Meeting the Medical Needs of Drug-Involved Offenders

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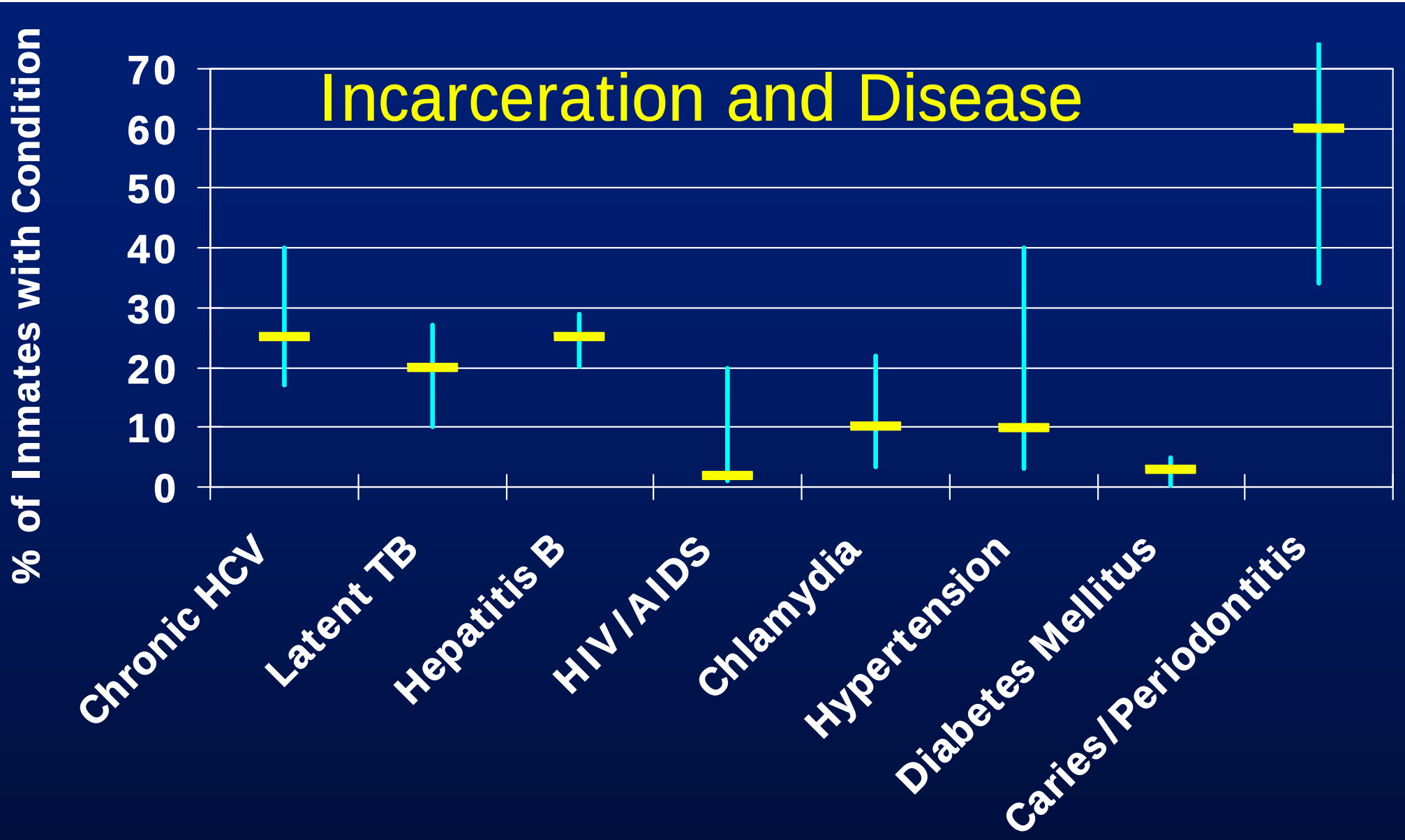
Meeting the Medical Needs of Drug-Involved Offenders

- Opportunity To Improve Public Health
- Post-release Mortality And Morbidity
- Other Primary And Secondary Prevention

Correctional Populations Have A High Prevalence Of Medical Conditions

- Current / past risk behaviors
  - Parenteral drug use
  - Tattoos
  - Unsafe sexual practices
- Direct toxic effects of illicit drugs or caustic agents
- Poverty and living conditions
  - Close living quarters – TB, HBV, MRSA
  - Unaddressed HTN, DM



Colsher 1992. Bureau of Justice Statistics 1999, NCJ 187456; Prev Med 1999;28:92-100; Baillargeon 2002. Hammett 2002; Hornung 2002. Macalino 2004;Maruschak 2005. MacNeil 2005; Bernstein 2006.

Opportunity to Improve Public Health

- Poor access to routine medical care in community
  - Underinsured
  - Care-seeking episodic, symptom-related, costly

Inmates Have Constitutional Right To Adequate Medical Care

(Estelle vs. Gamble, 1976)

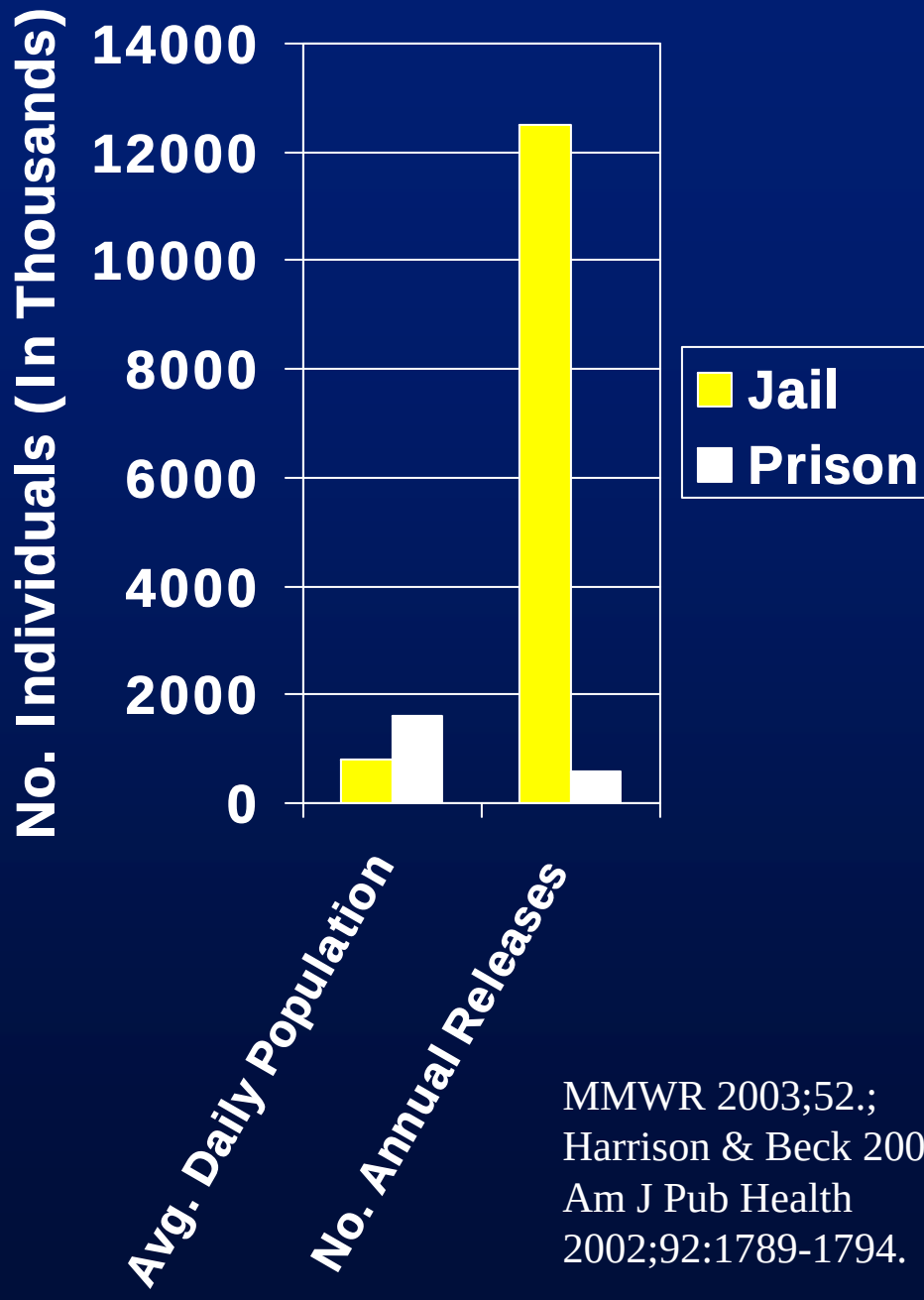
- Unique opportunity to deliver health care to hard-to-reach population:

"…the period of confinement [incarceration or detention] provides a unique chance to reach an otherwise exclusive group, whose risk factors and prevalence rates far exceed those of other populations."

--Glaser and Greifinger, 1993

High Turnover Rates

- Inmates come from, and return to communities with health disparities
  - May serve as high-risk "reservoir"
- >2,000,000 confined at any one time
- > 12 million releases from jail each year



MMWR 2003;52.;
Harrison & Beck 200
Am J Pub Health
2002;92:1789-1794.

