METH, MEN, AND HIV: WHAT SOCIAL WORKERS NEED TO KNOW

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AGENDA

History and Epidemiology
Manufacture
Ingestion and Effects
Meth and Sex
Meth and HIV
Best Practices
WHAT IS METHAMPHETAMINE?

“Tina”

“Ice”

“Meth”

“Speed”

“Chalk”

“Glass”

“Crank”

“Crystal”

“Fire”
AMPHETAMINES

- Amphetamines
  - Synthetic psychoactive drugs called CNS Stimulants
  - Narcolepsy, obesity, ADHD
  - Amphetamine (2 compounds: levoamphetamine and dextroamphetamine)
    - Dextroamphetamine (Dexedrine, “go-pills”)
    - Methamphetamine (Desoxyn)
  - Basic molecule can be modified for specific actions
  - Methylphenidate, Fenfluramine, phenmetrazine (Preludin), MDMA (ecstasy)
  - Methylphenidate (Concerta, Ritalin) are Schedule II
OTHER CNS STIMULANTS:

- Cocaine
- Nicotine
- Caffeine
- Pseudoephedrine
- Phenylpropanolamine (Dexatrim)
Classes of Emerging Synthetic Drugs

Phenethylamines
- Cathinones

Cannabinoids

Tryptamines (hallucinogens, psilocybin)

Piperazines (BZP, stimulants)

Opiates

Benzodiazepine Analogs
32 Kinds of Synthetic Phenethylamines Stimulants/Hallucinogens

Phenethylamines

- Amphetamines
- Methamphetamines
- 2-C Series ("NBOMe") – 5 types
- FLAKKA
HISTORY OF METH
HISTORY OF METH

1887
First created in Germany

1919
Crystalline powder form created in Japan

1919 – 1930
- Used as a component in benzedrine bronchial dilators and to stimulate CNS.
- Benzedrine available OTC
HISTORY OF METH

1940s

- Japanese soldiers use meth
- Nazi soldiers use meth
  - Pervitin
  - Hitler a meth addict
- Allied soldiers use meth
  - 5 meth-containing “energy” tablets in each soldier’s kit
HISTORY OF METH

America’s love affair with speed
HISTORY OF METH

America’s love affair with speed
METHODS OF MANUFACTURE

• P2P (swimming pools)
• Red Phosphorus Method
• Nazi (anhydrous ammonia method)
• Sudafed Smurf
CLAN LAB DANGERS

Explosion
Fire
Inhalation of fumes
Skin contact of chemicals
METH PRODUCTION CHEMICAL INGREDIENTS

Anhydrous Ammonia (Fertilizer)
Iodine (Veterinarian Products)
Lithium (Batteries)
Methanol (Gasoline Additive)
Red Phosphorus (Matches)
Muriatic Acid (Used in Pools)
Ammonia
Acetone
Ether (Engine Starter)
CLAN LABS AND CHILDREN

Children and meth

Life of a drug-endangered child
- Life of chaos
- Bonding and attachment are disrupted
- No boundaries or limits
- Pornography
- Knowledge of drugs
- Access to drugs, needles, other paraphernalia, chemicals
- Filth, environmental exposure

Medical issues that affect children
- Acute illness or injury
- Lethargy
- Agitation
- Jitters
- Seizure activity
- Respiratory symptoms
- Lack of basic medical care
- Immunizations
- Speech delays
- Developmental delays
- Behavior issues
- Dental caries
- Inadequate nutrition
- Untreated conditions

Issues that affect children
- Supervision issue
- School problems
- Criminal behavior
- Social isolation
- Environmental dangers
- Sexual, physical abuse
- Overall neglect
OH, THAT HAS BEEN AROUND FOR YEARS. MOST FOLKS JUST NEVER PAID ANY ATTENTION TO IT BEFORE...

