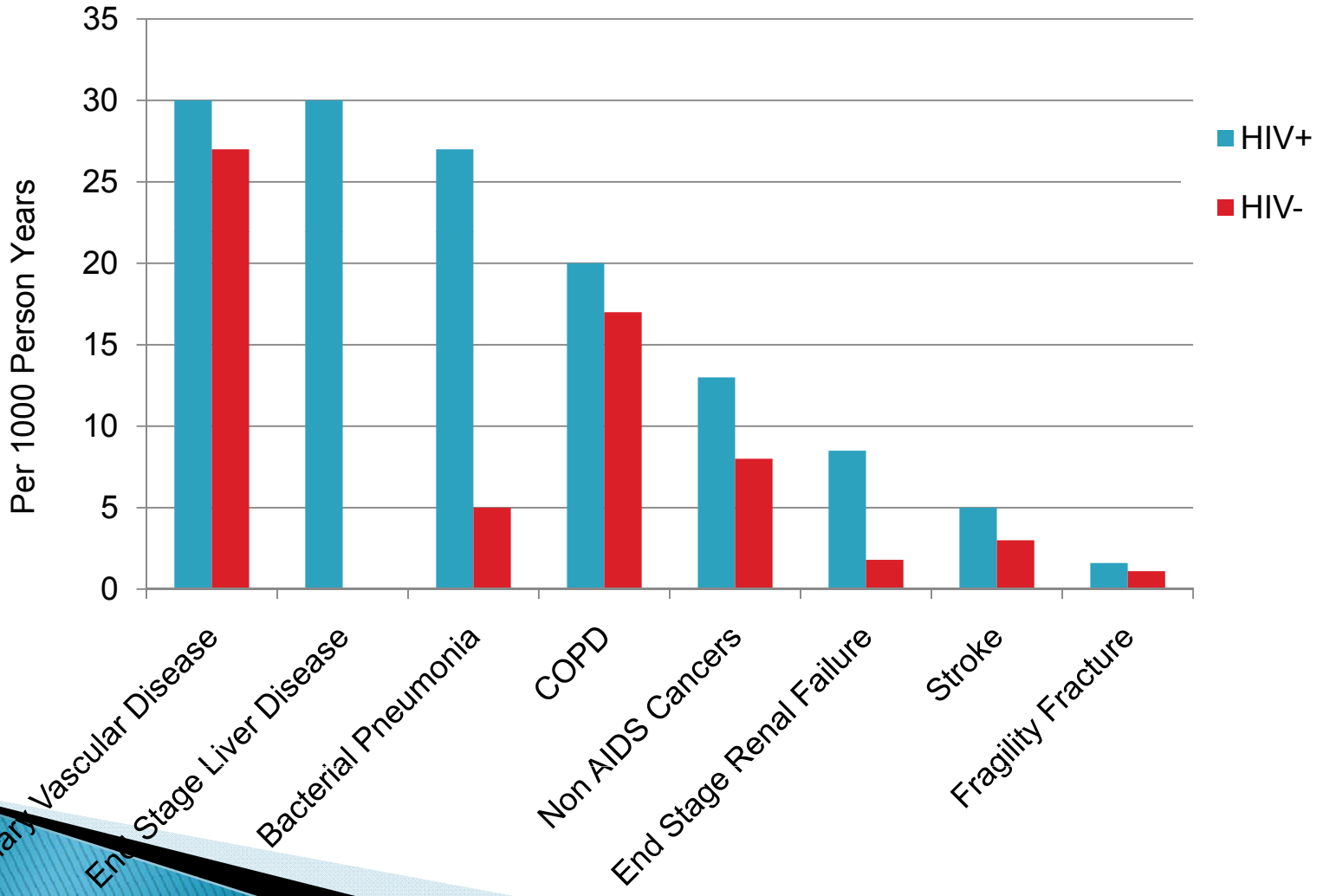


Omitting all deaths attributed to AIDS Defining Illnesses proportion determined by dividing cause by total non AIDS deaths. General population 2006 CDC data, HIV data is from ART-CC COD.

Problems with Cause of Death

- You have to die to be counted
  - Major sources of morbidity not included
  - Last problem counted most heavily
- Accuracy poor without autopsy
- Vary by prevalent age
- At best, tells you about what has killed people, not necessarily what will kill people

Incident Non AIDS Events Among HIV Infected and Uninfected



Incident Disease Depends Upon

- Dominant demographics of sample (age, race, gender)
- Dominant behaviors (smoking, alcohol, drugs, sexual practices, obesity)
- Clinical detection
- Should tailor these estimates to important subgroups

Major Observations

- HIV and age increases risk of ‘non AIDS’ conditions
- What is common for those aging with HIV not identical to aging uninfected
- Care guidelines for non-AIDS condition require careful adaptation for those with HIV
  - Some may justify earlier ARV treatment
  - Selected ARV treatments likely cause some conditions, but effects are often less than those of HIV itself

