

# Methadone Update

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Center for Substance Abuse Treatment

DEA National Conference

June 6, 2004

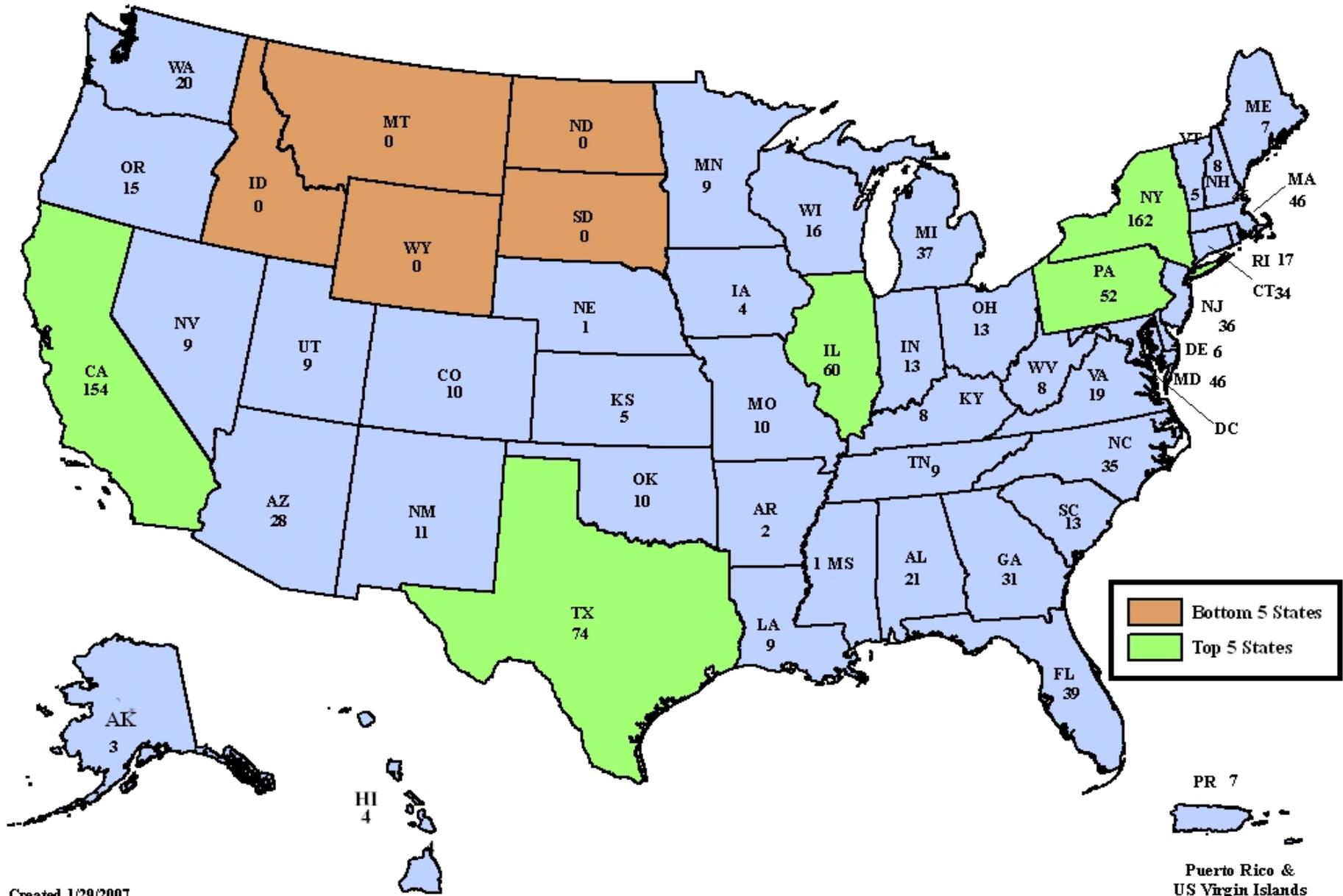
Ft. Lauderdale, FL

# Overview

- Opioid Assisted Treatment update (methadone/buprenorphine)
- Methadone abuse/mortality increasing.
- Methadone use/distribution increasing
- National Assessments

# Center for Substance Abuse Treatment

## Concentration of Active Opioid Treatment Programs by State as of January 2007



## Increase in Methadone Patients

- 2002 – 2005
- US – 2.3%
- WV – 464%
- Ohio – (-)34%
- PA – 35%
- MD – 1.8%
- IN – 120%

# OTP Characteristics

- Treatment capacity – average 208 patients
- Mean size—253 patients
- Range—20 to 2,000 patients
- Public/Non-profit—approximately 52% (2004)
- For-Profit—approximately 48% (2004)
- 44.6 % non-profit; 41% for-profit, 14.4%, run by a government agency
- Less than one-third of patients without insurance
- Of patients with insurance, two-thirds covered for OTP treatment.

