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
Incarceration and Disease

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

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
Meeting the Medical Needs of Drug-Involved Offenders

- Opportunity To Improve Public Health
- Post-release Mortality And Morbidity
- Other Primary And Secondary Prevention
Release from Prison - A High Risk of Death for Former Inmates

RR=12

RR=4

RR=3.2

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

Causes of Death among Former Inmates
Adjusted for Age, Sex, and Race

- Overdose
- Homicide
- Liver Disease
- MVA
- Suicide
- CVD
- Cancer

• Opioids
• Prison detox => ↓ tolerance

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

Causes of Death among Former Inmates
Adjusted for Age, Sex, and Race

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
Causes of Death among Former Inmates
Adjusted for Age, Sex, and Race

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

- **Exposure (Acute phase)**
  - 15% (15) Resolved
  - 85% (85) Chronic
    - 80% (68) Stable
    - 20% (17) Cirrhosis
      - 75% (13) Slowly Progressive
      - 25% (4) HCC Transplant Death

*HIV and Alcohol*

Acute HCV Infection with Progression to Chronic HCV Infection

Symptoms +/-

Titer

HCV RNA

anti-HCV

ALT

Time after Exposure

Months

Years

Normal
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

- Overdose
- Homicide
- Liver Disease
- MVA
- Suicide
- CVD
- Cancer

Relative Risk of Death

- DUI
- Seatbelts

Causes of Death among Former Inmates

- Overdose
- Homicide
- Liver Disease
- MVA
- Suicide
- CVD
- Cancer

Relative Risk of Death

- Depression
- Suicide screening
- Guns
- Alcohol
- Social support

Causes of Death among Former Inmates

- Overdose
- Homicide
- Liver Disease
- MVA
- Suicide
  - Smoking-related
  - HTN
  - DM
  - Cholesterol
- CVD
- Cancer

Causes of Death among Former Inmates

Relative Risk of Death

- Overdose
- Homicide
- Liver Disease
- MVA
- Suicide
- CVD
- Cancer

• Smoking-related
• Colon screening
• Prostate
• Cervical
• Breast

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

Trends in Annual Rates of Death due to the 9 Leading Causes among Persons 25-44 Years Old, USA, 1987-2002

Note: For comparison with data for 1999 and later years, data for 1987-1998 were modified to account for ICD-10 rules instead of ICD-9 rules.

- HAART has decreased AIDS mortality 60% in USA
HIV/AIDS Still A Leading Cause of Death Among Black Men


Note: For comparison with data for 1999 and later years, data for 1990–1998 were modified to account for ICD-10 rules instead of ICD-9 rules.
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

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<th>Clinical Category</th>
<th>CD4</th>
<th>HVL</th>
<th>Recommendation</th>
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<td>Any Value</td>
<td>Any Value</td>
<td>Treat</td>
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<td>&lt;200</td>
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<td>&lt;350</td>
<td></td>
<td>Controversial</td>
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<td>3yr risk &gt;30%</td>
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<td>3yr risk &lt;15%</td>
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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
Sexually 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
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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
  - Immunosuppressed
Preventive Health Care – Vaccinations

• Hepatitis A
• Hepatitis B
• Pneumococcal vaccine
• Influenza vaccine
• Tetanus
• ?Hemophilus influenza vaccine
• ?HPV
Methamphetamine Associated with Tooth Destruction

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