Opportunity to Improve Public Health

- Clinicians should know the common medical conditions among inmates or ex-inmates
- Screen for common conditions
- Treat or refer for treatment
- Counsel to reduce transmission
- Provide preventive interventions
  - e.g. vaccination

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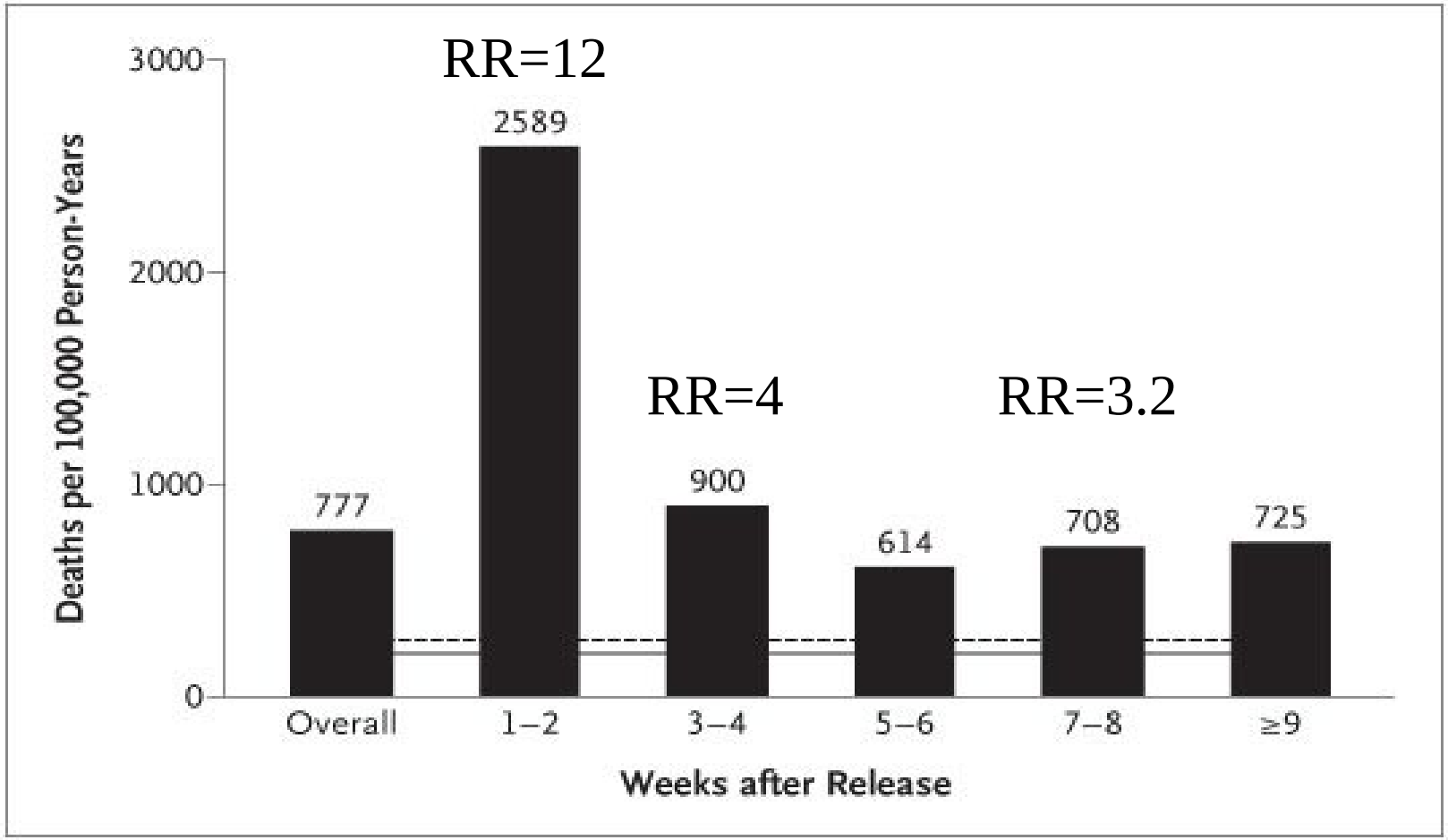
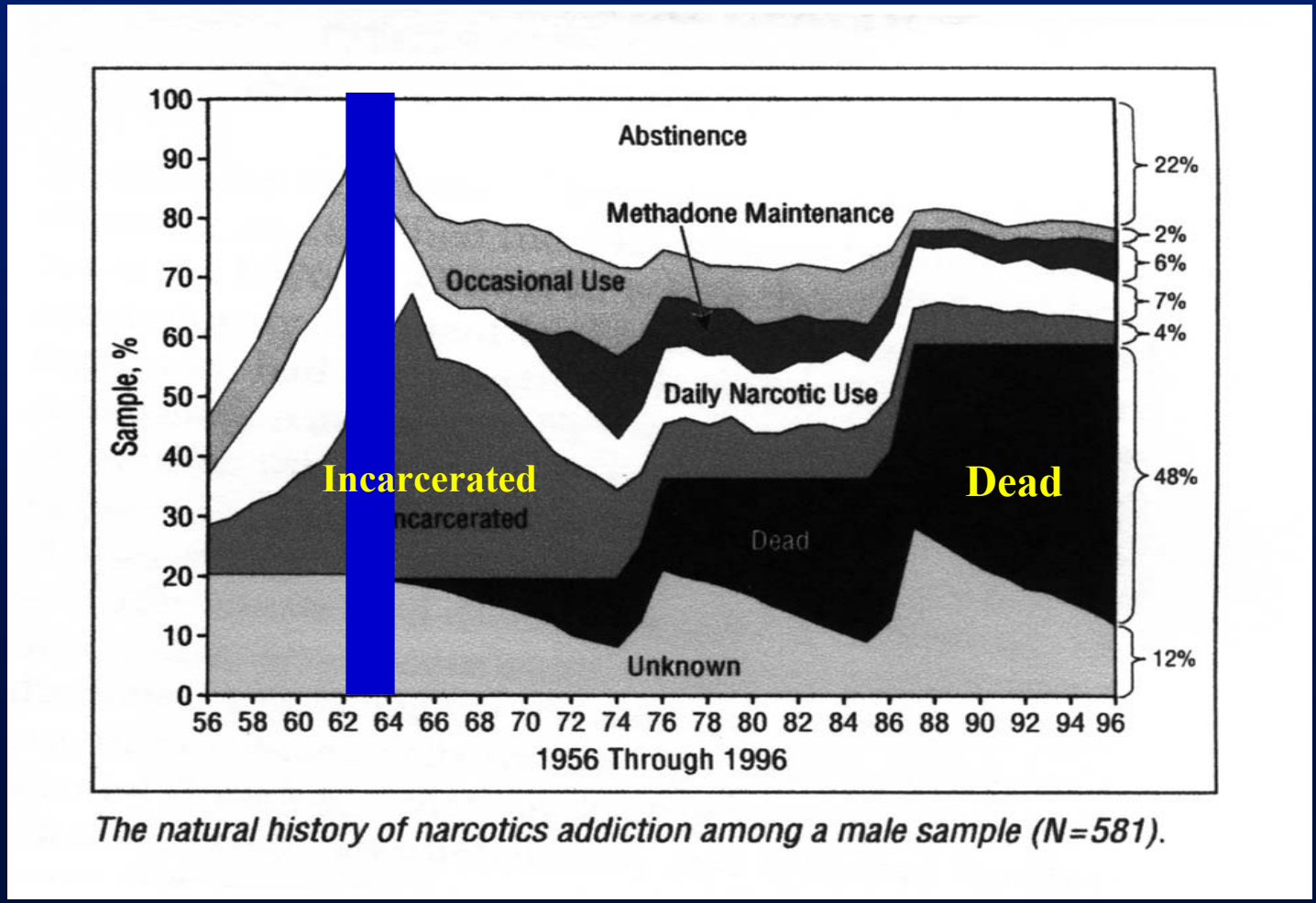
Release from Prison - A High Risk of Death for Former Inmates



Binswanger IA et al. N Engl J Med 2007;356:157-165

33-year Follow-Up of Heroin-Dependent Criminal Offenders in California Civil Commitment Program 1962-1964



The natural history of narcotics addiction among a male sample (N=581).

Source: Hser and Anglin et al. "A 33-year Follow-Up of Narcotics Addicts". Archives of General Psychiatry. 2001;58:503-508

Causes of Death among Former Inmates

Adjusted for Age, Sex, and Race

Binswanger IA et al. N Engl J Med 2007;356:157-165

Mail Survey Regarding Availability of Methadone in US Prisons

- 39 state prison systems plus federal BOP responded:
  - 88% of US prisoners
- 48% use methadone in rare situations
  - Detox
    - 32% for pregnant women
    - 42% for inmates on MMR
    - 32% for opiate withdrawal
  - MMT
    - 68% for pregnant women
    - None offered MMT to any other population

Rich et al. 2005

Opioid Overdose

- The Triad:
  - coma, pinpoint pupils, respiratory depression
- Naloxone (Narcan) 0.4 mg/ml IV/IM, repeat as needed, up to 1-2 mg.
  - Short acting
  - Some communities distributing naloxone and training IDUs in its use
- OD “Good Samaritan” laws for 911 calls
  - victims and witnesses of drug overdose who seek medical help immune from possession charges

Cardiomyopathy in Methamphetamine Users

- Case-control study
  - 107 cardiomyopathy patients age <45
  - Adjusting for age, BMI, and renal failure, methamphetamine associated with 3.7x risk of cardiomyopathy
  - Mechanism of injury related to excess catecholamine
- Cardiomyopathy associated with ventricular arrhythmias