Age, cART, and Immune Function

- Dementia often improves dramatically with cART (even cART that doesn't penetrate CNS)
- Older people
  - adhere better and therefore have a better virologic response to cART
  - have a slower CD4 response but similar at 2 years
  - Have greater depletion of both T and naïve B cells, exacerbating risk of infection

Dora Larussa et al. AIDS Research and Human Retroviruses 2006:22;386-392.
Gebo K and Justice A. Current Infectious Disease Reports 2009, 11: 246 – 254

Likely To Be Important with Aging

- Infection
  - Bacterial pneumonia, sepsis
  - Viral hepatitis
- Inflammation, thrombosis, and oxidative stress
  - Liver fibrosis, COPD, bone marrow suppression
  - stroke, MI, renal disease
  - Cancer
- Adverse events from chronic treatment
  - On as many non HIV as HIV medications
  - Secondary cancers, bone marrow suppression, liver and kidney injury

What Can We Modify Now?

- Suppress HIV-1 RNA early (cART, adherence)
- Prevent/treat other viruses (HCV, HBV, HPV)
- Intervene on “inflammatory” behavior (smoking, alcohol, drugs, obesity)
- Monitor all medications for toxicity
- Too much?– prioritize based on comparative effectiveness

How Do We Compare Effectiveness?

The Veterans Aging Cohort Study (VACS) Risk Index

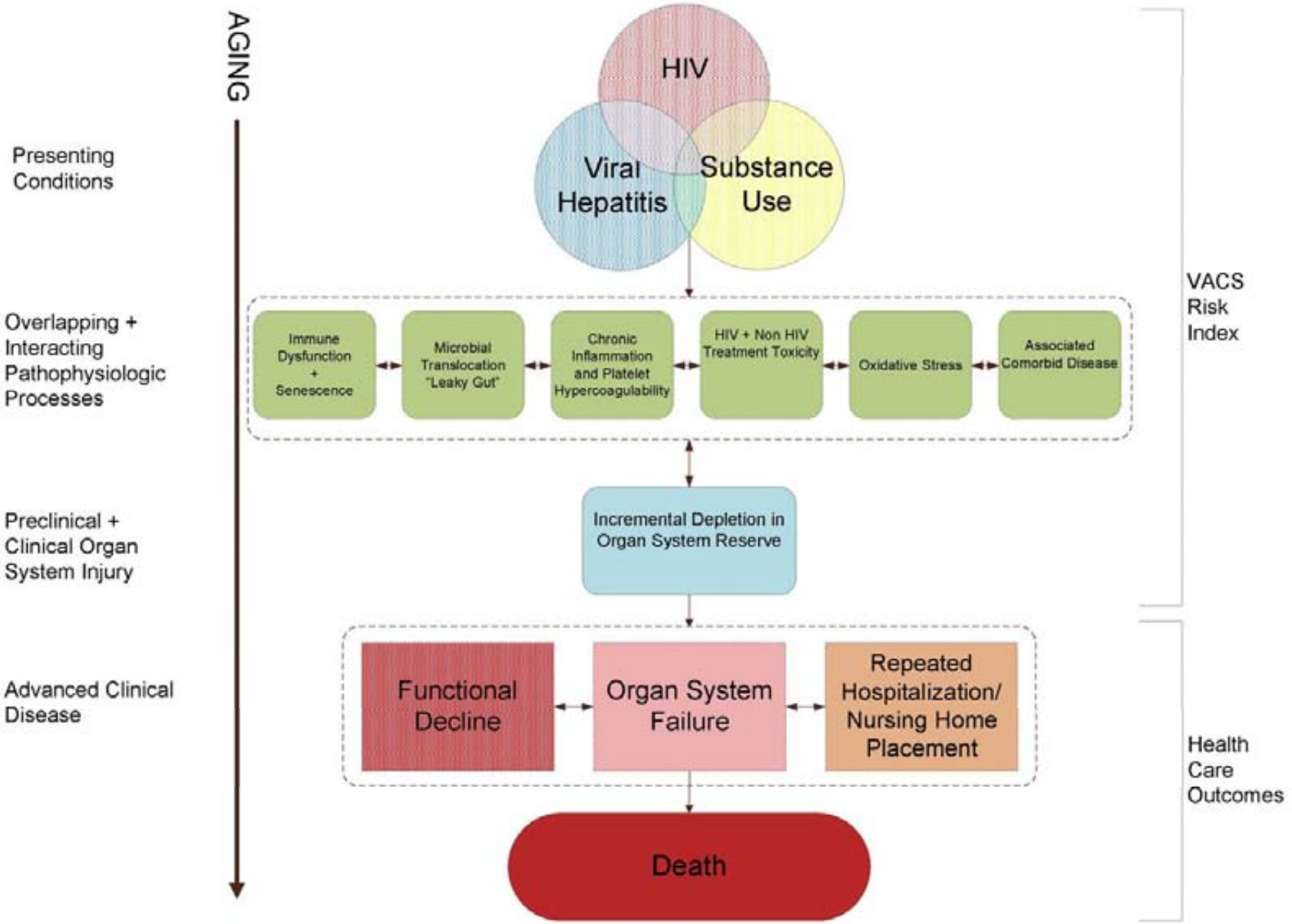
A work in progress

VACS Risk Index

An index composed of routinely collected laboratory values that accurately predicts all cause mortality and morbidity among those with HIV infection

Justice, AC. et. al, HIV Med. 2010 Feb;11(2):143-51. Epub 2009 Sep 14.