## OTP Characteristics (2)

- Ave. OTP caseload: 238 patients (range, 0-1,200)
- Typical pt: white male, 26-50 years old
- 75% treated for heroin addiction; 14.6, oxycodone and 5.7%, morphine addiction.
- Less than 1% treated with buprenorphine
- **Mean years in treatment: 6.3**
- Mean length, current treatment episode: 25.9 months

## 42 CFR § 8

- Federal opioid treatment standards
- Opioid Treatment Certification
- Accreditation body approval of an OTP
- Revocation of accreditation
- Suspension or revocation of OTP certification

# Federal Opioid Treatment Standards (§8.12)

- Administrative and organizational structure
- Quality assurance/improvement
- Diversion Control Plan
- Staff credentials
- Patient admission criteria
- Required services
- Record keeping and patient confidentiality
- Medication administration, dispensing
- Unsupervised use
- Interim maintenance – **for programs w/waiting lists**
- Detoxification

# Take Home Schedule - 6 steps

- A patient may receive a single take home dose for a day the program is closed, AND
  - 0 - 90 days - patient may receive a single dose each week
  - 90 - 180 days - patient may receive up to two doses per week
  - 180 - 270 days - patient may receive up to three doses per week
  - 270 - 365 days - patient may receive up to six doses per week
  - After 1 year continuous treatment - up to a 2 week supply
  - After 2 years of continuous treatment - up to a 30 day supply

# Emerging Issues Methadone Treatment

- Program Closures
  - Georgia, Texas, Illinois, New Mexico
  - Failure to comply with regulations
- Civil fines for failing to adhere to Federal dispensing schedule. (\$25,000 each, under CSA)
- Cardiac Conductivity – TDP
- FDA Labeling Revision

# Buprenorphine Treatment

- Office-Based Opioid Treatment (OBOT)
- Drug Addiction Treatment Act of 2000
- 10,625 Certified Physicians
- Approximately 66% prescribing
- 39 million dosage units distributed, 2006 (ARCOS) – 75% increase over 2005
- 168,000 treated in 2006, 77% increase over 2005 (95,000)
- December 2006 – physicians can treat up to 100 patients each.

