For PAIN & GAIN: PRESCRIPTION DRUG ABUSE By ADOLESCENTS

Janet F. Williams, M.D., FAAP
University of Texas Health Science Center
San Antonio
Chair, AAP Committee on Substance Abuse

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- I do not intend to discuss an unapproved or investigative use of commercial products or devices.

Ryan Leaf: Prescription Drug Abuse News This Week!

- Promising NFL quarterback & college coach
- Career ruined after 4 year painkiller addiction
- **Pleads guilty** 8 felony drug charges:
  - 7 counts of obtaining a controlled substance/ one count of delivery of simulated controlled substance
- Gets 10 year probation; $20,000 fine
- *“I convinced myself it wasn't a big deal because these weren't illegal drugs.”*
- *“I've been clean for 17 months, a fact I'm very proud of.”*

Define Prescription Drug Abuse

- No universally accepted terminology for the different aspects of prescription drug abuse
- Best umbrella term = **Prescription Drug Misuse**
- **Misuse** = Use of a drug not consistent with medical or legal guidelines.
  - Includes: Non-medical use, Substance abuse, Dependence, Addiction, Diversion, but not physical dependence alone

Some 'Misuse' Terminology

- **Non-medical Use:** Rx med use without a Rx or use for purposes other than prescribed (e.g., get high)
- **Substance Abuse:** Pattern of non-medical use causing specific adverse consequences related to repeated use
- **Dependence/Addiction:** DSM IV-TR compulsive drug use despite consequences; loss of control
- **Diversion:** Shifting meds from therapeutic channels to share or sell them for recreational use, treatment of untreated pain in others, or for financial gain.

Rx Drug Abuse is BIG!

- Nearly 48 million people or about 20% of the U.S. population who are ages 12 and older have intentionally misused prescription drugs in their lifetime.
- About 6.2 million persons in this age group are currently using psychotherapeutic drugs non-medically.