Final Common Pathway



Justice AC. HIV and Aging: Time for a New Paradigm. Curr HIV/AIDS Rep. 2010 May;7(2):69-76

VACS Virtual Cohort

- Subjects
  - 33,000 HIV infected Veterans
  - 99,000 Age, Race/Ethnicity, Region 2:1 Matched Controls

- Scope of Study
  - 1998 to present
  - Baseline
    - HIV infected patients at initiation of HIV care
    - Controls selected and followed in same calendar year
  - Administrative, laboratory, and pharmacy data

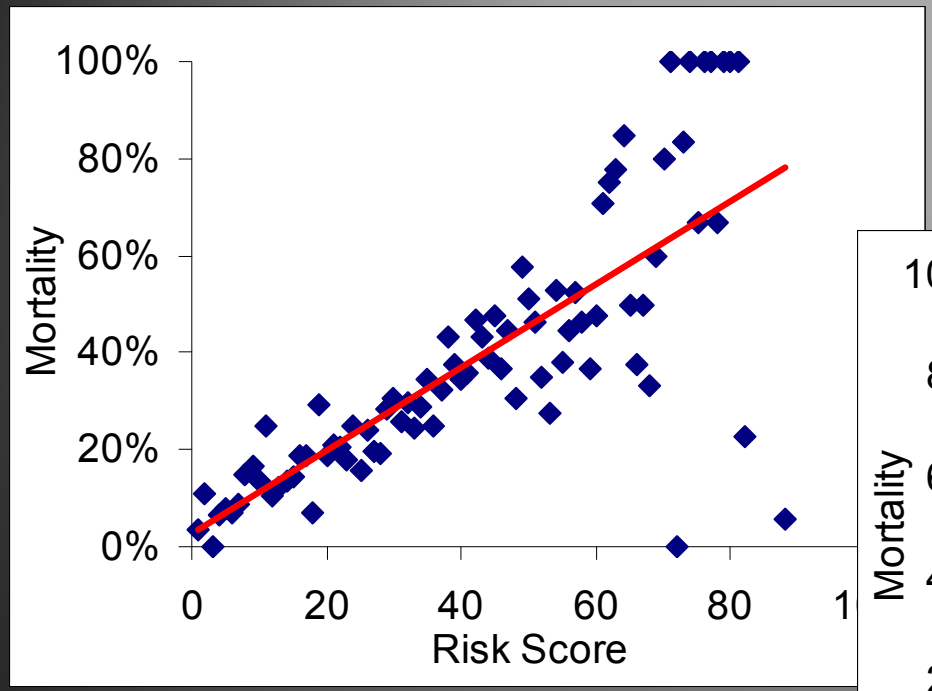
Approach

- Begin with established prognostic variables in HIV and mortality outcome
- Add indicators of preclinical frailty

Components of VACS Index

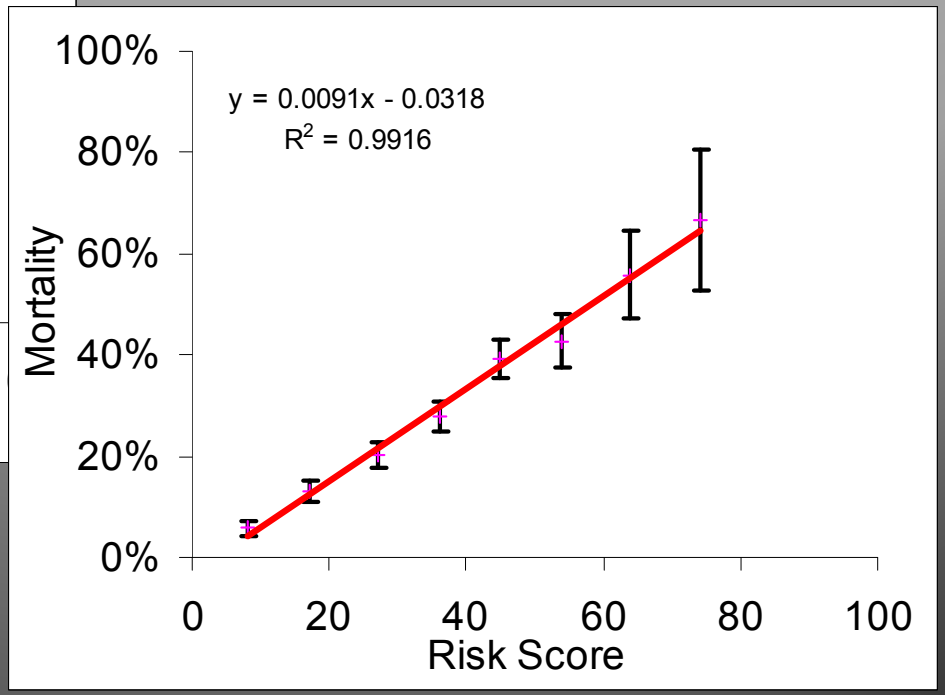
- Age
- HIV Biomarkers: HIV-1 RNA, CD4 Count, AIDS defining conditions
- "non HIV Biomarkers": Hemoglobin, HCV or HBV infection, Drug or Alcohol Abuse, Composite markers for liver and renal injury
- (Subsequently removed AIDS defining illnesses and Drug or Alcohol Abuse)