Yeo et al. Am J Med 2007

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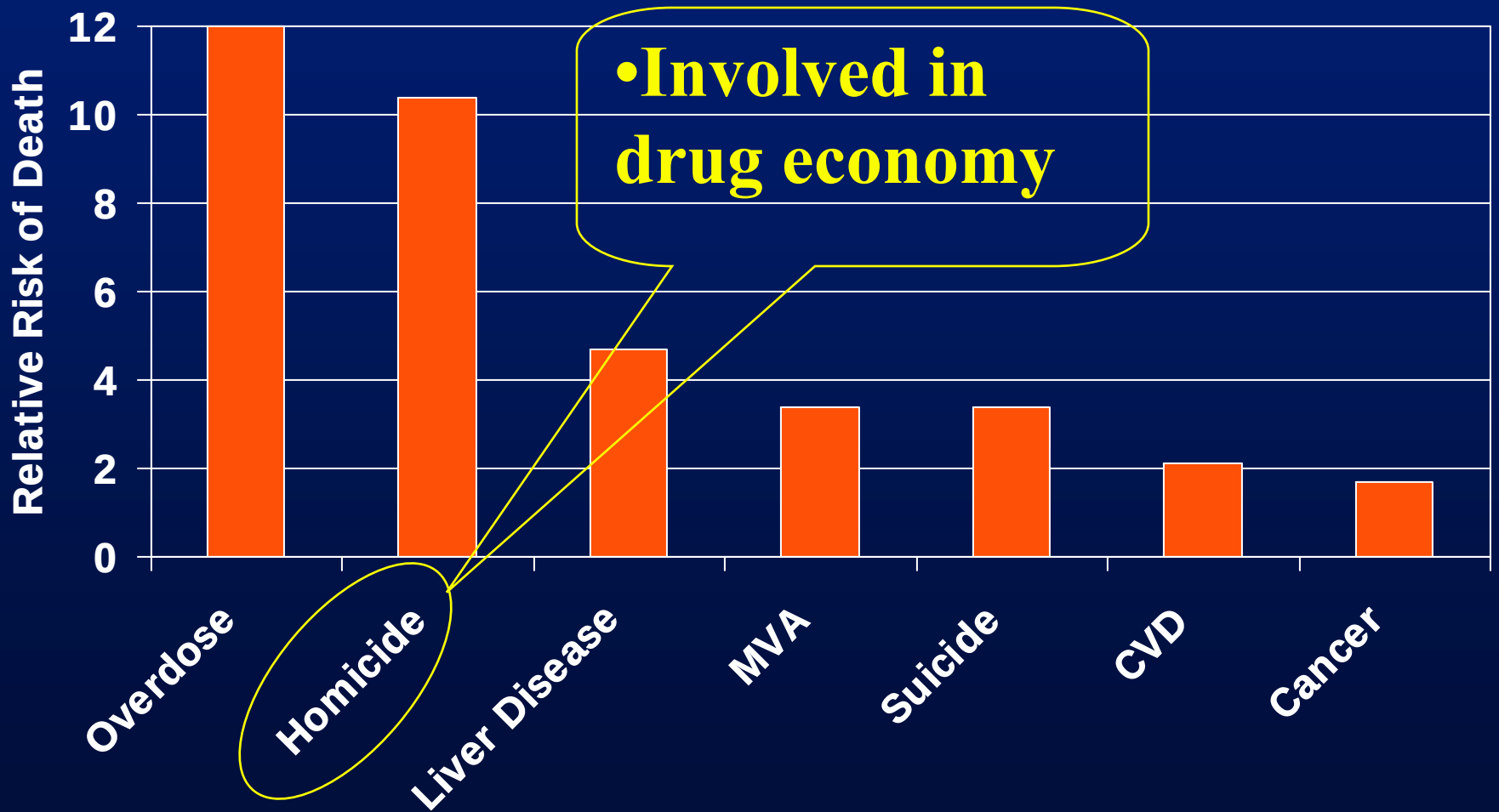

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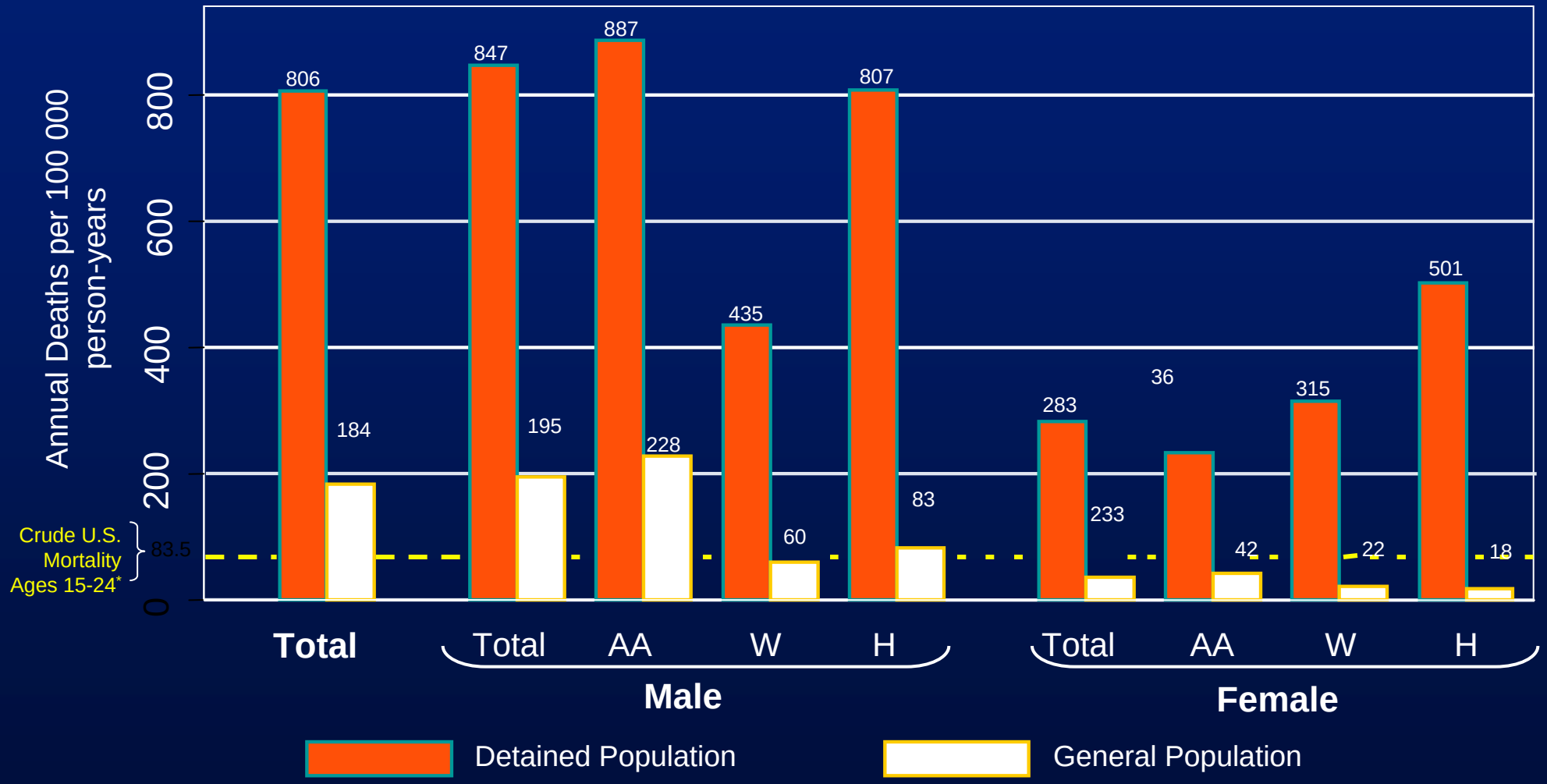
Mortality in Delinquent & Community Youth



AA= African American; W= Non-Hispanic White; H= Hispanic.

*Crude U.S. mortality for the years 1996-2001 was computed from the National Vital Statistics Reports.

Teplin, Northwestern Juvenile Project

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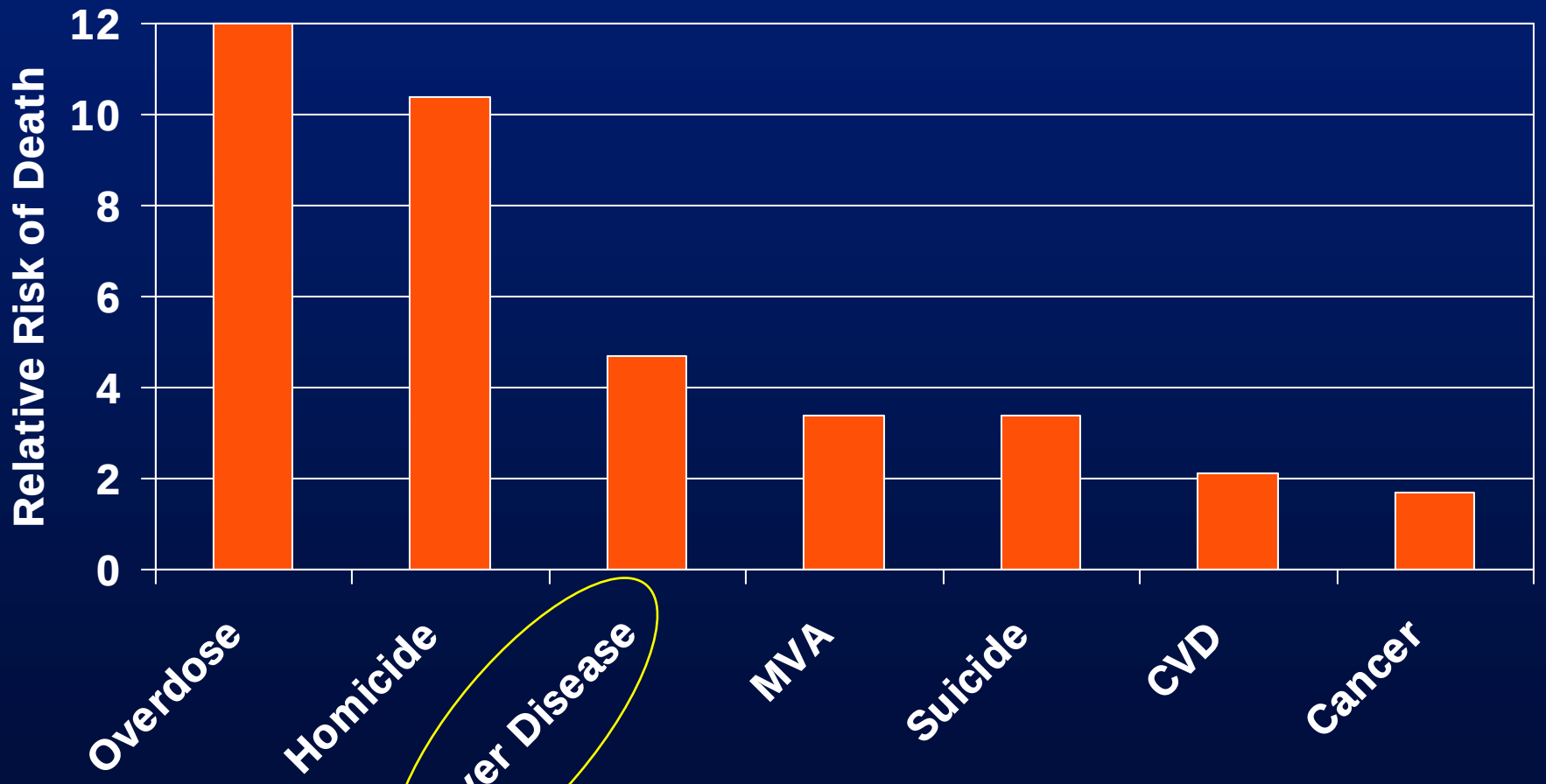