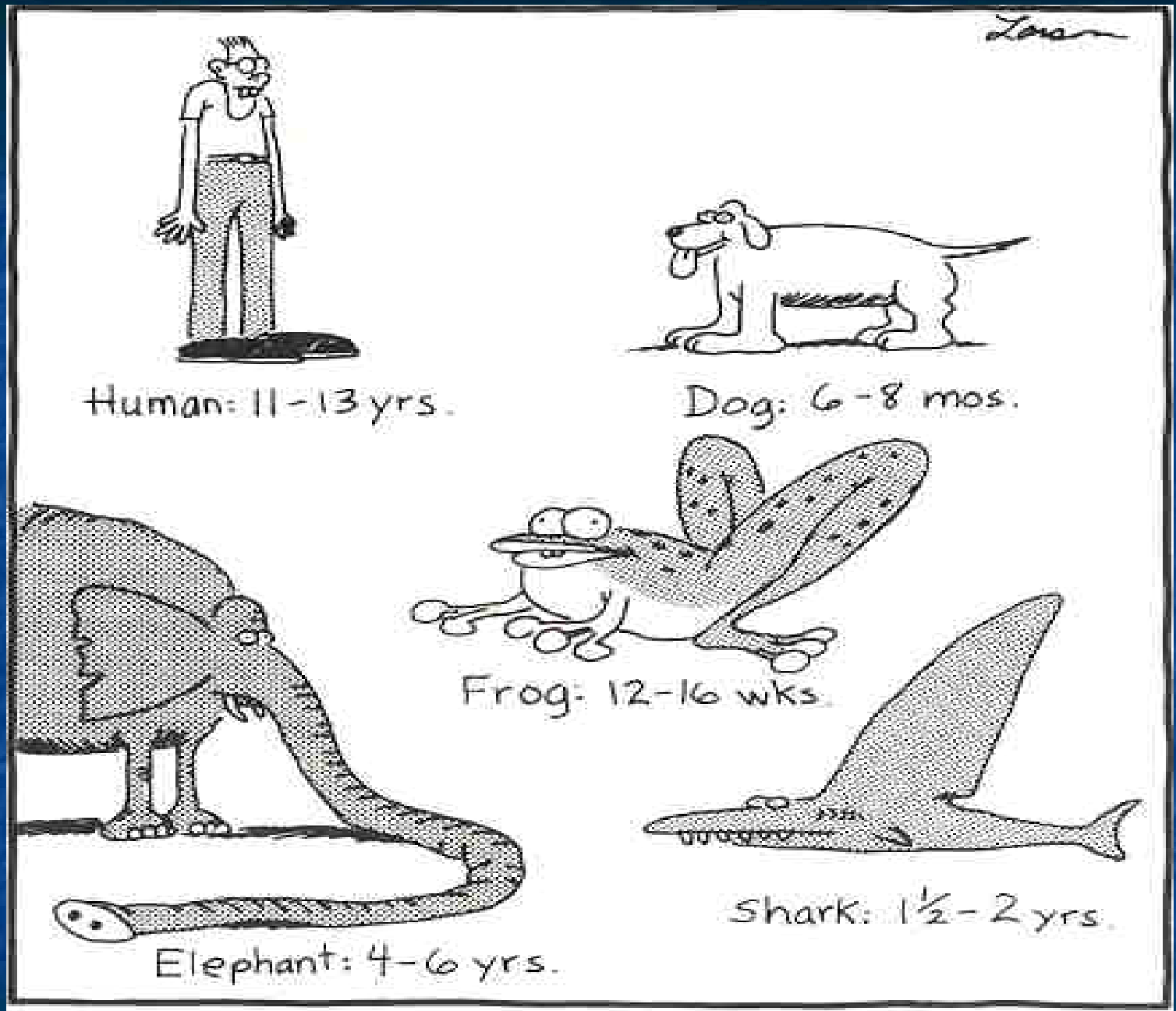
Facts…

- 44% of new Rx painkiller misuse in 2001 was by teens below age 18.
- 1 in 8 HS seniors has tried Rx opioid non-medically
- 1993 - 2002, more than doubled the number of 18 - 25 year-olds admitted to treatment for Rx pain meds.
- Incidence of “addiction” in chronic pain patients prescribed long term opioids is uncertain:
  - Greater risk when personal or family history of drug abuse or other mental illness.


Addiction
Abuse/Dependence
Prescription Drug Misuse
Aberrant Medication-Taking Behaviors
A spectrum of patient behaviors
that *may* be misuse
Total Chronic Pain Population

Plan: Brief Review of….

- Adolescence
- Substance abuse/Rx drug abuse data
- Pediatricians prescribing pain meds
- Tolerance, withdrawal, addiction
- Treating a substance abuse disorder patient in pain
- A safe opioid prescribing system



Awkward ages

Adolescent Neurodevelopment

- Significant neuron maturation & myelination throughout the third decade - 20s
- Prefrontal & frontal cortex development, controlling:
  - Impulsivity
  - Abstract thinking
  - Emotional regulation
  - Organization & planning skills

GOALS of ADOLESCENCE

= succeed in transition from complete dependence to AUTONOMY:

- SELF-IDENTITY
- SEXUAL IDENTITY
- VOCATION
- EMANCIPATION

Adolescent Substance Abuse

- Regular national monitoring of trends:
  - ***Monitoring The Future* Survey**
  - ***National Survey on Drug Use and Health***
  - ***Youth Risk Behavior Survey***
- **Alcohol use** involved in over 33% of the top 3 causes of teen death: accidents, homicide, suicide
- **Over 50% 12th graders have ever used an illicit drug; 24% in past 30 days.**

Adolescent Substance Use

Monitoring The Future (MTF) Survey

- **NIDA** & U. Michigan Instit. of Social Research
- Since 1975, annual survey US h.s. seniors
  - In 1991, added 8th & 10th graders
- Long-term follow up of subset thru age 40
- **Report use:** life-time, annual, last 30 days, daily
- **Perceived risk:** key predictor of future trends
- **Perceived availability**

***Monitoring The Future* Survey**

- 2009: 46,097 students in 389 schools
- Voluntary, anonymous/confidential
- 12th grader use: White > Hispanic >> Black
- **Males > females**: illicit drugs, steroids, smokeless tobacco, heavy drinking
- Those staying **in school use less** drugs.
- **2009: 7 of top 10 drugs abused by 12th graders in prior year were Rx or OTC**

Rx Drug Misuse: Why Worry?

