Underwriting and Insurability of HIV

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1

"Mortality Rates Among People With HIV, Long on the Wane, Continue to Drop"
HIV Medicine Feb 2013

2

My Opinions

- We should be insuring some people with HIV!
- Good underwriting:
  - Understand the disease process
  - Understand therapy
  - Appreciate co-morbidities
  - Account for risks to disease stability
- + Appropriate pricing
- = Good business!

4

The Disease

- Retrovirus
- 1930 Simian Immunodeficiency Virus “jumps” to humans in central Africa
- 1959 first known death from HIV in the Congo (preserved blood samples)
- 1966 HIV hits the Americas with a person infected in Haiti
- October 31, 1980 Gaetan Dugas, patient zero, pays his first visit to NYC bath houses and the epidemic begins in the U.S.…

6

The Disease

- Transmitted via sexual intercourse, exposure to contaminated blood, or during birth
- Binds to a variety of cells
- CD4 or T helper cells bind with the infected cell
- Virus alters cellular DNA
- HIV is off to the races in terms of self-proliferation
- Found in serum 3 days after infection
- Measurement of number of HIV RNA copies is possible

7

The Disease

- Unchecked, HIV invades a variety of tissues
- Destroys immune competence
- Allows AIDS-defining conditions to develop
- Median CD4 count of 67 cells/mm3
- Death within months

8

AIDS Defining Conditions, CDC

- Thrush; Invasive cervical cancer; Coccidioidomycosis; Cryptococcosis; Cryptosporidiosis; CMV; HIV encephalopathy; HSV chronic ulceration; Histoplasmosis; Isosporiasis; Kaposi's; Lymphomas; Mycobacterium avium; Other Mycobacteria; Pneumocystis carinii; Recurrent pneumonias; Progressive multifocal leukoencephalopathy; Recurrent Salmonella; Toxoplasmosis; Disseminated TB; HIV-associated wasting syndrome.

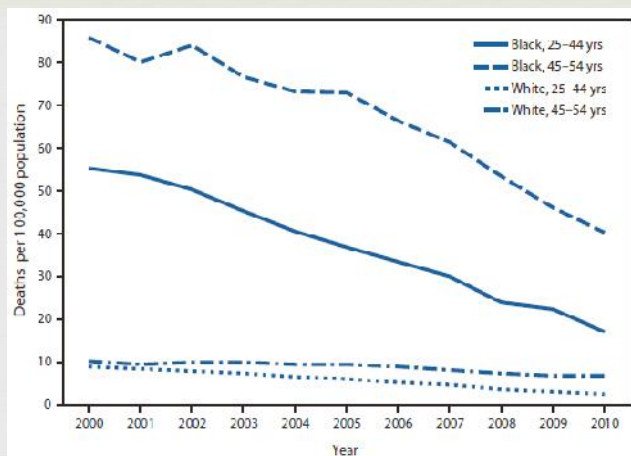
9

10

HAART/cART

- 20 drugs in 6 major classes
- Backbone of two NRTI's (nucleoside reverse transcriptase inhibitors) and a base of NNRTI (non-nucleoside…) or PI (protease inhibitor)
- Goals: suppress viral load, restore/maintain immune function (CD4 cell count), prevent transmission, prevent drug resistance, improve quality of life
- How well have goals been achieved?

11



CDC January 25, 2013

Decrease in disease specific death rates of 70% during this period. Death rates for black males exceed those of white males by a factor of 6.

12

SMART and ESPRIT Trials

- "Mortality in well controlled HIV in the continuous antiretroviral therapy arms of the SMART and ESPRIT trials compared with the general population." AIDS. 2013; 27:973-79.
- Among patients receiving cART in these trials with CD4>500: "there was no difference in mortality compared with the general population."
- CD4=350-499 SMR (Standardized Mortality Ratio) 1.77 with 95% confidence interval of 1.17-2.55

13

COHERE 2012

- "Mortality patterns in most non-IDU HIV-infected individuals with high CD4 counts on cART are similar to those in the general population."
- 35,316 individuals with a CD4 count >500/mm3
- SMR of 0.9 for men and 1.1 in women after 3 years of treatment
- International Journal of Epidemiology. 2012, 41(2); 433-445.