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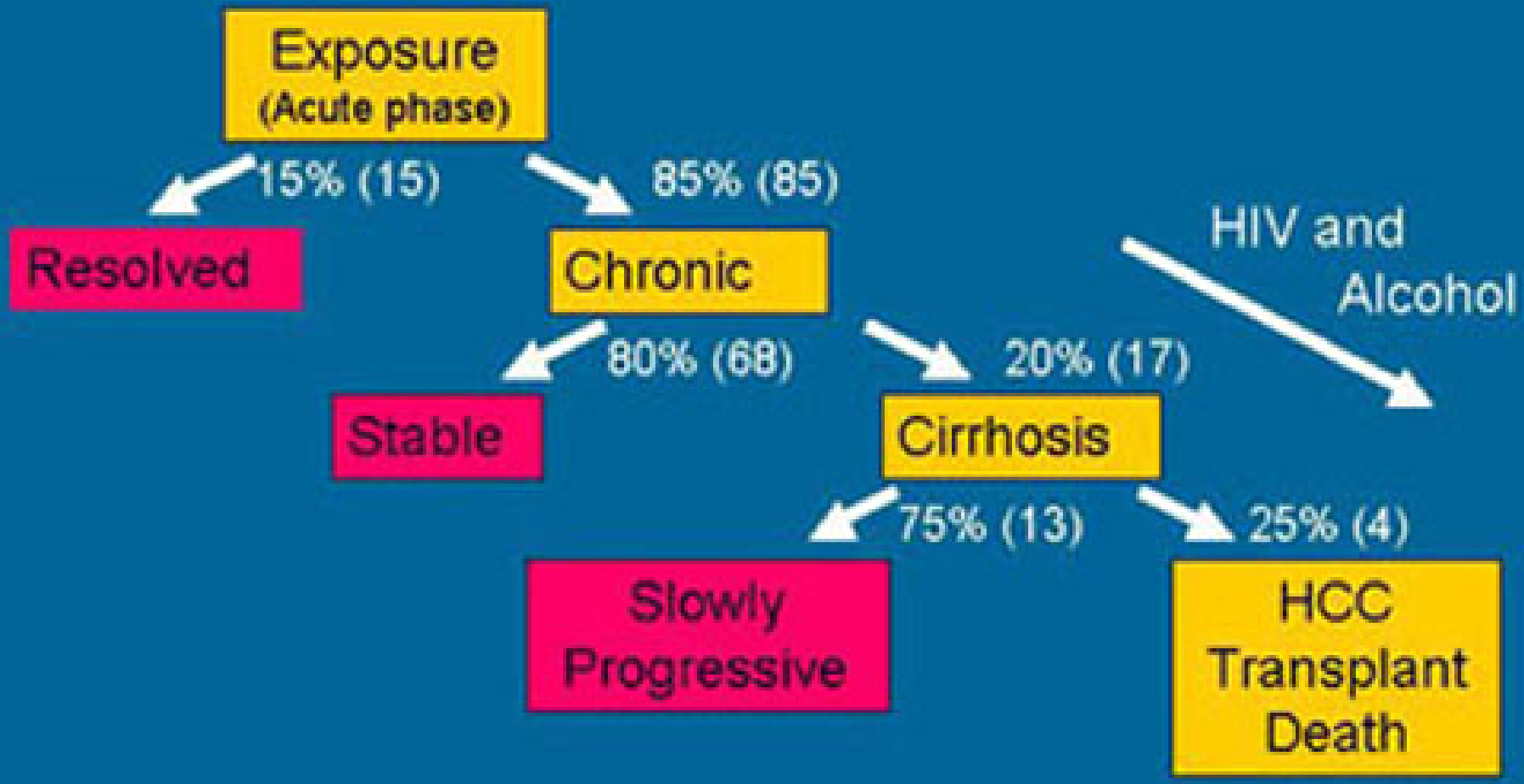
Hepatitis B and C

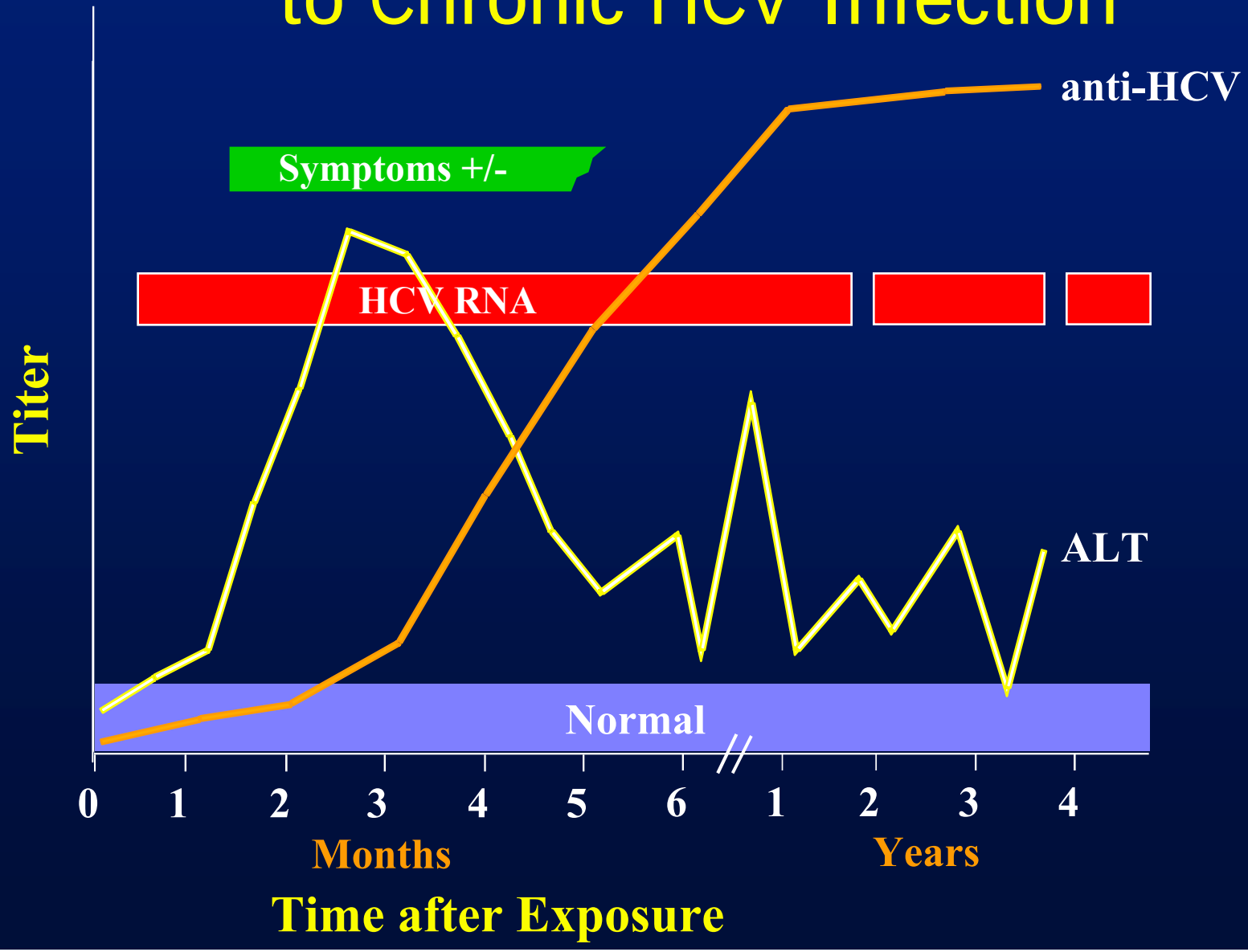
- Parenteral spread
  - IDU
  - Tattoos
    - 66% of HCV in prison not associated with IDU
  - Sexual (hep B)
- Fever, jaundice, elevated LFT's
  - Often minimal symptoms
- IgM or viral load to diagnose acute dz.

Natural History of HCV Infection



Alter, MJ. Epidemiology of Hepatitis C in the West. Semin Liver Dis. 1996; 15:5-14.
Management of Hepatitis C. NIH Consensus Statement. 1997 March 24-26;15(3).

Acute HCV Infection with Progression to Chronic HCV Infection



HCV Monitoring and Maintenance

- Liver enzymes: every 6-12 months
- Viral load:
  - annually, or if LFT elevated
- Genotype, staging biopsy if treating
- Annual AFP, US if chronic
- Immunizations
  - Hep A and B
- Avoid liver toxins
  - Alcohol
  - Acetaminophen

Hep C: Treatment

- Pegylated Interferon/Ribavirin
  - 54 % SVR
  - 1 year treatment
  - one injection per week, two pills per day
  - Genotype 2 & 3 better response
  - ? Restrictions
    - active drug abuse
    - psychiatric disease