Prescription medications are misused by adolescents more than any other drugs except alcohol, tobacco & marijuana.

Many adolescents believe prescription medications are safe because they are prescribed by a physician.*

New England Journal of Medicine, Friedman, 2006

Rx Drugs Considered ‘Safe’

- Have legitimate medical indications:
  - User believes is ‘**safe**’ to self-medicate.
- Are manufactured with specifications:
  - Known ingredients, so ‘**safer**’ than ‘street drugs’
  - Same predictable dose & effects each pill
- Are ‘legal’ & available nearby, often ‘free’:
  - Legal & available = ‘**safe**’

Reason for Misusing Rx Pain Meds

Easy to get from medicine cabinet	62%
Available everywhere	52%
Not illegal	51%
Easy to get through other people's prescription	50%
Can claim to have a prescription if caught	49%
Cheap	43%
Safer to use than illegal drugs	35%
Less shame attached to using	33%
Easy to purchase over the Internet	32%
Fewer side effects than street drugs	32%
Parents don't care as much if you get caught	21%

Partnership for a Drug-Free America. The Partnership Attitude Tracking Study (2005): N = 7,216; grades 7th to 12th Teens in grades 7 through 12.

Source of Abused Rx Pain Relievers

Past year use by over 12 yrs old, NSDUH 2007-2008

- 55.9% from friend or relative - free
  - 81.7% of those had gotten from just one doctor
  - Given/taken from home medicine cabinet
- 18% from one doctor
- 4.3% from drug dealer or stranger
- 0.4% bought on Internet