WELL, YOU SURE DON'T SEE THAT EVERY DAY!
FLORIDA METH LAB SEIZURES

FY 2000 - FY 2006

Source: MFD Tampa HIDTA/CLET
TRENDS

• Price significantly decreased and purity increased since 2007
• Potency continued to rise over the past 4 years
• Highest availability in western states
• Lowest availability in northeastern states
• High purity and potency levels likely contribute to rise in abuse
TRENDS

• Increased production in Mexico
• New users becoming psychotic in short period of time due to potency.
• More crystal meth use among young MSM and high-risk heterosexual populations.
• STIs being spread by use of GRINDR® and Craig’s List® but outreach workers also using these apps to locate their cases.
TRENDS

• Indicators are now equal to or at higher levels than before the ban on pseudoephedrine.
  • Proportion of Meth crime lab items rose from 19% in 2012 to 24% in 2013 in Texas.

• Purity & potency across US remain at 95-96.
• Areas which had traditionally been dominated by heroin now reporting increasing problems with meth
LIQUID METH

• New form of meth has surfaced called liquid meth
• Dissolved in water (liquified) for purposes of transportation
• Placed in familiar containers (eg tequila bottles, windshield washer tanks in vehicles which are commonplace at points of inspection)
• Once shipped the water is boiled away leaving the drug in solid form
DRUGS MOST COMMONLY IDENTIFIED BY FORENSIC LABS REPORTING TO NFLIS: U.S. 2003 VS. 2008 VS. 2013

Source: NFLIS
Price and Purity of Methamphetamine in USA 2007 – 2012

Oct 2007 to Dec 2012
Price Down 72 %
Purity up 120 %

Source: USDJ: DEA – STRIDE Data
<table>
<thead>
<tr>
<th>Term</th>
<th>Amount</th>
<th>Going Rate in SF</th>
</tr>
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<tbody>
<tr>
<td>Quarter</td>
<td>( \frac{1}{4} ) gram (0.01 ounce) (about half 1”x1” bag)</td>
<td>$20-$40</td>
</tr>
<tr>
<td>Half</td>
<td>( \frac{1}{2} ) gram (0.02 ounce)</td>
<td>$40-$80</td>
</tr>
<tr>
<td>Teenager</td>
<td>1/16 ounce (1.8 grams)</td>
<td>$120</td>
</tr>
<tr>
<td>8-Ball</td>
<td>1/8 ounce (3.5 grams)</td>
<td>$250</td>
</tr>
<tr>
<td>Ounce</td>
<td>1.0 ounce</td>
<td>$1200</td>
</tr>
</tbody>
</table>
Figure 14. Primary Methamphetamine Treatment Admissions, as a Percentage of Total Treatment Admissions, in 16 CEWG Areas:\(^1\) 2013\(^2\)

- Phoenix: 23.0%
- San Francisco: 14.2%
- Texas: 13.0%
- Denver: 12.4%
- Minneapolis/St. Paul: 9.6%
- Seattle: 9.3%
- Atlanta: 7.5%
- St. Louis: 4.3%
- Broward County: 0.5%
- Miami-Dade County: 0.4%
- Boston: 0.3%
- Maine: 0.3%
- Philadelphia: 0.3%
- Detroit: 0.1%
- Maryland: 0.1%
- Baltimore City: <0.1%
Exhibit 3: Production Routes of Methamphetamine Samples over 6g and Clandestine Methamphetamine Lab Incidents: DEA

Note: # of Labs shown in Red are from clandestine production in the USA. % of P2P production in Blue are from Mexican Labs.

P2P: phenyl-2-propanone (swimming pool cleaner)
WORLDWIDE EPIDEMIC

Pseudoephedrine manufactured in India and China

- Hawaii
- Australia
- Thailand
- Philippines
INGESTION AND EFFECTS
METHODS OF INGESTION

Smoke
Snort
Booty bump
Slam

Duration of Action 10-12 hours
SYNTHETIC MOLECULE

Not destroyed by heat

- 5-8 hits off 1 rock

Heavier molecule sits on receptor longer
METH IN THE BODY

Acute Physical Effects

- Increases heart rate, blood pressure, pupil size, respiration, sensory acuity, energy