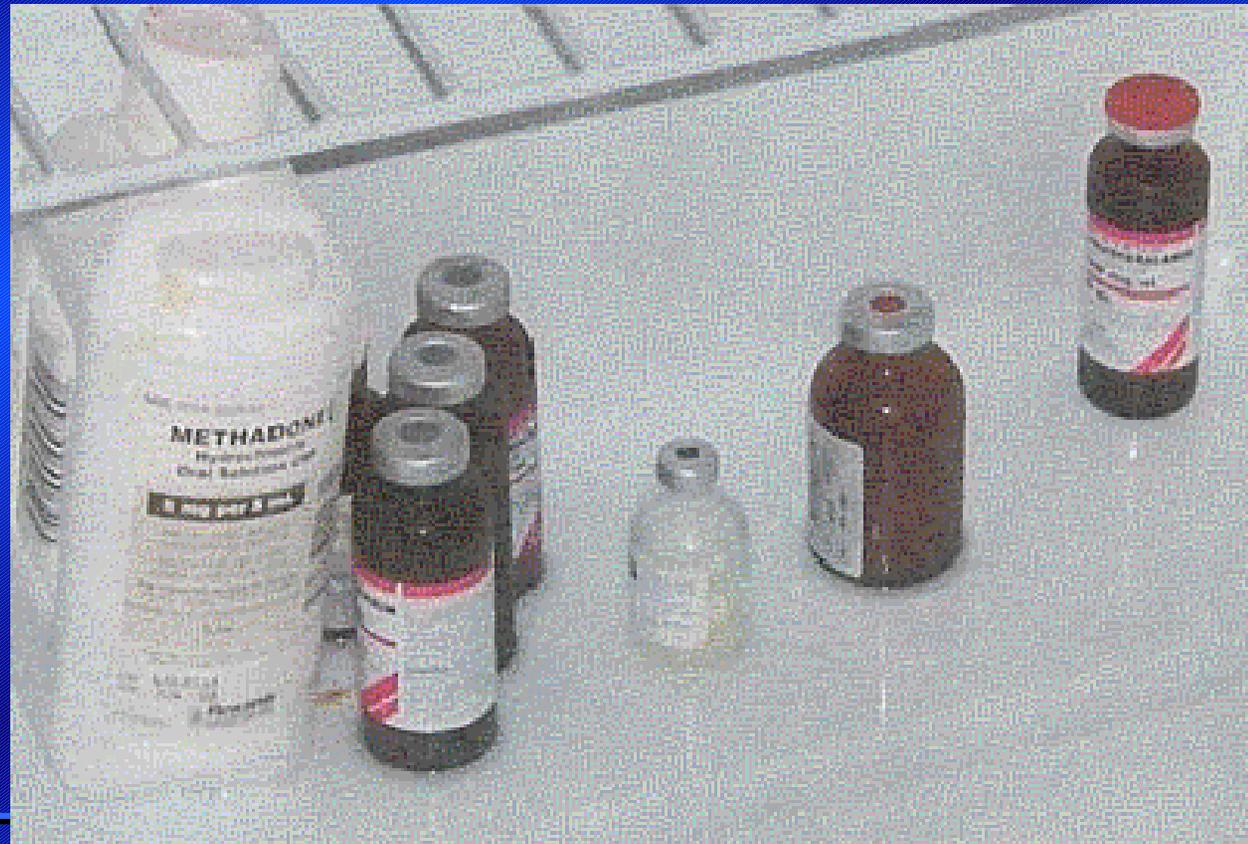
# Buprenorphine Patient Demographics

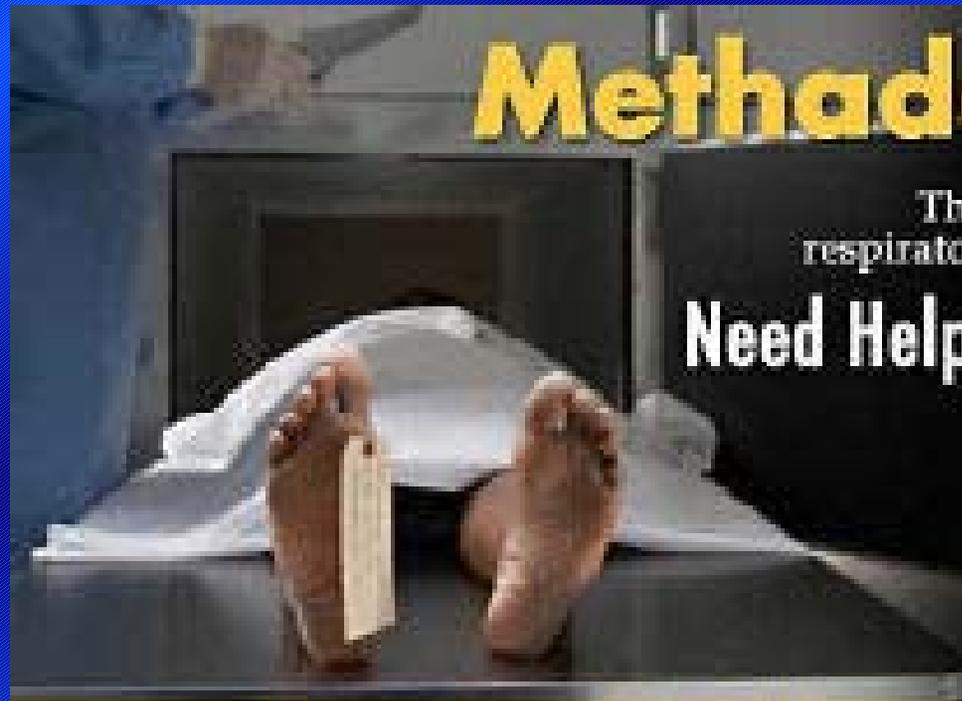
- 58 Percent Male
- 92 Percent White
- 60 Percent Addicted to Non-Heroin Opiates.
- 60 Percent New to Opioid Assisted Treatment

# Methadone Associated Mortality

- 2003-2004 National Assessment
- NCHS Data – National/West Virginia

# February 2007 - Anna Nichole Smith's Refrigerator Contents





# Methadone Kills.

The use of methadone can lead to respiratory depression, coma and death.

**Need Help? Call 800-342-5653**



*A Public Service Announcement of the Newcastle County Health Department*

## NCHS Data

- Crude Death Rates, methadone-related unintentional deaths/100M
- 1999 – 2004
- WV – 24.8% (4 to 99 deaths)
- KY – 15.1% (8 to 121 deaths, decr in 2004)
- NC - 7.2% (34 to 245)
- US - 5.1% (623 to 3202)

# CDC MMWR Data - 2007

- Nearly all poisoning deaths in the United States are attributed to drugs, and most drug poisonings result from the abuse of prescription and illegal drugs
- West Virginia Unintentional Poisoning Deaths Increased 550% between 1999-2004
- NCHS Methadone Mentions increased 390% between 1999-2004
- Methadone Distribution (ARCOS) Increased 390% between 1990-2004