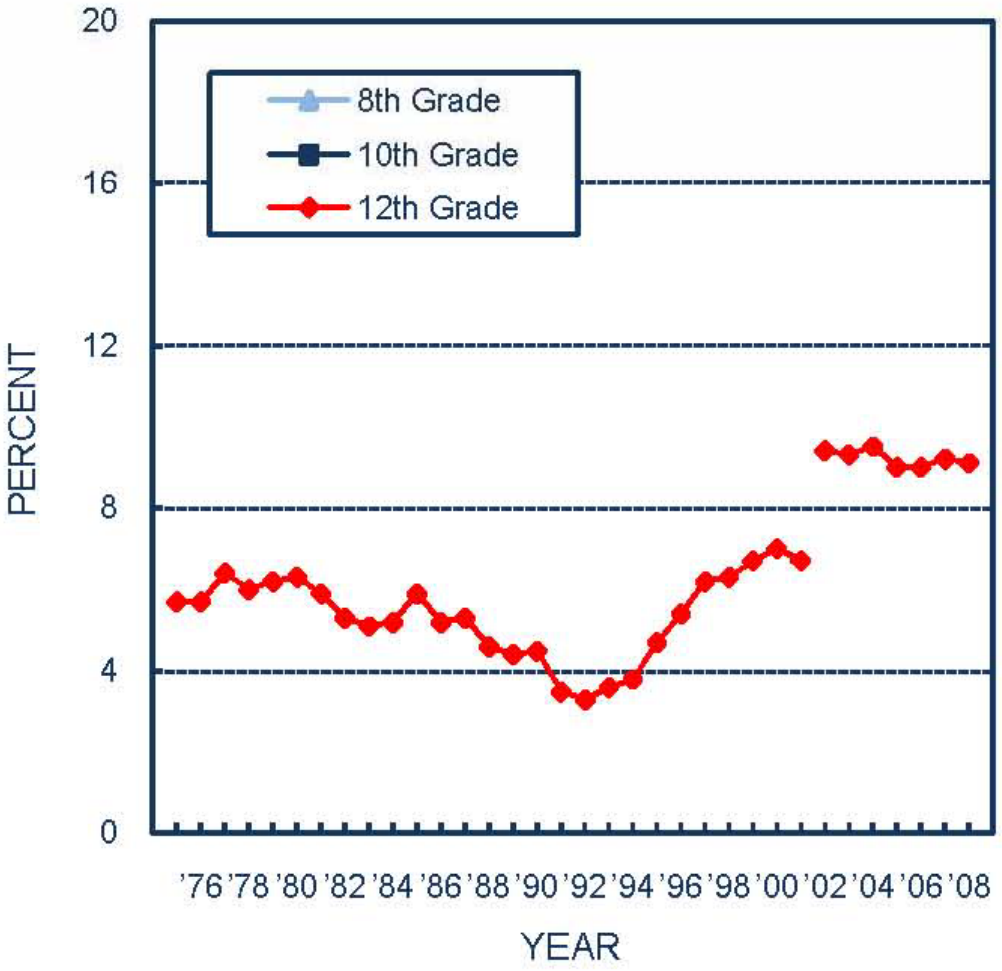
Rx Drug Abuse Pattern

MTF 2009 12th Grader Past Year Use

- **Opioid analgesics:** highly addictive
- 'Narcotics other than heroin' as a class remain at peak prevalence rates past 5 years
- **Vicodin** (hydrocodone) use unchanged - 10%