- Decreases appetite, sleep, reaction time
METH IN THE BODY

Acute Psychological Effects

- Increases confidence, alertness, mood, sex drive, energy, talkativeness
- Decreases boredom, loneliness, timidity
METH IN THE BODY

Chronic Physical Effects

- Tremor, weakness, dry mouth, weight loss, cough, sinus infection, sweating, burned lips, sore nose, oily skin/complexion, headaches, diarrhea, anorexia
METH AND THE BODY

Chronic Psychological Effects

- Confusion, concentration, hallucinations, fatigue, memory loss, insomnia, irritability, paranoia, panic reactions, depression, anger, psychosis, formication, scarring
PSYCHIATRIC CONSEQUENCES

Acute Methamphetamine Psychosis
- Extreme paranoid ideation
- Well formed delusions
- Hypersensitivity to environmental stimuli
- Stereotyped behavior
- Panic, extreme fearfulness
- High potential for violence
LIMBIC / REWARD CENTER

Food
Sex
Excitement
Comfort
Nurturing

- Reinforcement for pleasure, then neural pathway formed: creates tolerance
Natural Rewards Elevate Dopamine Levels

**FOOD**

![Graph showing DA concentration over time with NAc shell highlighted.](source: Di Chiara et al.)

**SEX**

![Graph showing copulation frequency with sample numbers and event markers.](source: Fiorino and Phillips)
Effects of Drugs on Dopamine Levels

MORPHINE
- Time After Morphine
- % of Basal Release
- Dose (mg/kg)
- 0.5
- 1.0
- 2.5
- 10

COCAINE
- Time After Cocaine
- % of Basal Release
- DA
- DOPAC
- HVA

NICOTINE
- Time After Nicotine
- % of Basal Release
- Accumbens
- Caudate

AMPHETAMINE
- Time After Amphetamine
- % of Basal Release
- DA
- DOPAC
- HVA

Source: Di Chiara and Imperato
METH AND THE BRAIN

MA (like cocaine) causes excessive release of dopamine resulting in great feelings of pleasure and well-being.
METH AND THE BRAIN

Dopamine levels in the brain
METH AND THE BRAIN
METH AND THE BRAIN

Cognitive Impairment

Sara Simon – Matrix Institute

- Stimulants and control group
- Digit symbol
- Trail making (judgment, problem solving)
- Word recall
- Picture recall
METH AND THE BRAIN

Findings

- In recovery verbal memory worse
- In recovery visual memory improved
- Important implications for treatment
IMPAIRMENTS OF FACIAL EMOTIONAL RECOGNITION

Capacity to identify emotions from facial expression and infer mental state impaired
IMPAIEMENTS OF FACIAL EMOTIONAL RECOGNITION

Facial Emotion Recognition Task

MA users made more total and perseverative errors than controls

Impairments in cognitive flexibility

Impairments in facial emotional recognition

Implications:

Social isolation, depression, aggressive behavior

Tx: consider role of social cognition and relearning social interactions
METH IN THE BODY
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Meth mouth
METH & SEX
METH & SEX

Because of the sensory effects and associated decrease in sexual inhibition, use of methamphetamine directly linked to:

• Longer periods of continuous sexual intercourse
• Careless in choice of partner
• Not using condoms.
• Desire

“it pushed my personal boundaries and changed preferences of the type of sex (rough, more adventurous, etc.)”

“I was a sex maniac on the drug...”
SEXUAL DYSFUNCTION

“Since I've quit using I've been practically impotent. Sadly I don’t know [how sex could be better without crystal]. I am now fortunate enough to enjoy a relationship with a wonderful man that truly loves me. But that intensity of the high sex is never achievable.”
METH AND HIV
METH + STDS

Studies from San Francisco and New York show that MSMs who use crystal vs. non-users are:

2-3X more likely to have HIV
6x more likely to have syphilis
2X more likely to have gonorrhea
METH & HIV

Semple, Patterson and Grant (2002)