## DAWN 2005 – ED Visits

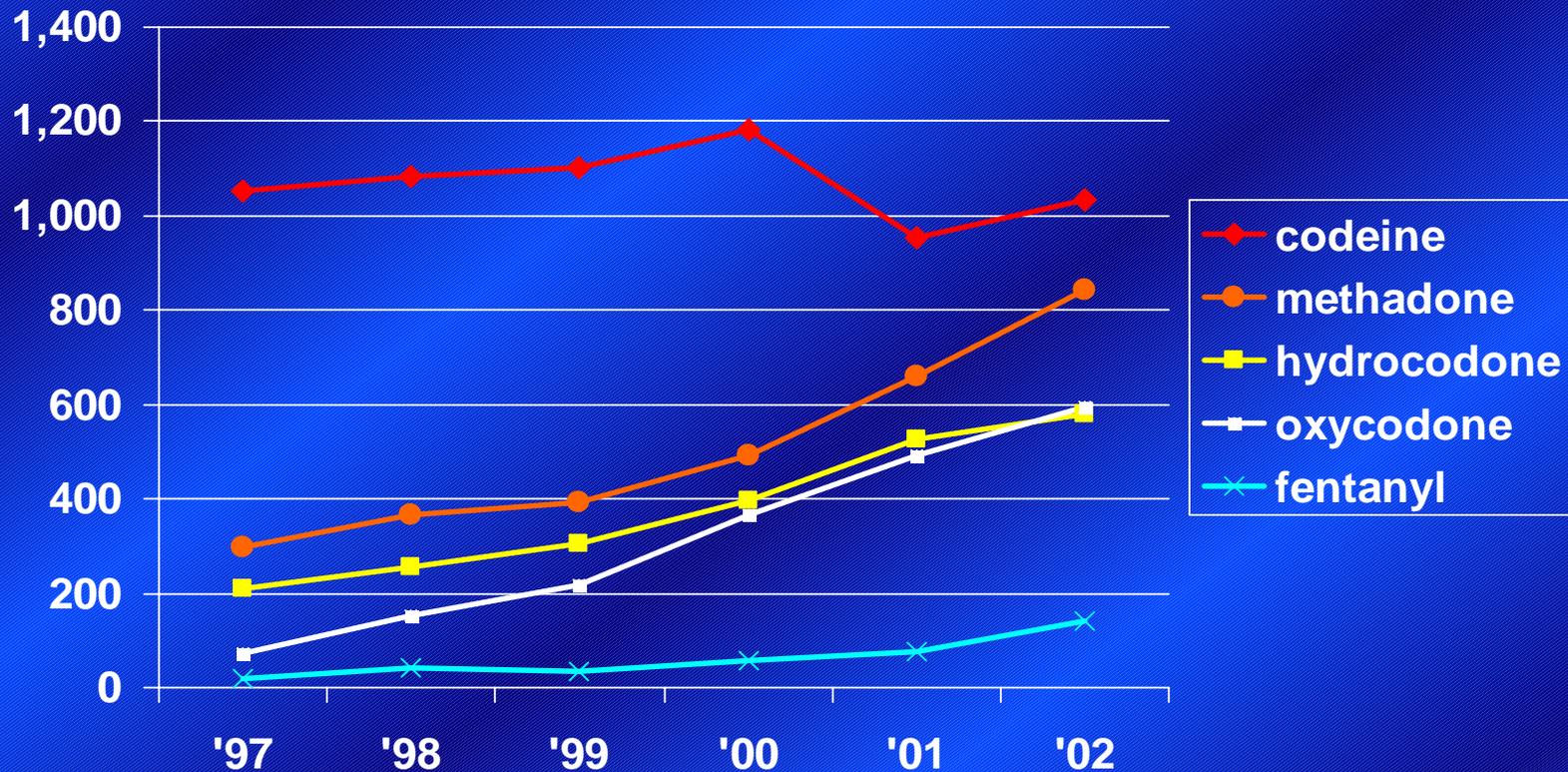
- Hydrocodone/Combinations – 51,225
- Oxycodone/Combinations – 42,810
- Methadone – 41,216

## TEDS – 2005

- Non-RX methadone 0.2 % of all admissions
- Other opiates/synthetics 3.5 % of all admissions

- Has methadone associated abuse and mortality increased in recent years?

# Reports of opioid analgesics among drug-related deaths, Drug Abuse Warning Network medical examiner consistent panel, 1997-2002