VACS Index Highly Predictive of Long Term (5 Year) All Cause Mortality



Individual Scores

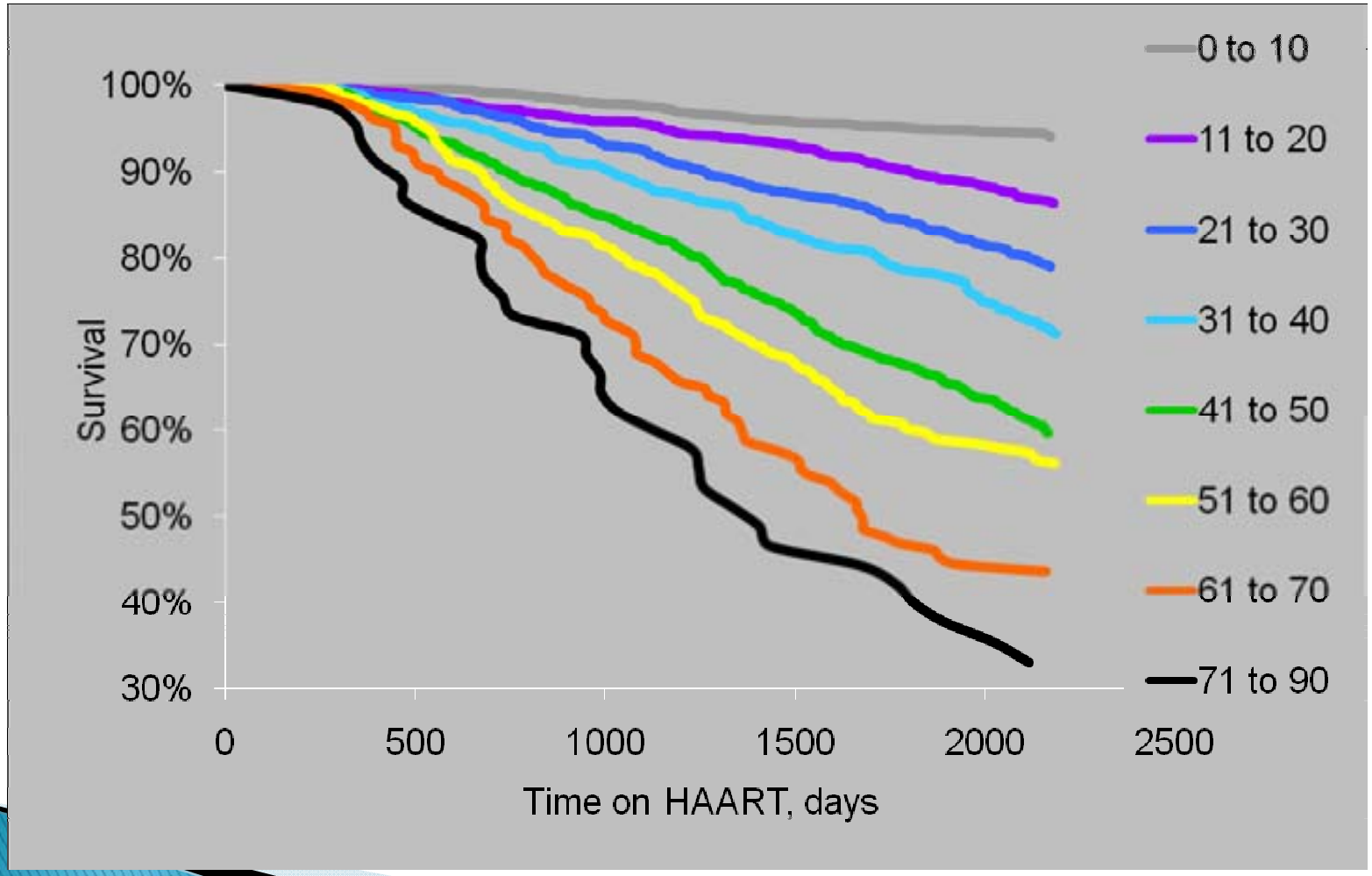