HCV Treatment: Side Effects

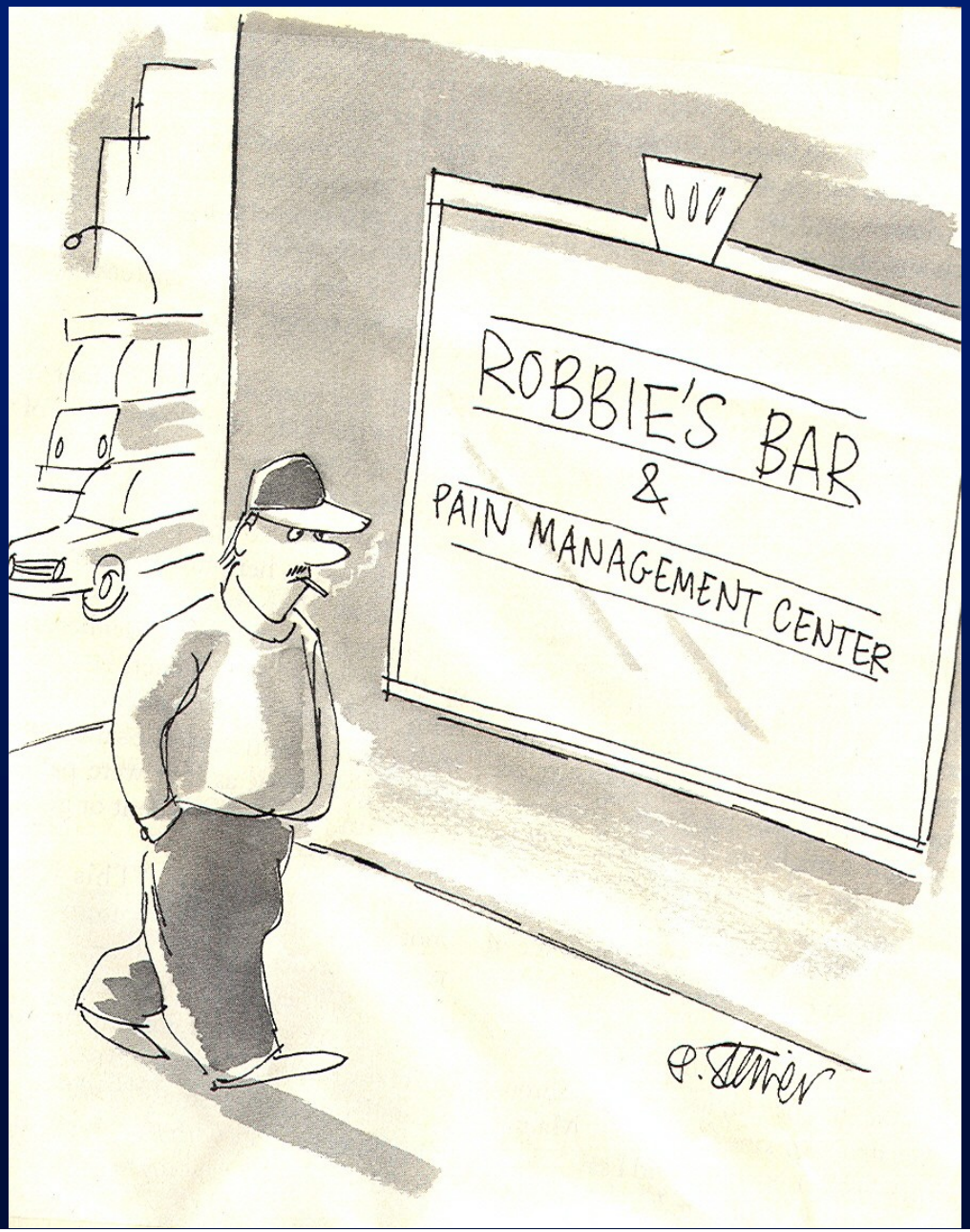
- Flu syndrome 82%
- Psych complications 20%
- Cannot cont. tx 20%
- Bone marrow sup 5%

Feels like withdrawal

"dope sick"

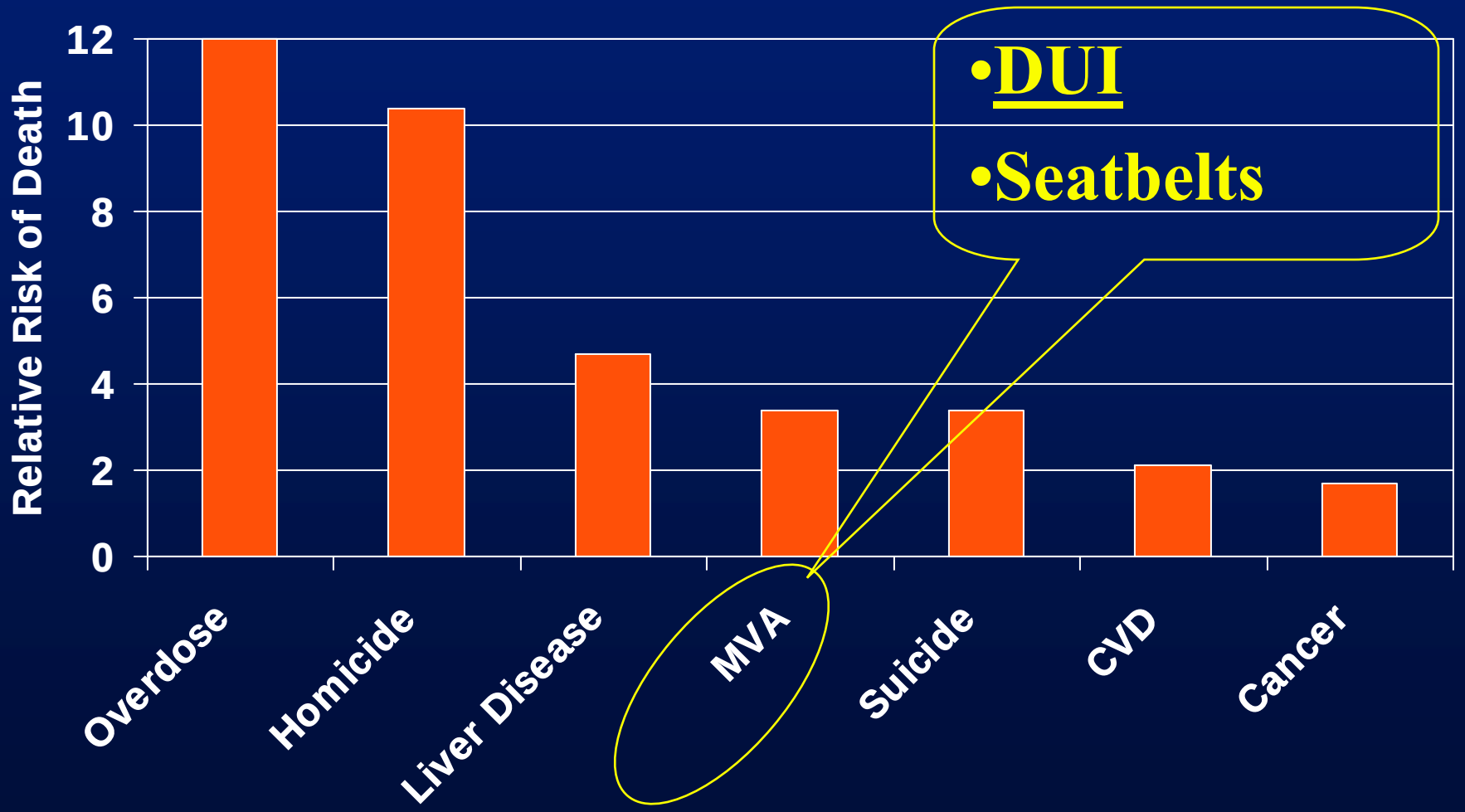
Relapse trigger!

Alcohol Is A Common Substitute for Drugs



- Alcohol not detected in forensic drug screens
- Alcohol accelerates progression of HCV
- Screen
  - "Do you sometimes drink alcoholic beverages?"
  - "How many times in the past year have you had…"
    - -5 or more drinks in a day (men)
    - -4 or more drinks in a day (women)

Causes of Death among Former Inmates



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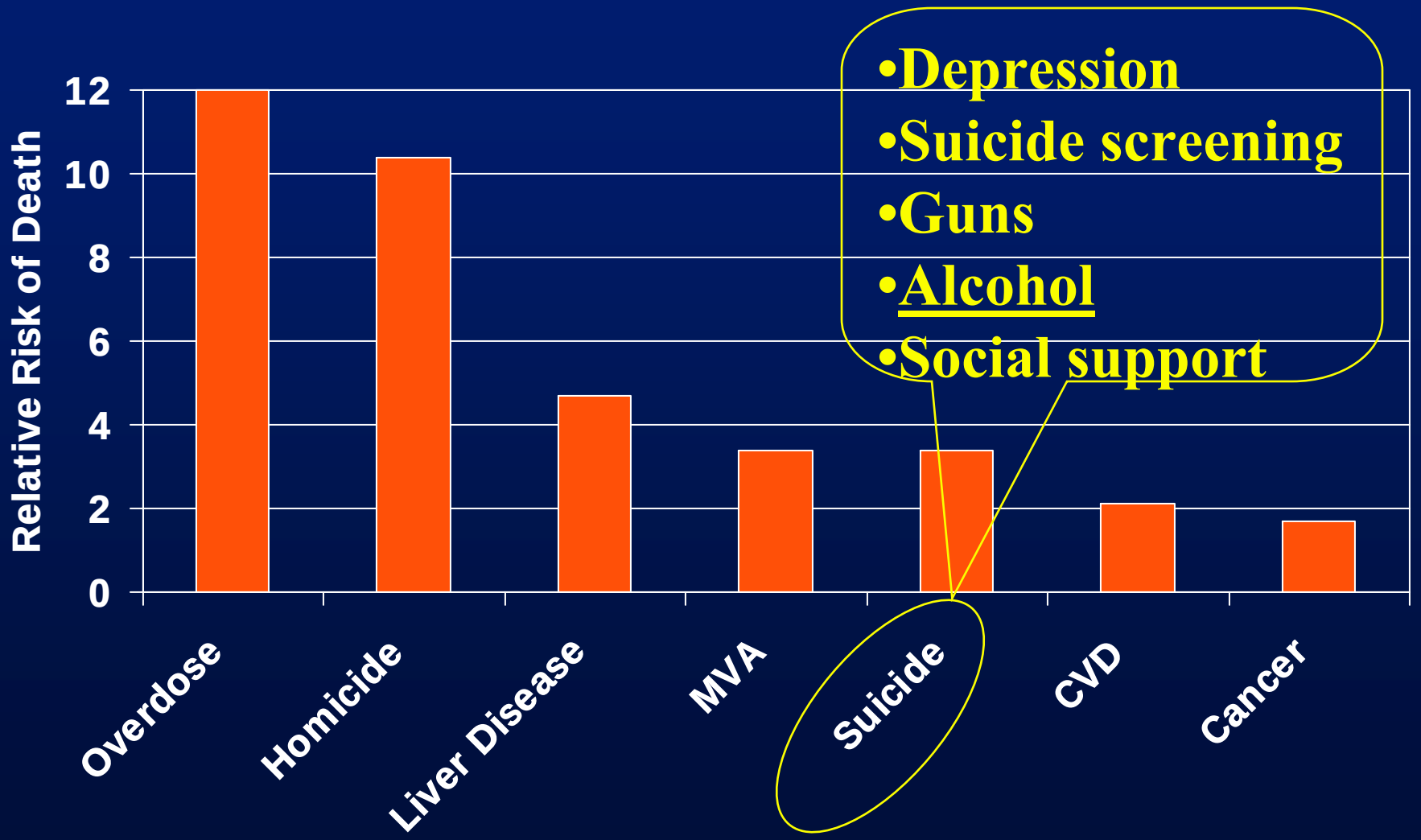