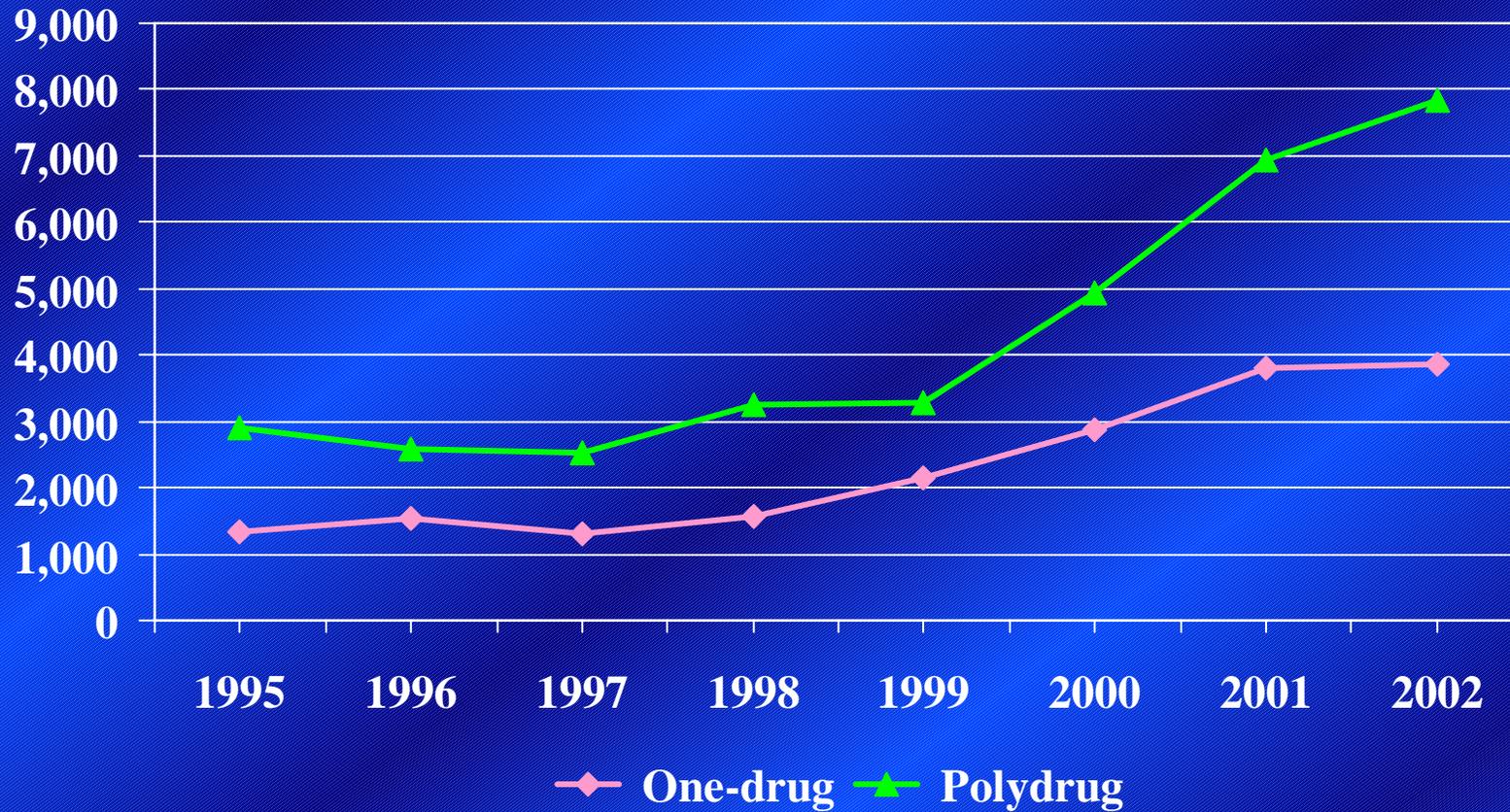


# Examples of drugs reported in methadone-involved deaths

- Heroin/morphine
- Cocaine
- Benzodiazepines
- Narcotic analgesics
- PCP

# Methadone-involved ED visits, U.S.

ED visits



# Examples of drugs reported in methadone-involved ED visits

- Alcohol
- Heroin
- Cocaine
- Narcotic analgesics
- Benzodiazepines

# Considerations

- No information on source of drug, so cannot determine if it was from a physician's prescription or OTP
- In polydrug deaths, some drugs may be incidental to cause of death

# Observations

- Few deaths attributed to methadone alone
- Single-drug deaths relatively stable since 2001
- From 2001-2002, methadone-involved drug abuse ED visits:
  - increased in Baltimore
  - were stable in Boston, Miami and Phoenix
  - decreased in San Diego, San Francisco and Seattle

## Observations, cont.

- Methadone needs to be seen in context of narcotic analgesic abuse
- Other narcotic analgesics have shown greater increases in ED visits
- Dependence mentioned most often for ED visit

# Comparing the numbers of nonmedical and medical opioid analgesic users

- ~9.0 million people used OAs in past month in 1999-2002 (4.2%, NHANES)
- ~4.6 million people used OAs nonmedically in past month in 2005 (1.9% of 12+, NSDUH)
- Therefore, from one third to one half of users may be using OAs nonmedically at least some of the time.

- Has methadone distribution increased in recent years?
- If so, how?