Aggregated Scores



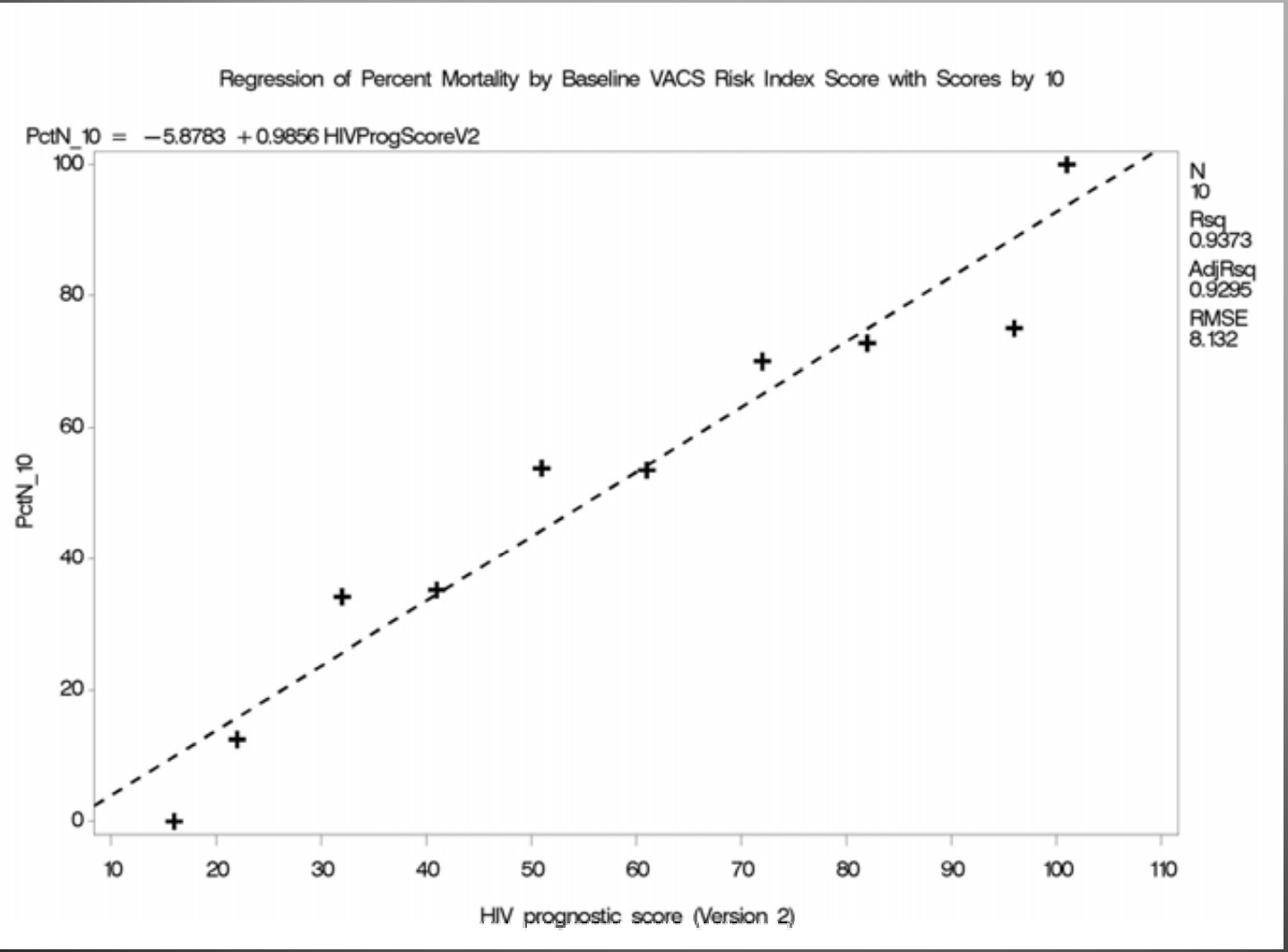
Justice, AC. et. al, HIV Med. 2010 Feb;11(2):143-51. Epub 2009 Sep 14.