Use of methamphetamine (among HIV positive men) was associated with high rates of anal sex, low rates of condom use, multiple sex partners, sexual marathons, and anonymous sex”
METH & SEX

Mansergh (2004)

Meth users were twice as likely as nonusers to engage in unprotected receptive anal intercourse and sildenafil users were 6.5 times more likely to report having had unprotected insertive anal intercourse.
METH + STDS

Heterosexual Men in Northern California

Sexually active w/ casual or anonymous female partner
Have multiple female partners
Anal sex with female partner
Sex with IDU
Received drugs or money for sex
Forced into sex

METH & COGNITIVE ESCAPISM

Escape from the emotional pain associated with
- HIV+ status
- Reduced sexual stamina
- Reduced energy levels
- Reduced self esteem
- Other medical complications, and
- Ravages of addiction itself.
HIV & HAART

Drug Resistance
- Tumor Necrosis Factor
- Metabolic Rates
- Medical Adherence

Drug Interactions
CYP2D6

METH & HIV MEDS: “AN ACCEPTABLE COMPROMISE”


Unplanned nonadherence was associated with meth-related disruptions in eating and sleeping.

Planned nonadherence was identified as a conscious strategy:
- medication schedule would not be maintained while using methamphetamine
- concerns about mixing methamphetamine and medications.
METH & HIV

Halkitis, Parsons, and Stirrat (2001)

The effect of methamphetamine [is] two or three times greater for individuals on combination therapy, especially combinations including ritonavir (Norvir)
BEST PRACTICES
“Did you think the ladder of success would be straight up?”
EMERGENCY PROTOCOL

Treatment of MA Psychosis

Typical ER protocol:
- Haloperidol 5mg
- Clonazepam 1 mg
- Cogentin 1 mg
- Quiet, dimly lit room
- Restraints
- Trazadone can create stimulation: should not be used for sleep
METH WITHDRAWAL

MA Withdrawal

Depression

Difficulty concentrating

Severe Cravings

Paranoia

Exhaustion

Confused
BEST PRACTICES

Treatment approaches
- Accepting
- Non-judgmental
- Empowering
- Supportive
- Understanding
- Collaborative
- Facilitative
BEST PRACTICES

Stages of Change

Prochaska and DiClemente

- Precontemplation
- Contemplation
- Determination
- Action
- Maintenance
- Permanent Exit
BEST PRACTICES

Harmful assumptions

- Someone who continues to use is “in denial”

- The best way to break through the denial is direct confrontation

- People change only when they have to
BEST PRACTICES

Most valuable modalities

- Cognitive Behavioral Therapy
- Motivational Enhancement
- Contingency Management
- Retention
BEST PRACTICES

Phases

- Withdrawal      Day 1-15
- Honeymoon       Day 16-45
- The Wall        Day 46 – 120
- Adjustment      Day 120-180
- Resolution      Day 180 +
BEST PRACTICES

Family involvement important
- More effective when at least one supportive family member is engaged

12 step facilitation and participation valuable
- Combination of CBT groups and self-help support most efficacious
BEST PRACTICES

Adaptation of CBT

- Not thinking clearly
- Poor judgment
- Poor verbal recall (5 words or less)
- 20-30 minute sessions 3-4 x per week
- Emphasis on visuals: handouts, “painting a picture”
MOTIVATIONAL APPROACHES

Positive Connection to Others
- Therapeutic relationship
- Family/support
- 12 step mtgs

Connection to HP of your choice
Non-judgmental approach
Lust, Men, and Meth:  
A Gay Man’s Guide to Sex and Recovery  
David Fawcett Ph.D.  
Foreword by Mark S. King

A comprehensive guide examining the perfect storm of gay men, meth and sex.

Part 1 describes the chase for intensity and the hijacking of sexual desire by meth use.

Part 2 explores the universe of sexual templates, the aphrodesiac effect of secret desires, and the role of the plastic brain in both addiction and healing.

Part 3 reviews the recovery process, including healing old wounds, embracing feelings, and utilizing seven essential tools for recovery.
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