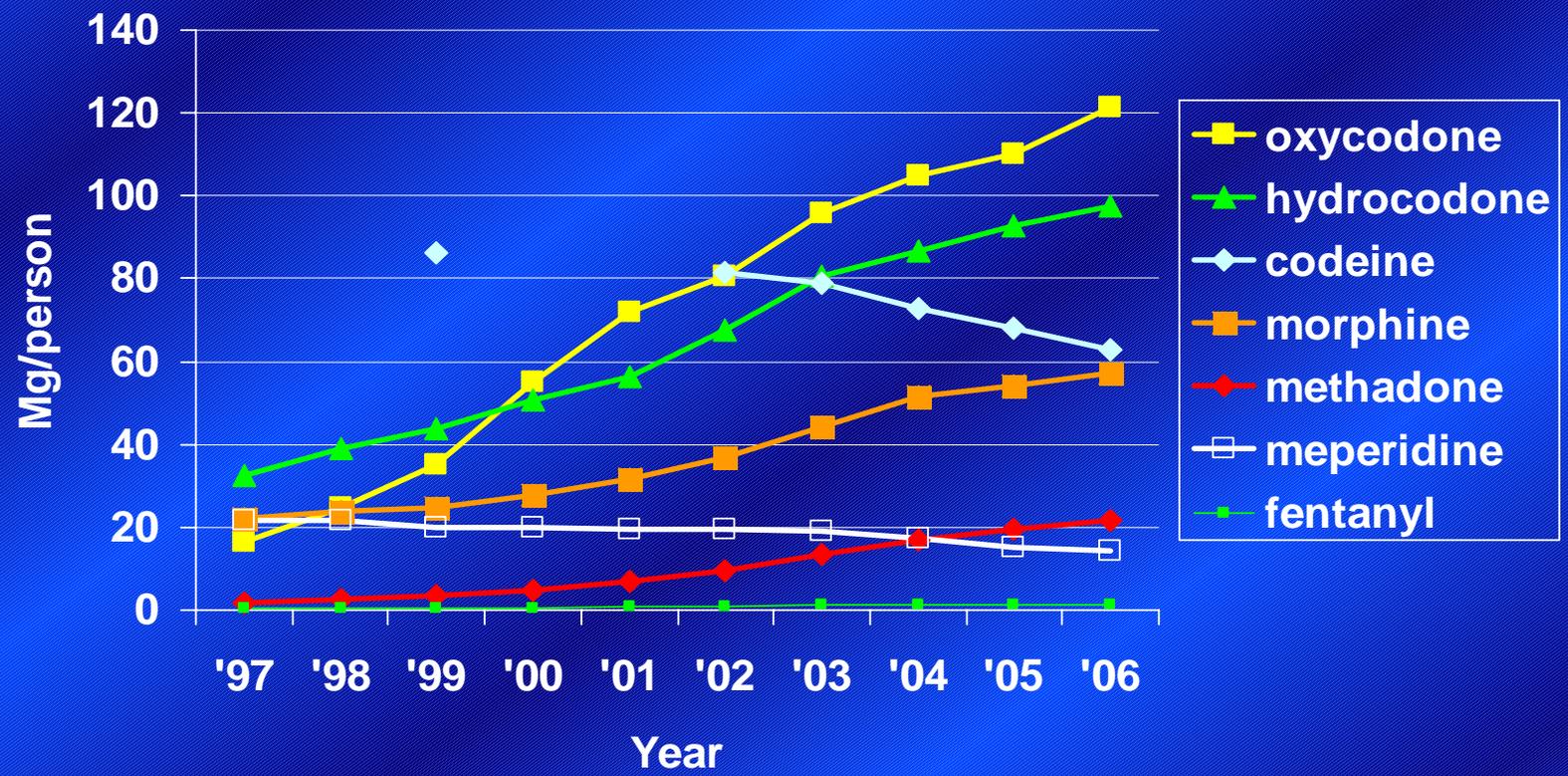
# Methadone Prescriptions

- 1998-2003 Rx for hydrocodone, oxycodone, methadone increased.
- Methadone Rx increased 0.5- 1.8 million
- Unique Patient Rx methadone increased 80% from 2005-2006
- Correlation between increases in methadone dispensed by pharmacies and increases in methadone associated mortality

## Methadone Rx Increases - 2006

- Out of all strengths of methadone, the largest growth in sales is seen with methadone **40mg** with a **240% growth** in combined sales since 2001. (10mg 150%, 5mg 91%).
- Sales of methadone **40mg** to chain stores and independent pharmacies have increased **700% and 450%**, respectively since 2001.

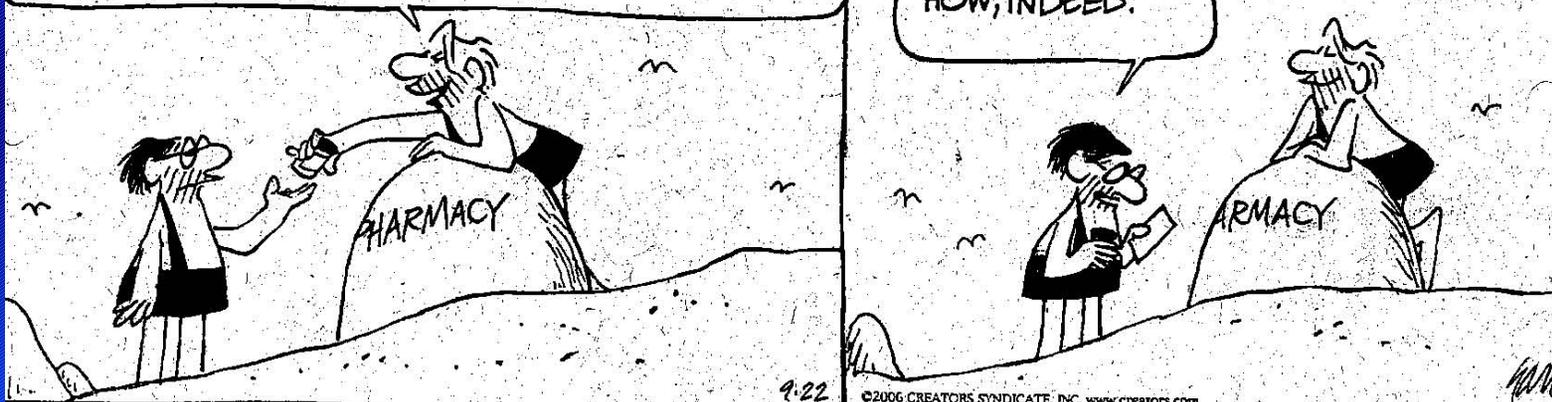
# Sales of opioids by type, US, 1997 thru 3<sup>rd</sup> quarter, 2006 (DEA ARCOS data)