Justice AC. HIV and Aging: Time for a New Paradigm. Curr HIV/AIDS Rep. 2010 May;7(2):69-76

Survival by VACS Index (6 years)

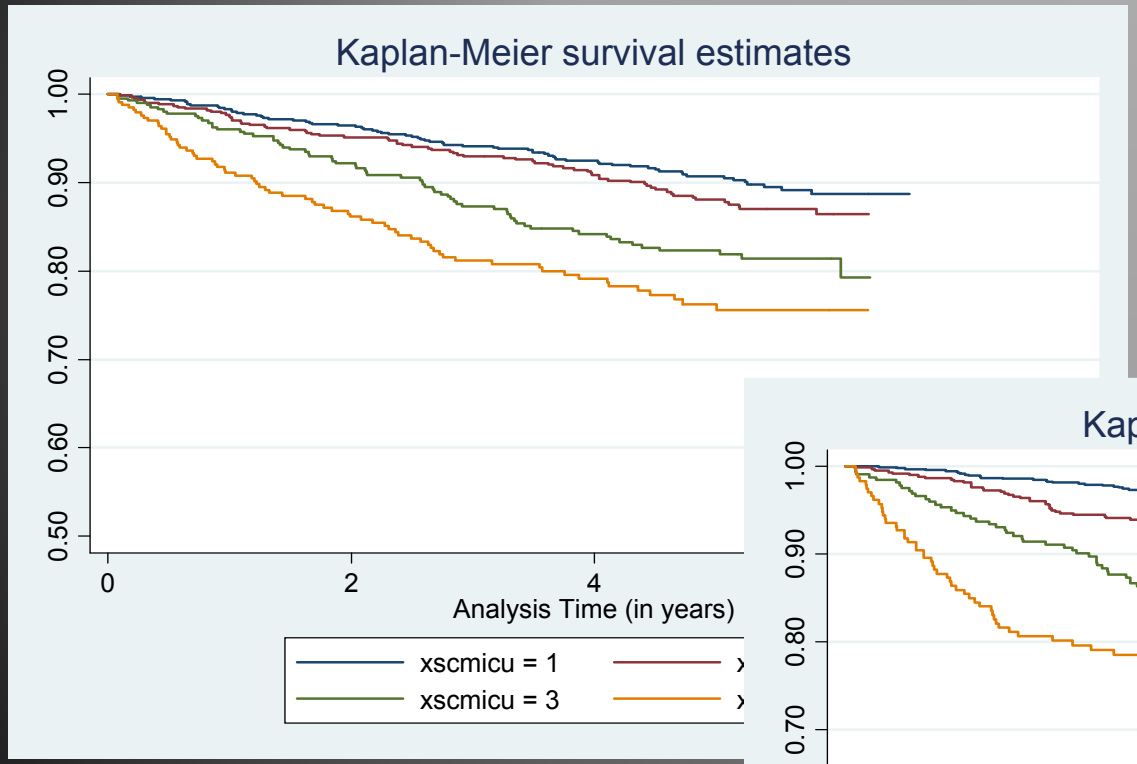


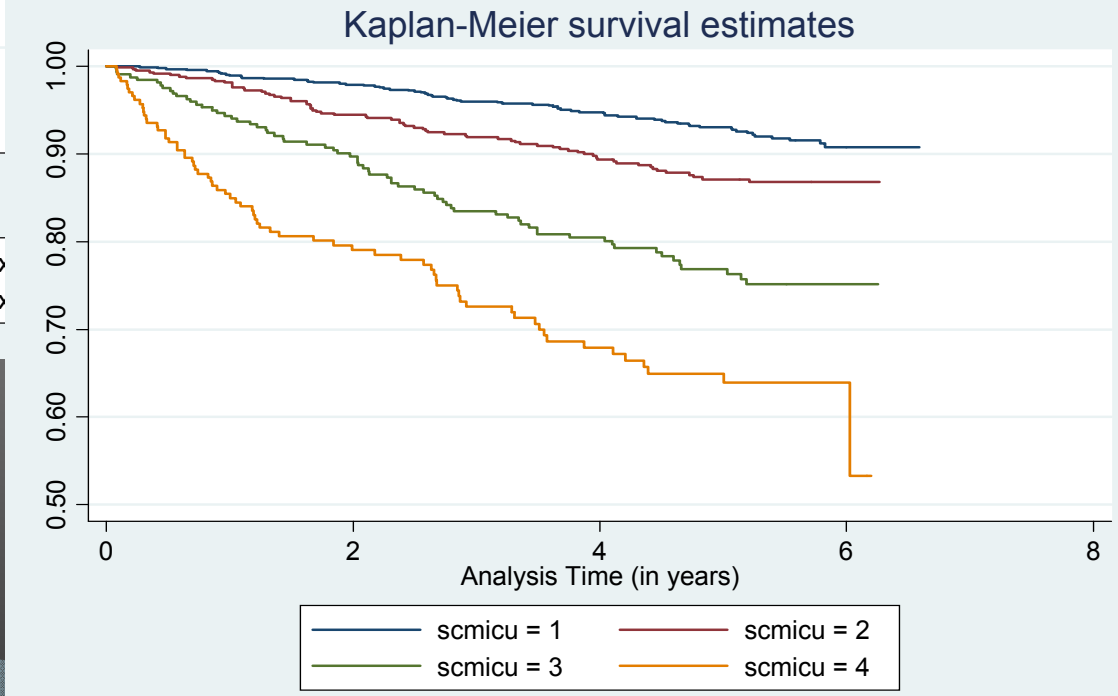
VACS Index in OPTIMA



Brown S.T. et al. Poster Presentation, Abstract #16436 International AIDS Conference 2010