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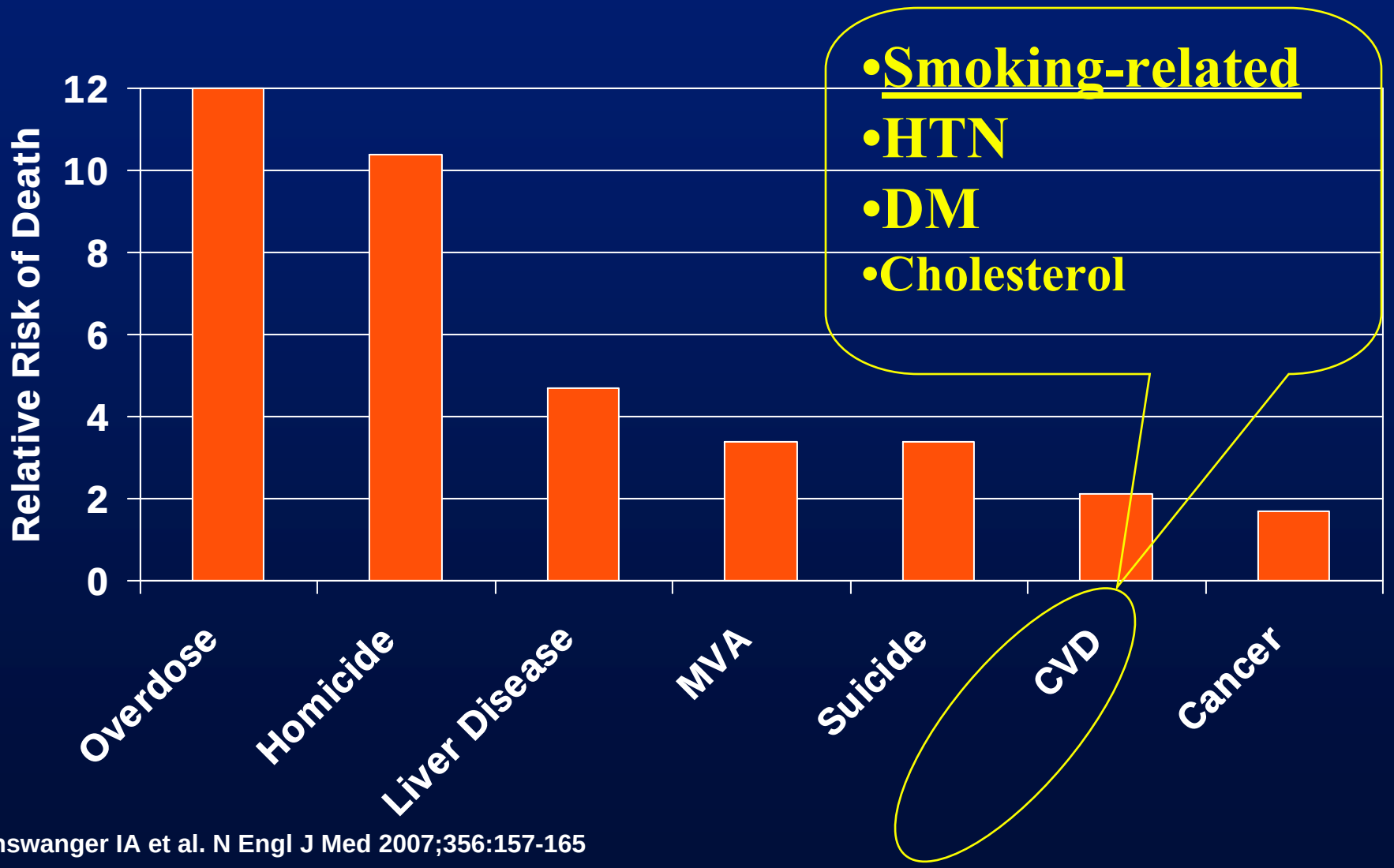

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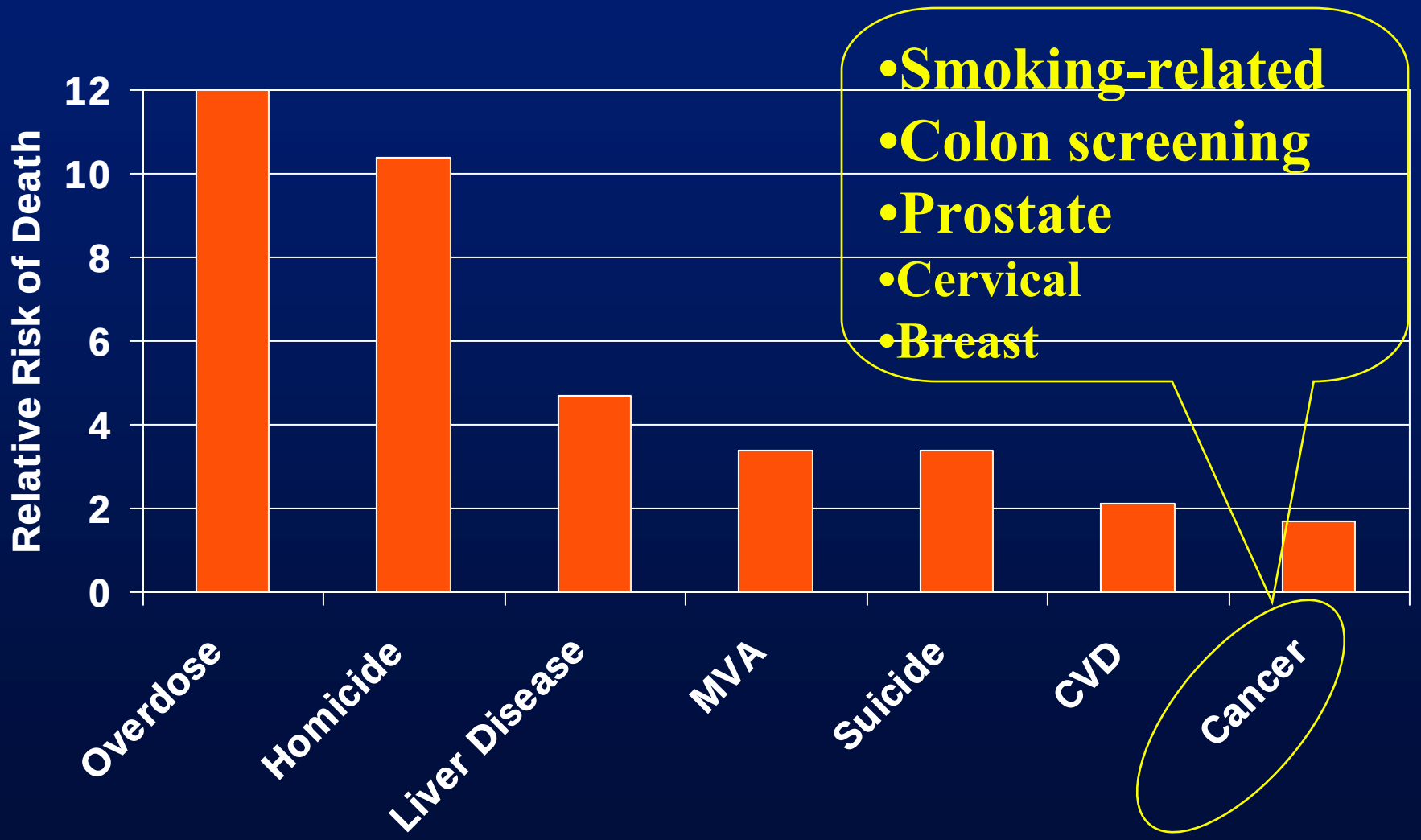

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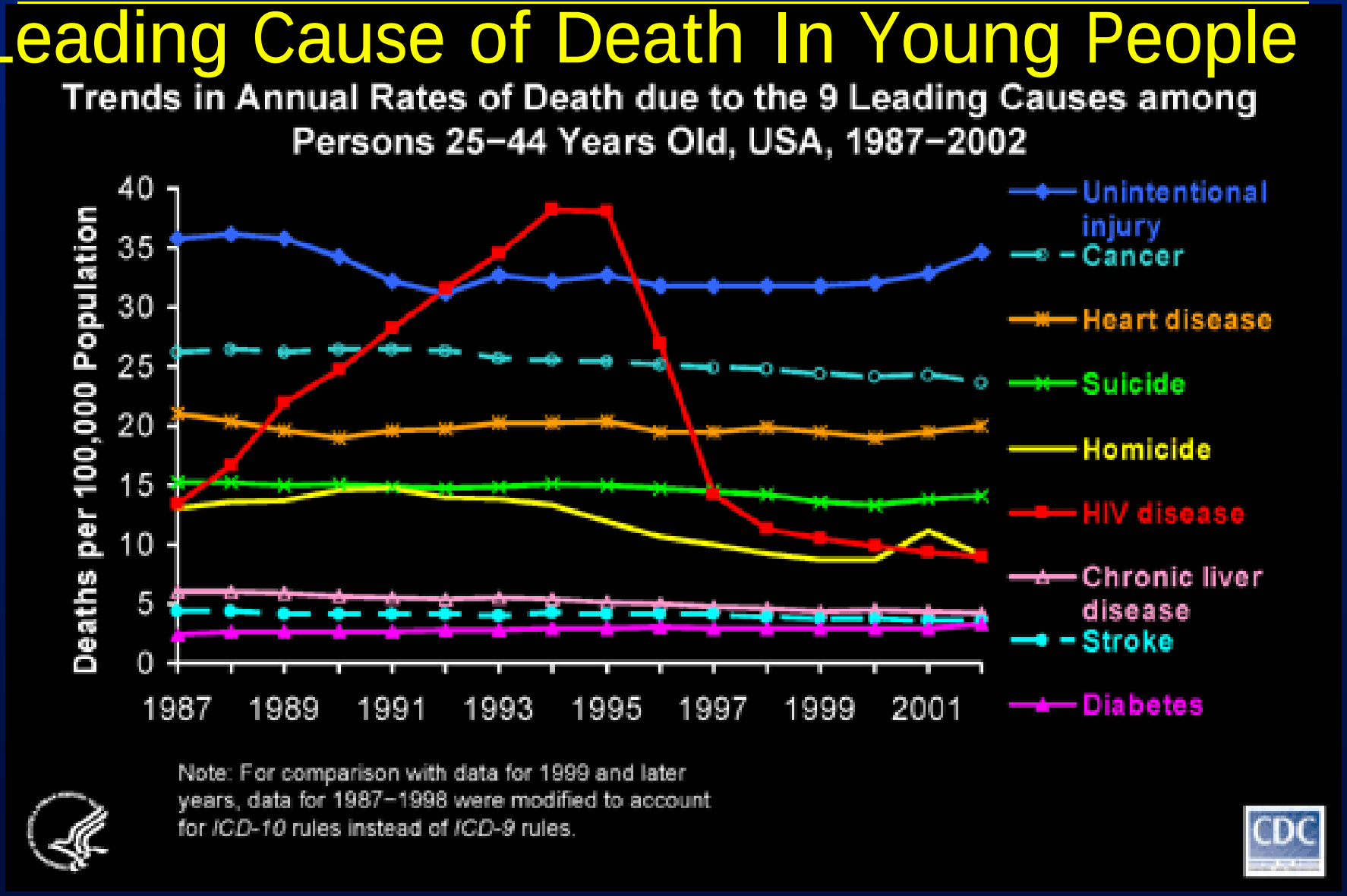
The 5 A's