- **OxyContin** (oxycodone) use steady - 5%
- 2002 MTF Survey change: Asked about Vicodin, OxyContin, Percocet instead of Talwin, laudanum, paregoric.

Use of Narcotics other than Heroin

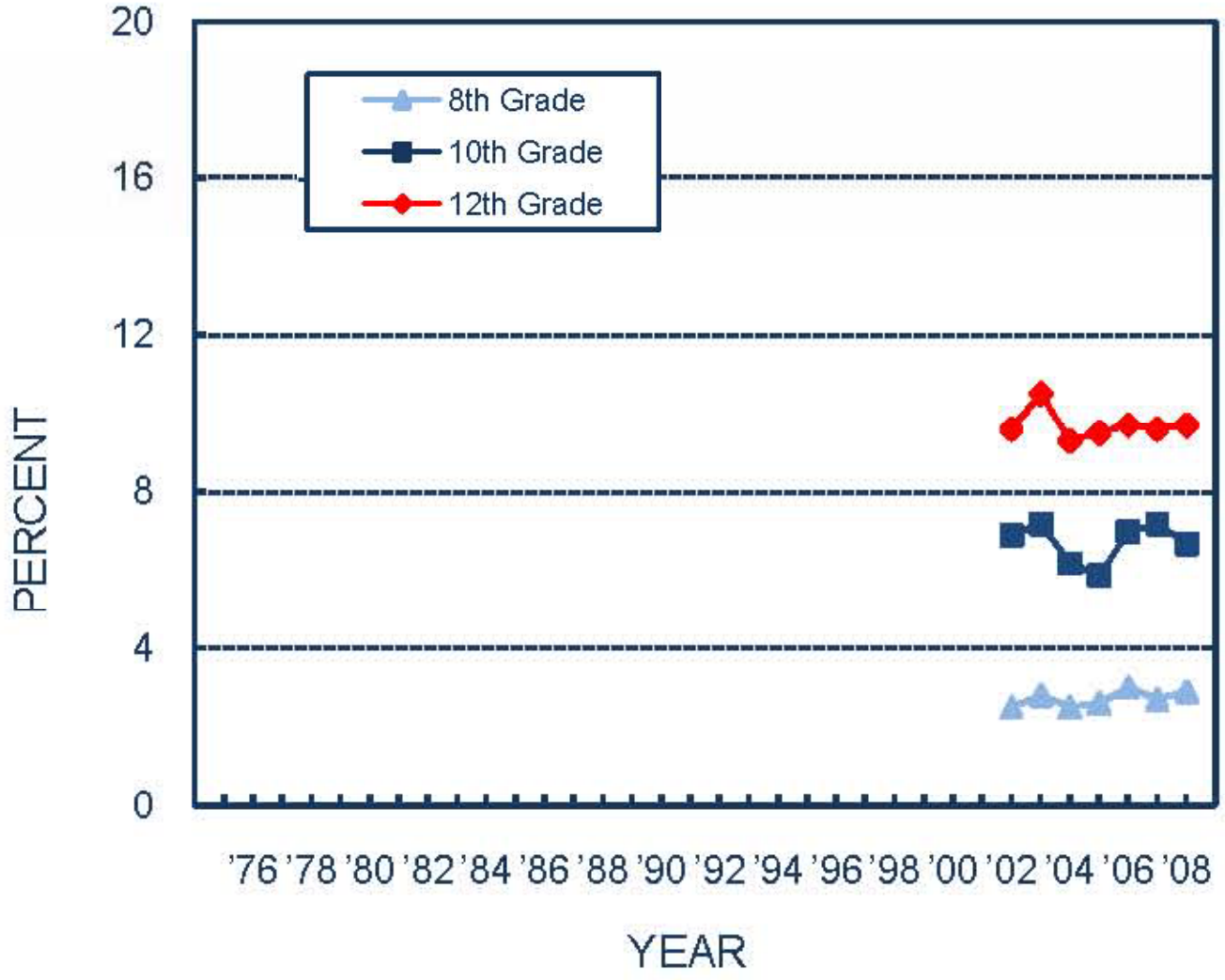
% who used any narcotics other than heroin in last 12 months*