3.C. HART

YOUR PRESCRIPTION, SIR. HOW WILL YOU BE PAYING ?

HOW, INDEED.



9-22

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HART

ITTLE DALEY MOST WALKED

# Pain Reliever Cost Comparison

- Estimated Monthly Drug Costs

• Agent	Dosage	Cost*
• Methadone	90 pills	\$ 8.00
• SR morphine	60 pills	101.50
• MS Contin	60 pills	113.50
• Oxycontin	60 pills	176.50
• Duragesic	10 patches	154.00*

-Estimated cost to the pharmacist based on average wholesale prices, rounded to the nearest half dollar, in Red book. Montvale, N.J.: Medical Economics Data, 2004. Cost to the patient will be higher, depending on prescription filling fee.

# Opioid Treatment and Mortality

- Texas
- North Carolina
- Maine

# Maxwell – NTP Patient Deaths – Texas – 1994-2002 - 1

- Compared to general population NTP patients:
- 4.6 x drug overdose
- 3.4 x liver disease
- 1.7 x respiratory disease
- 1.5 x cancer

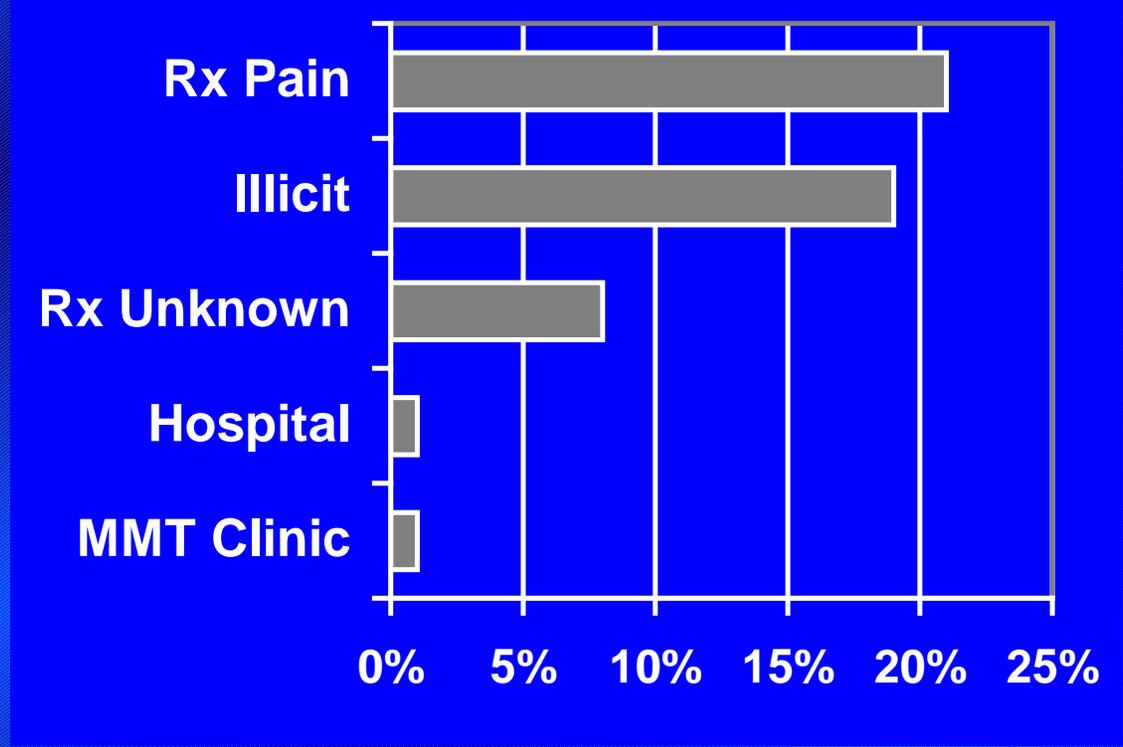
## Maxwell – NTP Patient Deaths – Texas – 1994-2002 - 2

- Older cohort – chronic disease
- Younger cohort – trauma, overdose
- Knowledge of Toxicity
  - 14 % aware of overdose risk during 1<sup>st</sup> 2 weeks
  - 15% aware of risks of starting patients at 30 mg or higher

# North Carolina

- 2,419 poisoning-related deaths: 1997-2001.
- 55% due to unintentional overdose; 111% increase during 5-year period.
- Mean age 39 years; 68% males.
- 71% attributed to single drug; 90% of those caused by cocaine, heroin, oxycodone, hydrocodone, morphine, and methadone.