VACS Index Predicts MICU-Admissions Better than CD4 and HIV-1 RNA Alone





Akgun K. et al. American Thoracic Society 2010 . A5199

VACS Index Summary

- Demonstrates consistent discrimination across a wide variety of subjects
- Offers more complete information than CD4, HIV-1 RNA, and age alone
- Accurately estimates risk of morbidity and mortality among those
  - Initiating cART
  - On long term cART

Conclusions

- We need a single metric to:
  - Time cART initiation
  - Monitor patients and chart their progress
  - Prioritize interventions based on effectiveness
- The VACS Index
  - Better reflects overall risk of morbidity and mortality than CD4 count and HIV-1 RNA
  - Is the best metric currently available

National VACS Project Team 2010

Veterans Aging Cohort Study

- PI and Co-PI: AC Justice, DA Fiellin
- Scientific Officer (NIAAA): K Bryant
- Participating VA Medical Centers: Atlanta (D. Rimland), Baltimore (KA Oursler, R Titanji), Bronx (S Brown, S Garrison), Houston (M Rodriguez-Barradas, N Masozera), Los Angeles (M Goetz, D Leaf), Manhattan-Brooklyn (M Simberkoff, D Blumenthal, J Leung), Pittsburgh (A Butt, E Hoffman), and Washington DC (C Gibert, R Peck)
- Core Faculty: K Mattocks (Deputy Director), S Braithwaite, C Brandt, K Bryant, R Cook, K Crothers, J Chang, S Crystal, N Day, J Erdos, M Freiberg, M Kozal, M Gaziano, M Gerschenson, A Gordon, J Goulet, K Kraemer, J Lim, S Maisto, P Miller, P O'Connor, R Papas, C Rinaldo, J Samet
- Staff: D Cohen, A Consorte, K Gordon, F Kidwai, F Levin, K McGinnis, J Rogers, M Skanderson, J Tate, Harini, T Boran
- Major Collaborators: VA Public Health Strategic Healthcare Group, VA Pharmacy Benefits Management, Massachusetts Veterans Epidemiology Research and Information Center (MAVERIC), Yale Center for Interdisciplinary Research on AIDS (CIRA), Center for Health Equity Research and Promotion (CHERP), ART-CC, NA-ACCORD, HIV-Causal
- Major Funding by: National Institutes of Health: NIAAA (U10-AA13566), NIA (R01-AG029154), NHLBI (R01-HL095136; R01-HL090342) , NIAID (U01-A1069918), NIMH (P30-MH062294), 2009 ARRA award; and the Veterans Health Administration Office of Research and Development (VA REA 08-266) and Office of Academic Affiliations (Medical Informatics Fellowship).

Reference List for bar graphs of comorbid conditon incidence rates and relative risk

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Ref Type: Abstract

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Ref Type: Abstract

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(10) Crothers K, Huang L, Goulet J, Goetz MB, Brown S, Rodriguez-Barradas M et al. HIV Infection and Risk for Incident Pulmonary Diseases in the Combination Antiretroviral Therapy Era. AJRCCM. 2010; [In press].

IV. Policy recommendations: Epidemiology

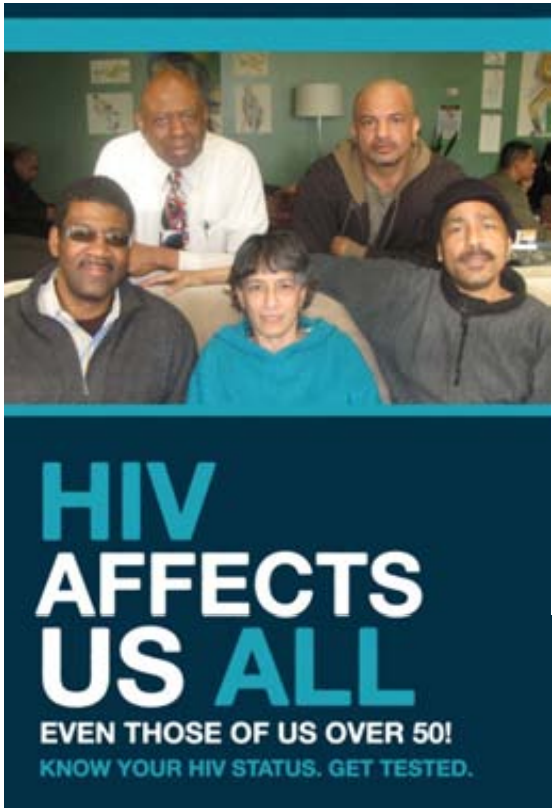
- The CDC should:
  - Improve epidemiological surveillance systems and data collection to provide specific data delineated by age and risk category.
  - Collect data on gender identity in addition to transmission categories. This would provide national level data on HIV among trans people.
  - Better knowledge re: prevalence of HIV among older gay men, trans women could inform more culturally competent care.