Source. The Monitoring the Future study, the University of Michigan.

Vicodin Use

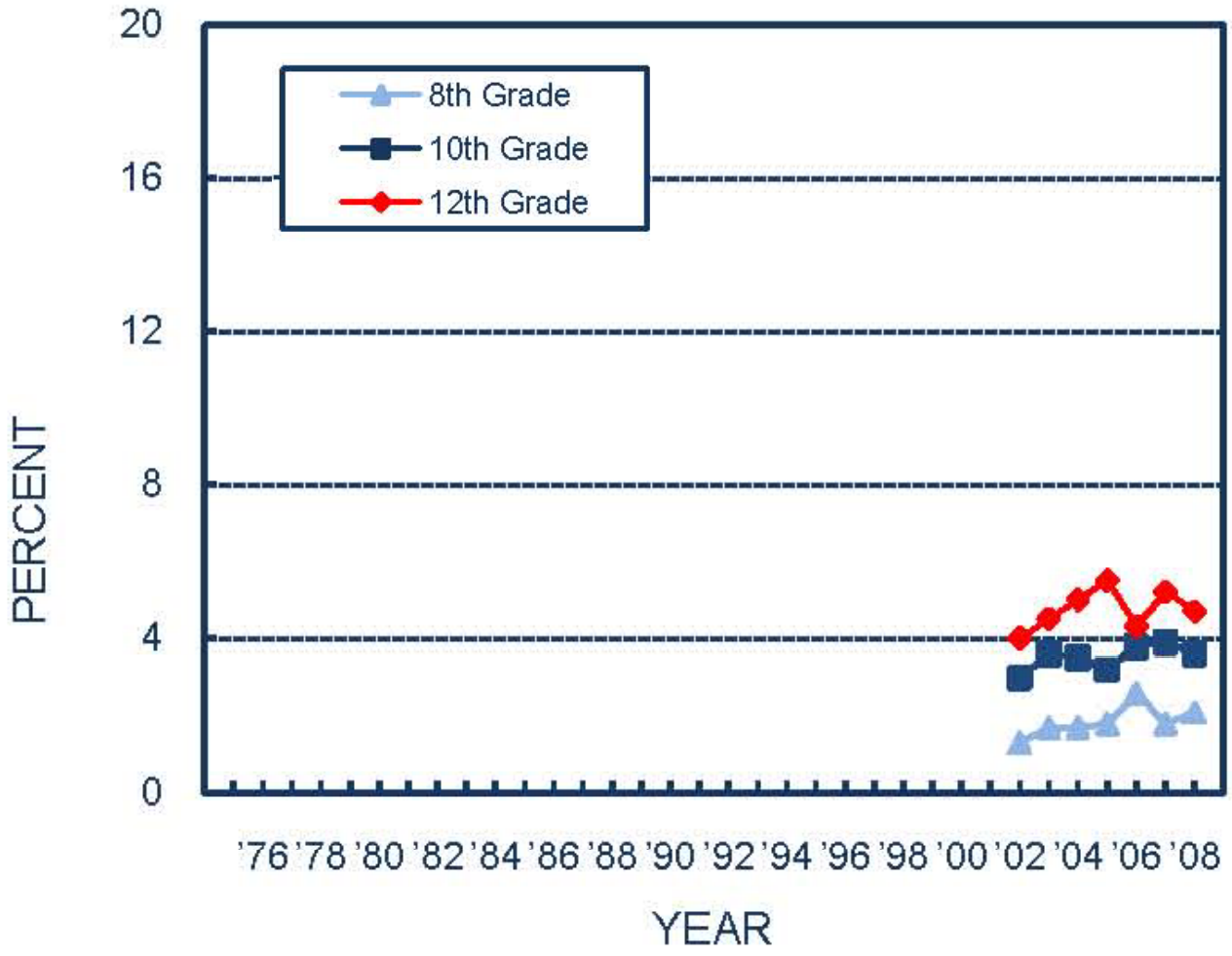
% who used Vicodin in last 12 months



Source. The Monitoring the Future study, the University of Michigan.