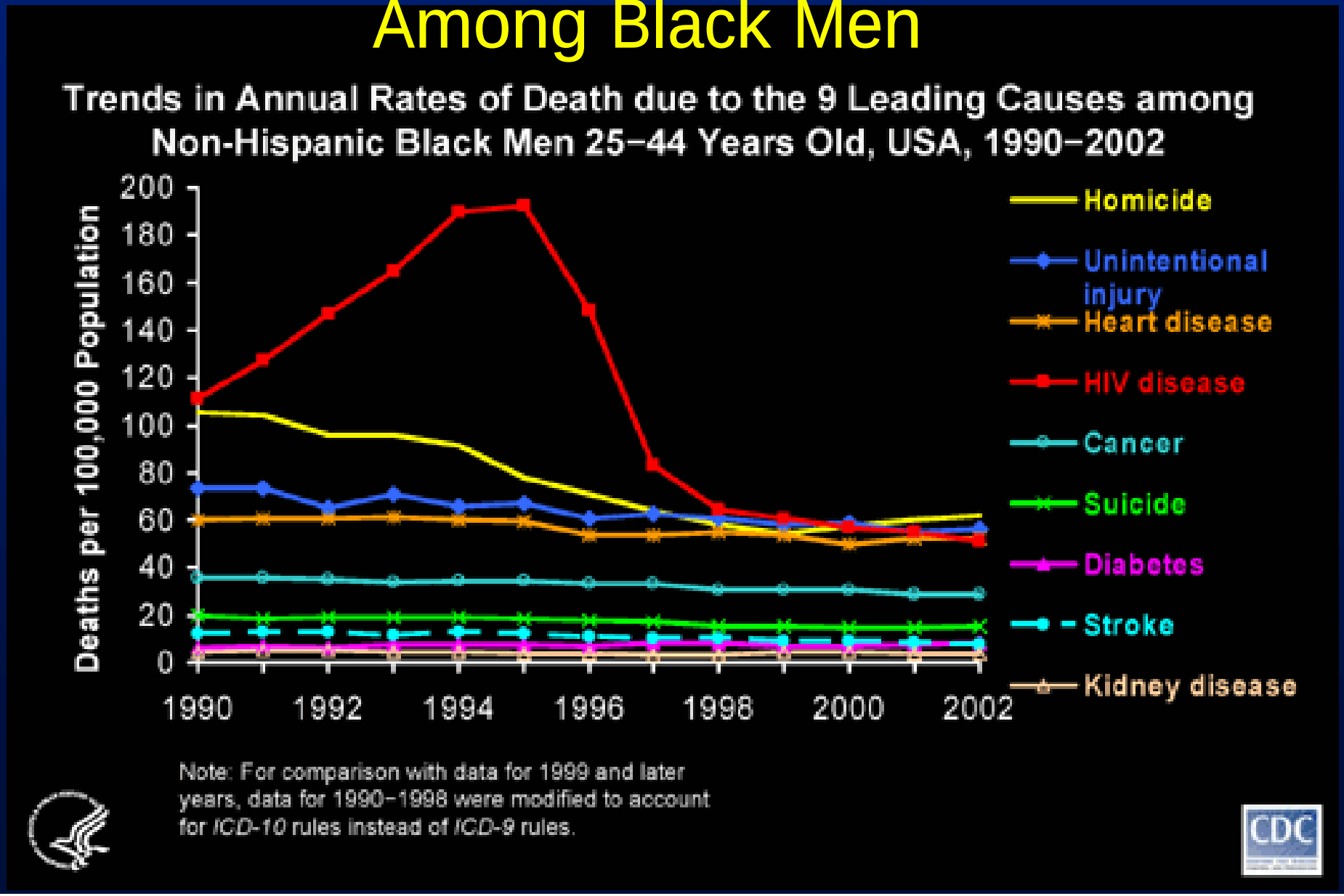
- ASK about alcohol use and smoking
- ASSESS severity and readiness to change
- ADVISE abstinence as safest
  - Negotiate cutting down if necessary
- ASSIST using counseling, referral, pharmacotherapy and other resources
- ARRANGE follow-up to monitor progress

HIV/AIDS Is No Longer a Leading Cause of Death In Young People



- **HAART has decreased AIDS mortality 60% in USA**

HIV/AIDS Still A Leading Cause of Death Among Black Men



Antiretrovirals

- **NRTIs:**
  - AZT, ddI, d4T, 3TC, FTC, Abacavir, Tenofovir
  - Combivir (AZT/3TC)
  - Truvada (FTC/Tenofovir)
  - Epzicom (3TC/Abacavir)
- **NNRTIs:**
  - Efavirenz, Nevirapine,
  - Etravirine (investigational)
- **Protease inhibitors:**
  - Lopinavir/r, Atazanavir/r,
  - Fosamprenavir/r
  - Indinavir, Saquinavir, Nelfinavir, Darunavir/r, Tipranavir/r
- **Fusion inhibitor:**
  - Enfuvirtide
- **HAART combination:**
  - Atripla (Efavirenz/FTC/Tenofovir)
- **Investigational drugs:**
  - **CCR5 inhibitors:**
    - Maraviroc, Vicriviroc
  - **Integrase inhibitor:**
    - MK0518
  - **Maturation inhibitor:**
    - PA457

One Pill Once a Day!!

Indications for HIV/AIDS Treatment

Clinical Category	CD4	HVL	Recommendation
Symptomatic AIDS	Any Value	Any Value	Treat
Asymptomatic AIDS	<200	Any Value	Treat
Asymptomatic	>200 but <350	Any Value	Treatment Offered Controversial
Asymptomatic	>350	>55,000	Controversial 3yr risk >30%
Asymptomatic	>350	<55,000	Defer Treatment, 3yr risk <15%

HIV Screening: Revised CDC Recommendations

(MMWR 9/22/2006)

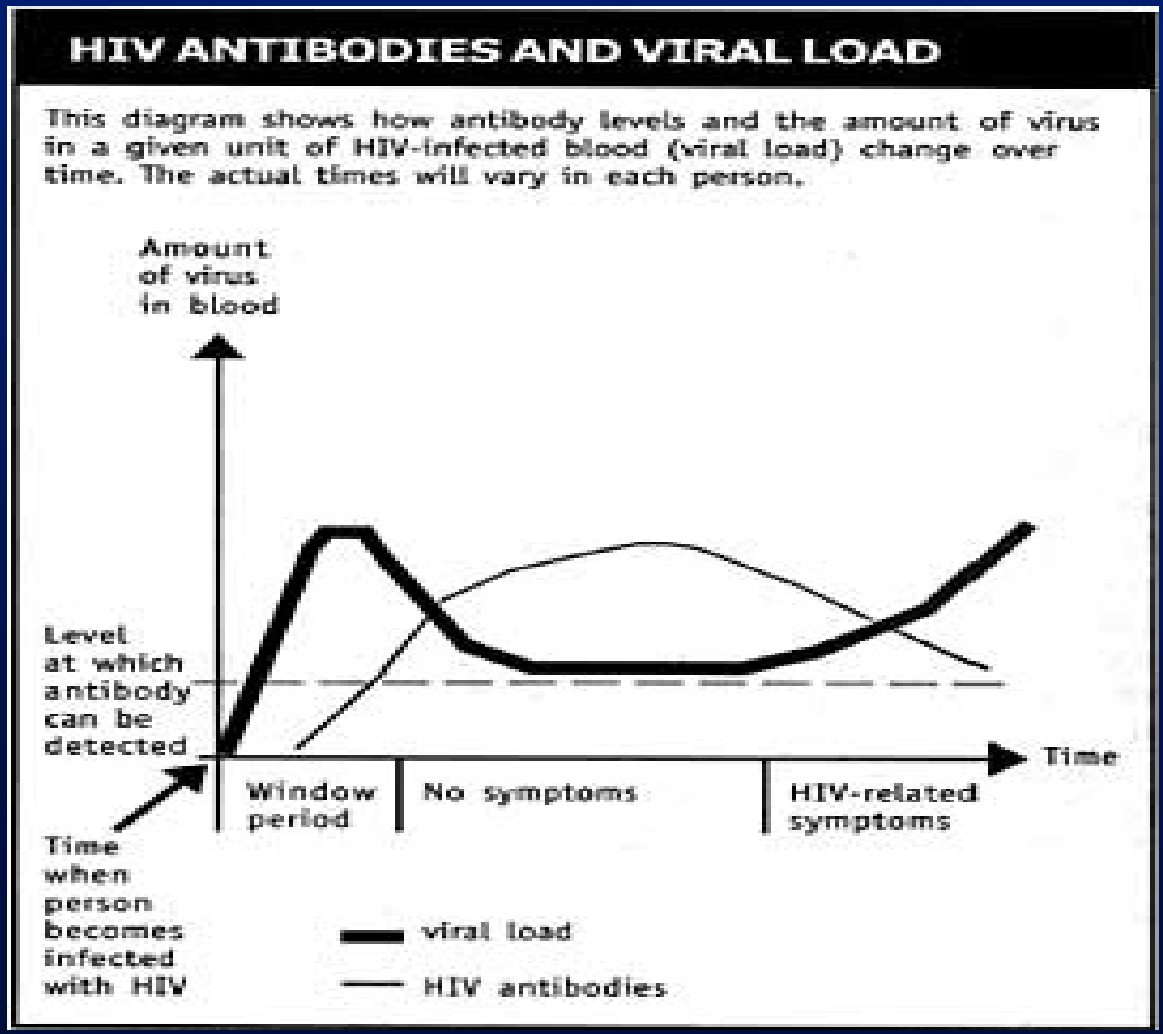
- Screening in all healthcare settings
  - Includes correctional settings
- Test high risk persons annually
- Consent for general medical care should assume consent for HIV screening
  - Separate consent for HIV testing required in 28 states
  - Testing voluntary but on opt-out basis: inform patients that HIV testing will be performed unless they decline
- Inability to counsel should not bar testing