14

Insurability of HIV positive people treated with antiretroviral therapy in Europe: collaborative analysis of HIV cohort studies

- AIDS, ePub Feb 2013, awaiting post author corrections to be published
- 34,680 patients compared with an insured population
- No IDU, Hep C, cART between '96-08
- 1236 deaths/174,906 person-years, overall relative mortality 459% compared with an insured population
- 61% had 500% or better relative mortality; 43% : 400%; 28% : 300%
- "The continuing long-term effectiveness of ART implies that life insurance with sufficiently long duration to cover a mortgage is feasible for many HIV positive people successfully treated with ART for >6 months."

15

Fair and Balanced Reporting

- Studies have some problems
- Study published in JIM shows poor survival
- What I think…

16

Problems

- Heavy European Influence
  - Different healthcare system
  - Very few "fall through the cracks"
- Projection
  - No long-term retrospective studies
- Medication
  - Expensive: What happens if insured loses their job?
  - Side Effects
  - Compliance Issues
  - PPACA effect…

17

CRL Study

- "Trends in Mortality of Insurance Applicants with HIV Infection" J Insur Med 2012; 43:67-75.
- 1991-2009; 12,000 positive HIV results in 14.1MM applicants
- SS death master file
- Relative Mortality 320-1300%
- My perspective on these results from our experience.

18

Underwriting Guidelines

- Only the best risks
  - No IVDU
  - No Hepatitis
  - Viral Load <500
  - CD4>350 or >500 (two classes)
  - >6 months—HAART--<10 years
    - Evidence of compliance (APS and Rx check) without significant episodes of resistance
  - No other ratable illnesses; No ADI’s
  - Stable employment, financially sound

19

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“If I let myself get bitten by a vampire so I become immortal and only a wooden stake can kill me, can I get a better rate on my life insurance?”

20

+Pricing

- Have to account for some non-compliance, medication failure, etc.
- …not unlike those people with moderate coronary disease that we insure every day
- Account for increased cost of underwriting
- Moderately substandard
- Is anyone with HIV a STD risk?
  - Probably, but I would like to see some positive experience prior to committing to this.

21

=Good Business

- Early to Market
  - >1MM (CDC); >610K insurable
  - Control of application process
  - Roll out through brokers with some in-house underwriting capability
- Goodwill is inestimable
- Secondary Business

22

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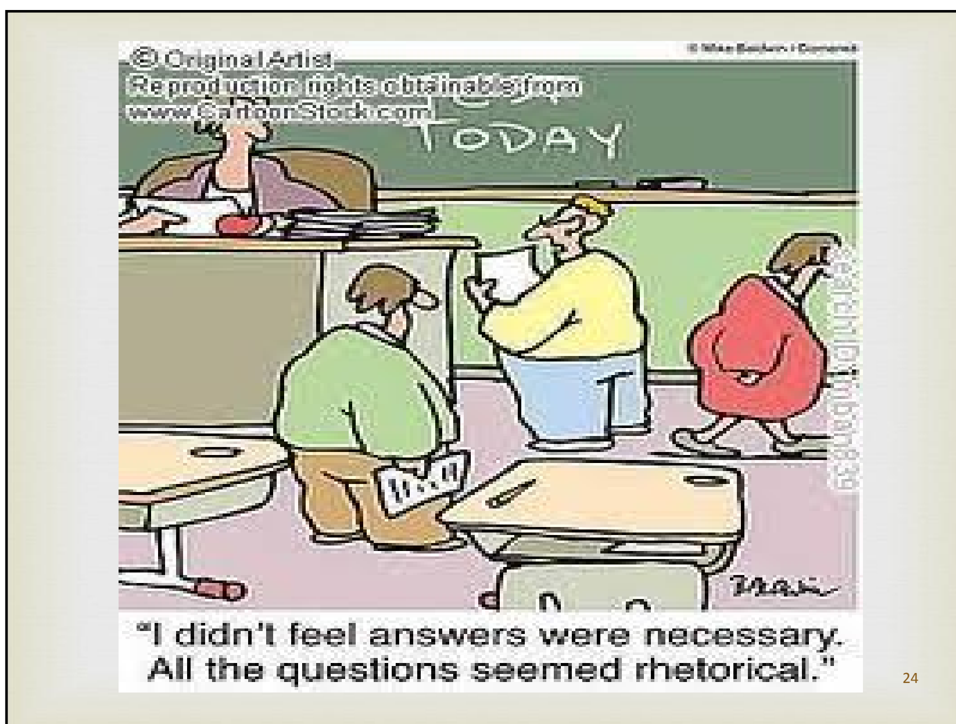
"Sometimes the key to a creative breakthrough is
a good old fashioned whack on the side of the head."
23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TODAY
"I didn't feel answers were necessary.
All the questions seemed rhetorical."
24