# North Carolina Methadone Source



Data from Sanford 2002,

[www.communityhealth.dhhs.state.nc.us/hlthprom/Unintentional%20Poisonings%20report-9-02-final.pdf](http://www.communityhealth.dhhs.state.nc.us/hlthprom/Unintentional%20Poisonings%20report-9-02-final.pdf)

- Is methadone diversion increasing?

## DEA NFLS

- Seizures for hydrocodone, oxycodone outpaced methadone
- Methadone tablet seizures increased 133% between 2001 and 2002.
- Methadone liquid seizures increased only 11% during this period.

# Methadone Mortality Assessment

- Findings – Methadone Related Mortality Increased 1998-2002
- Increase Related Its Use as an Analgesic
- Context of Increases in Prescription Opioid Abuse and Mortality

# Pharmacology

- Slow onset
- Long duration of action
  - Half life 24-36 hours
  - Steady state 4-5 days
  - Half of each days dose remains to be added to next days dose.
- Accumulation
- Tolerance – respiratory depression slower than pain relief
- Interactions with depressants

# Methadone Toxicity Varies Greatly Across Individuals –100x

- Enhanced by other drugs/alcohol – interactions not fully quantified.
- Enhanced by natural disease – e.g., pathology due to history of drug use, sleep apnea, heart, lung, or liver disease.
- Enhanced by circumstances – e.g., airway position, temperature, food.

Source: Sorg 2002

# Further Complexities of Toxicology Interpretation

- Low or lost opioid tolerance.
- Slow or altered metabolism.
- Timing of death vs. methadone ingestion.
- Source of specimen (postmortem redistribution).
- Chemistry of decomposition.
- Laboratory methods.

# Methadone Mortality Assessment (2)

- Recommendations:
  - Need for uniform case definitions
  - Standards for Toxicology Testing
  - More useful data needed
  - Health Professional training/education
  - Public Misconceptions must be addressed.

# Recommendations

1. Uniform medical examiner/coroner case definition

Case registry

**2. More useful data needed**

Status of patients prescribed methadone

PMPs

**3. Education/training Health Care Professionals in  
pain & addiction**

Understand methadone's pharmacology, consider when  
deciding to use for pain or addiction.

# Activities – Education/Training

- FDA Revised Labeling
- **Black-box warning**
  - Methadone for pain, second line
  - accidental overdose
  - death due to respiratory depressant effects
  - death due to cardiac conduction effects
- **Dosing revision**
  - lower starting dose and greater inter-dose interval
  - conversion from other opioids
  - stresses unique pharmacology and caution during initiation and conversion from other opioids

# FDA Advisory - 1

- Patients should take methadone exactly as prescribed. Taking more methadone than prescribed can cause breathing to slow or stop and can cause death. A patient who does not experience good pain relief with the prescribed dose of methadone, should talk to his or her doctor.
- Patients taking methadone should not start or stop taking other medicines or dietary supplements without talking to their health care provider. Taking other medicines or dietary supplements may cause less pain relief. They may also cause a toxic buildup of methadone in the body leading to dangerous changes in breathing or heart beat that may cause death.

## FDA Advisory - 2

- Health care professionals and patients should be aware of the signs of methadone overdose. Signs of methadone overdose include trouble breathing or shallow breathing; extreme tiredness or sleepiness; blurred vision; inability to think, talk or walk normally; and feeling faint, dizzy or confused. If these signs occur, patients should get medical attention right away.

# Methadone Physician Training -1

- Explain the criteria for determining when methadone is appropriately used in the management of pain.
- Describe approaches to devising an appropriate dosing regimen.
- Describe the considerations involved in patient selection and monitoring.
- Discuss the special precautions to be taken during the induction phase of methadone use.

# Methadone Rx Training - 2

- Explain the special issues involved in managing pain in the methadone-maintained patient.
- Describe the legal and administrative requirements for the use of methadone to treat pain.
- Discuss steps that can be taken to minimize the risks of drug diversion and abuse.

## Summary/conclusions

- Methadone associated mortality continues to be an increasing problem.
- Increases not associated with addiction treatment source.
  - However, cases of deaths during induction are not uncommon
  - **SAMHSA will emphasize caution in induction process for OTPs**
- Methadone Mortality Conference in July

# Methadone Update

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