Acute HIV: Signs and Symptoms

- Fever 96%
- Pharyngitis 70%
- Adenopathy 74%
- Rash 70%
  - maculopapular - face, trunk, extremities,
  - mucocutaneous ulceration
- Lab Abnormalities
  - Leukopenia, thrombocytopenia, LFT's elevated
- Headache 32%
- Myalgias 54%
- GI symptoms 30%
  - Nausea, vomiting or diarrhea
- Thrush 12%
- Neuro sx 12%
  - Aseptic meningitis
  - Facial palsy

Diagnostic Testing for Acute HIV Infection

- High level of suspicion if compatible clinical syndrome or recent high-risk behavior
  - plasma RNA test and HIV antibody test
- Test all patients with signs/symptoms consistent with HIV infection



Sexuallly Transmitted Infections

- STI risk factor for HIV transmission – annual antibody test
  - Syphilis - annual VDRL/RPR
  - Hepatitis B - vaccinate
  - Genital warts
    - Dysplasia: cervical, vulvar, perineal, anorectal
    - Pap Smears
    - HPV vaccination???
  - Chlamydia – screen all women
  - Gonorrhea – casefind
  - Herpes – suppression with antivirals to reduce transmission
- Sexual activity high after prison
  - Abstinence is safest
  - Protective measures, contraception

Meeting the Medical Needs of Drug-Involved Offenders

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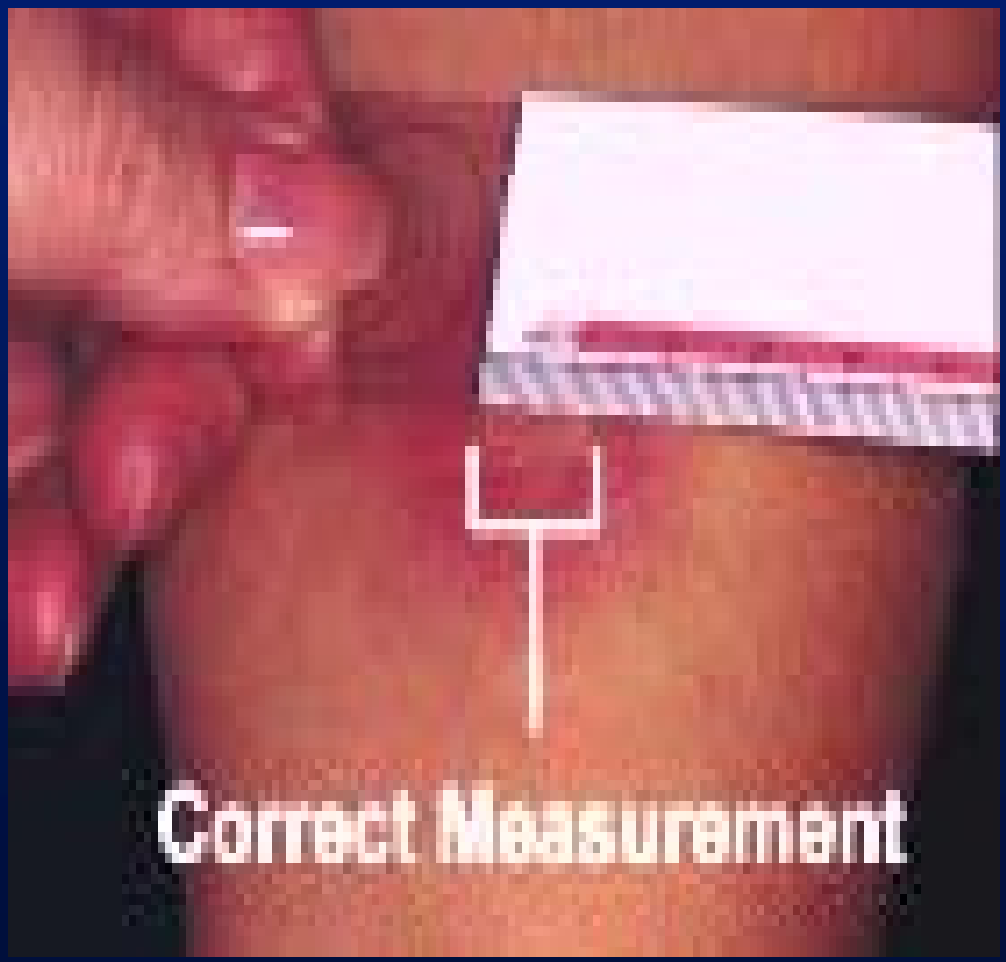
PPD for Tuberculosis

- Read reaction: 48-72 hours
- Measure only induration using mm
- Annual CXR if previous +



Tuberculosis Screening: PPD

>15mm positive regardless of risk factors

> 10 mm positive if:

- Recent immigrant from endemic area
- IVDU
- High risk residential
  - Jail/prison, nursing home, homeless shelter
- High risk clinical
  - DM, CRF, malignancy, wt. loss, gastrectomy/bypass
- Children < 4 exposed to high-risk adults

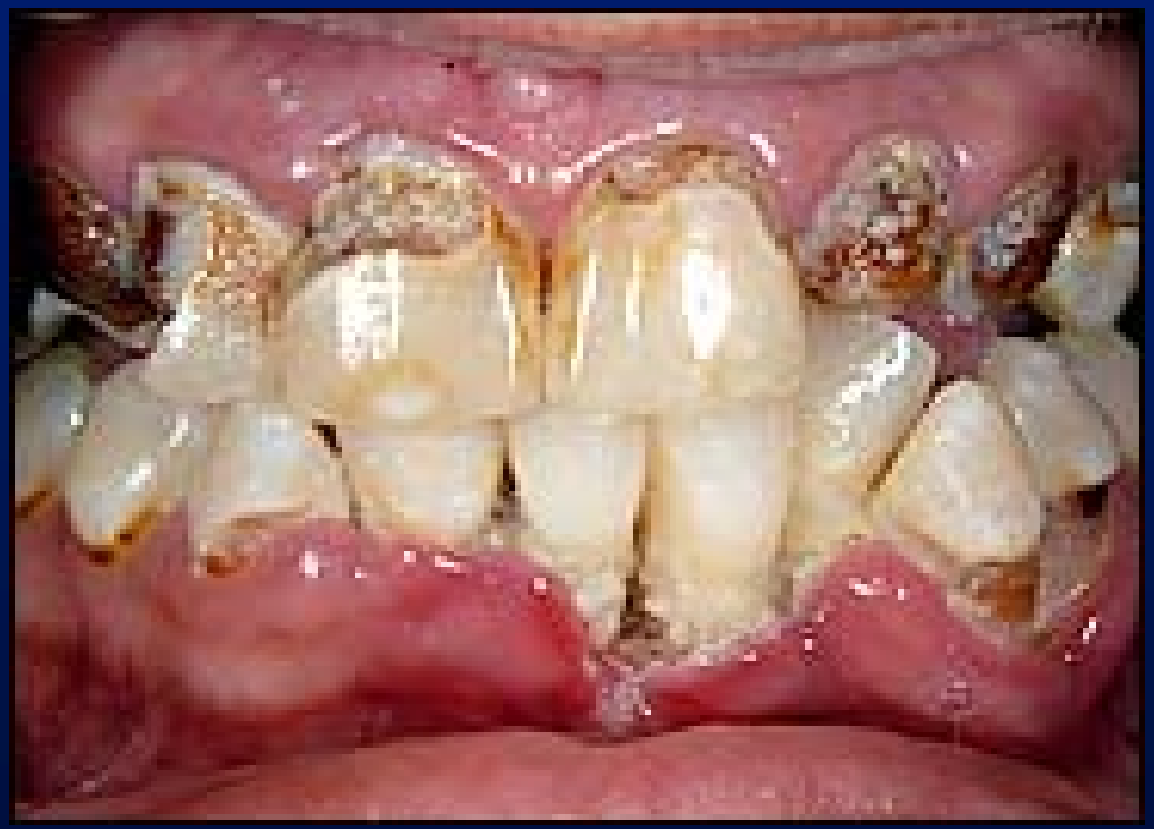
> 5 mm positive if:

- HIV positive
- Recent TB contact
- CXR with TB changes
- Organ transplants
- Immunosupressed

Preventive Health Care – Vaccinations

- Hepatitis A
- Hepatitis B
- Pneumococcal vaccine
- Influenza vaccine
- Tetanus
- ?Hemophilus influenza vaccine
- ?HPV

Methamphetamine Associated with Tooth Destruction



Source: Richards, JR and Brofeldt, BT, J Periodontology, August 2000.

Summary

- High prevalence of medical problems in prisoners and ex-offenders
  - Acute & Chronic
  - Most related directly or indirectly to drug use
- Many ways to intervene effectively
  - Educate about risks
  - Screening / case-finding
  - Preventive measures
    - Condoms
    - Vaccines
  - Treatment