Policy recommendations: Prevention

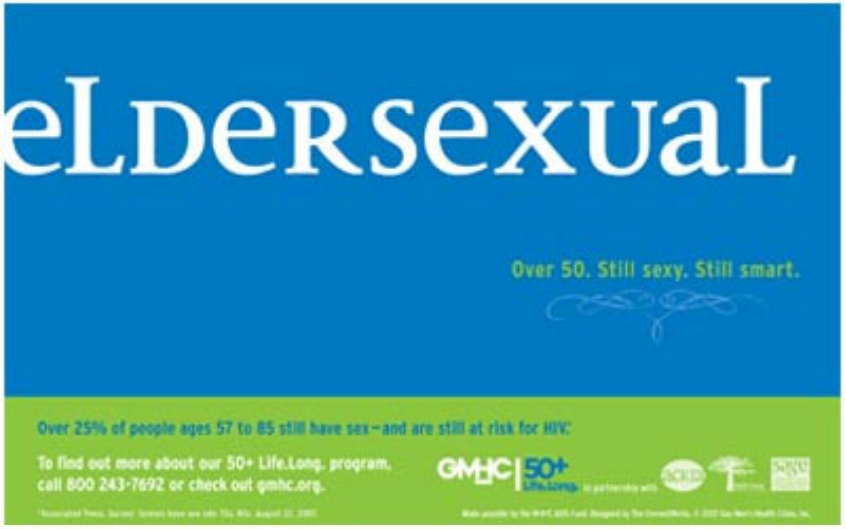
- CDC, state and local health departments should target prevention efforts at older adults, including gay men, MSM, women, and African Americans. They should also target high-risk sexual behaviors (such as unprotected anal, vaginal sex) whether between opposite-sex or same-sex couples.

- Both HHS and the CDC should fund social marketing campaigns challenging HIV stigma and anti-gay stigma.

Prevention with older adults



Prevention with older adults



Policy recommendations: Prevention and health providers

- Healthcare professionals should proactively assess older patients for sexual health risks and test for HIV.
- Doctors should be encouraged to talk with their patients regarding sexual behavior/orientation and make clear that such conversations are confidential.

Policy recommendations: Comorbidities

- More clinical research with HIV+ 50+
  - Explore how treatments for comorbidities interact with anti-retroviral medication and what effects these interactions may have on older adults.
  - Increase understanding of NARCs among HIV+ 50+.
- Standards of care for older adults living with HIV should call for screenings for comorbidities.
- Vice versa: Doctors treating cervical, anal cancer etc. should offer their patients an HIV test.
- HIV medical providers should screen for depression and refer to mental health treatment.

Policy recs: HIV+ elders in social context

- ASOs, LGBT community centers, other CBOs should encourage community caregiving for elders living with HIV (like “buddy programs”).
- Should Ryan White fund caregiving assistance for PLWHA to assist with ADLs?
- Home healthcare aides should be trained in the particular experiences and needs of HIV+ elders and LGBT elders to ensure culturally competent and nondiscriminatory care.

Older Americans Act

- Funds community planning and social services, research and development projects, and personnel training in the field of aging.
- Available evidence that senior centers are not adequately serving LGBT elders.
- Need for staff training re: gay elders, HIV+ elders.
- The upcoming 2011 reauthorization of the Older Americans Act presents unique opportunities for change that could impact HIV positive older adults.

Policy recommendations: Senior services

- AOA, HHS should fund social marketing campaigns that challenge HIV stigma and stigma related to homosexuality.
- OAA could list HIV+ elders, LGBT elders as vulnerable populations (2011 reauthorization); would free up funding for training, research, targeted services.
- Researchers should study the experiences of older HIV positive and LGBT populations in congregate living facilities.
- Senior center staff, volunteers and nurses should be trained on HIV, sexuality, social isolation and other factors that affect older HIV+ clients.

Policy recommendations: Same-sex partners

- Marriage equality should be enacted to allow same-sex partners access to many health related benefits.
  - In the meantime, Medicaid regulations should be changed to provide same-sex partners the ability to remain in their homes without jeopardizing their partners' right to Medicaid coverage.
- Same-sex couples should be treated the same as opposite-sex married couples under Social Security policy.

Policy recommendations: Healthcare

- Family Medical Leave Inclusion Act pass to modify 1993 FMLA to allow employees to take unpaid leave to care for same-sex partners; state laws should also be changed (except CA).

- Geriatric workforce not at all prepared to accept growing number of older adults living with HIV. Very few medical schools even have a geriatric focus. We must as a society address this.

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To you for your work and taking time today

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