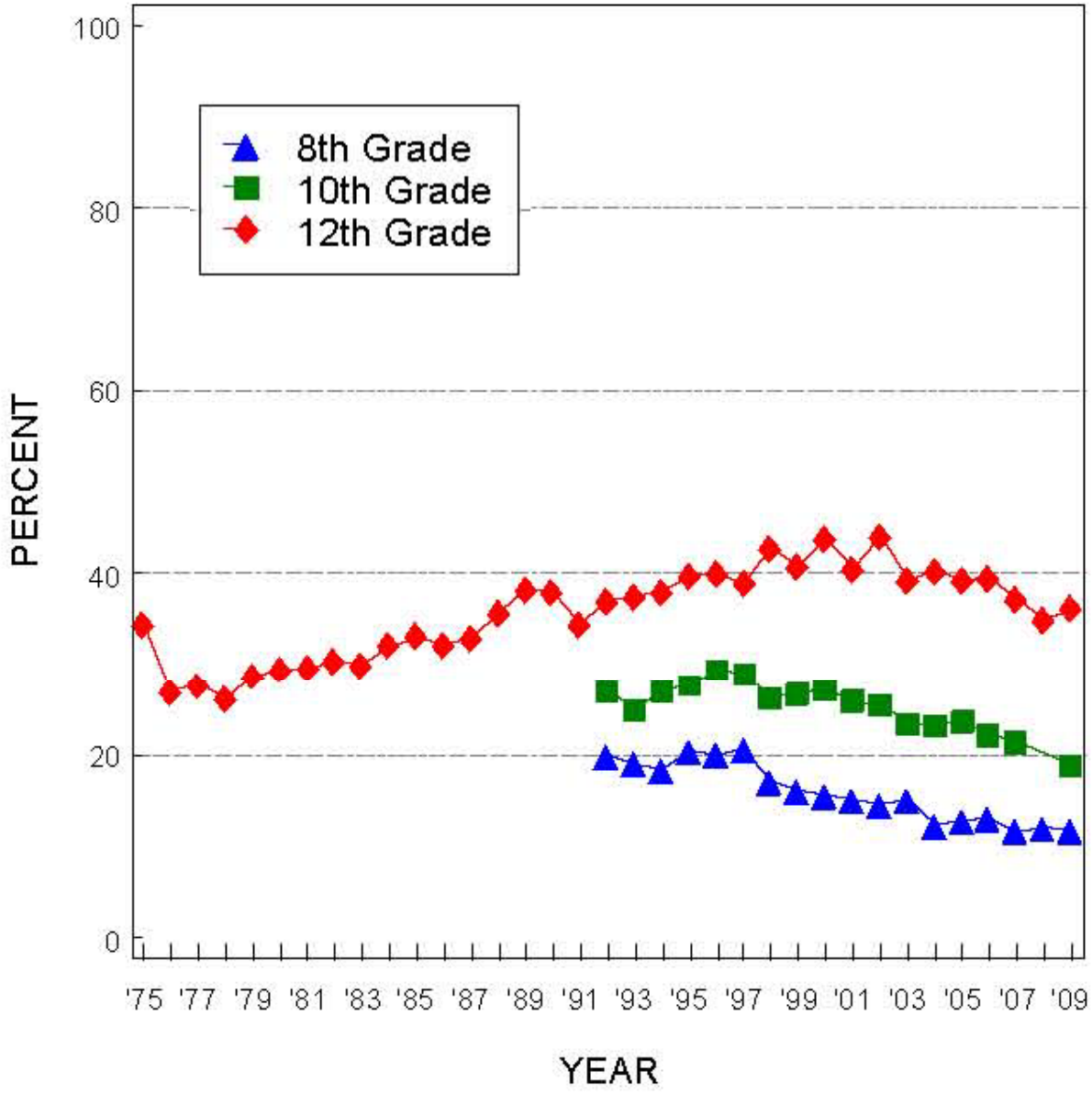
OxyContin Use

% who used OxyContin in last 12 months



Source. The Monitoring the Future study, the University of Michigan.

Availability**
% saying "fairly easy" or "very easy" to get



Source. The Monitoring the Future study, the University of Michigan.

Rx Drug Abuse Pattern

MTF 2009 12th Grader Past Year Use

- **CNS depressants:** Steady or slight decline?
  - Sedatives (Barbiturates): 7% in 2004, now 5%
  - Tranquilizers: 8% in 2002, now 6%
- **Stimulants:** Amphetamines staying steady?
  - Ritalin: In 2001, 5% abusing; now 2%
  - Adderall: Added to survey in 2009 - 5%.
- **Stimulant:** Provigil (modafinil) abuse: 1.8%

Office Practice Pain Med Rx

- Knowledgable about pain physiology, pain management, terminology, resources
- Knowledge, attitude & (communication) skills in substance abuse SBIRT:
  - Screening
  - Brief Intervention
  - Referral to Treatment
- Knowledge & skills in basic addiction med

Indications for Opioids

- Pain:
  - moderate to severe
  - significant impact on function
  - significant impact on quality of life
- Non-opioid pharmacotherapy has been tried and failed.
- Patient agreeable to close monitoring of opioid use (e.g., pill counts, urine screens)

Opioid Efficacy in Chronic Pain

- Pain relief modest - mixed study results
- Limited or no functional improvement
- Literature: surveys & uncontrolled case series
- Randomized clinical trials: short duration < 4 months with small sample sizes < 300 pts
- Mostly pharmaceutical-company sponsored

Opioid Prescribing Principles

- **Beneficence:** Physician is obligated to exert his/her best efforts to relieve pain.
- **Non-maleficence:** The physician is obligated to treat pain in a manner that minimizes risks to the patient and others, including prescription opioid abuse and diversion.
- Opioids are the most effective analgesics, but have significant risks, including abuse & diversion.

Weigh Benefits vs Risks

- **Benefits:**
  - Better function
  - Set realistic goals
  - Action-oriented goals
  - Specific measurable changes
  - Short time-frame
- Monitor closely

- **Risks:**
  - Sedation
  - Confusion
  - Constipation
  - Diversion
  - Addiction
- Monitor closely

Physician Prescribing Practices

- **Why Over Rx?**
  - Duped
  - Dated
  - Dishonest
  - Med mania
  - Enabler
  - Nonconfrontational
- Adds to ease of Rx drug abuse

- **Why Under Rx?**
  - Opioidophobia
  - Overrate effects
  - Fear of being duped
  - Fear of addiction
- Possibly adds to Rx drug misuse & doctor shopping

Prescribing Opioids for Teen Pain

- Must screen patient for substance use:
  - AAP, APA, AMA, AACAP, MCH, etc., ***all*** recommend validated screening for tobacco, alcohol & other drug use during routine care.
  - Use 3 opening questions & CRAFFT screen
- Must screen patient & family's mental health & substance abuse Hx
- Use safe prescribing system & formal opioid treatment contract

CRAFFT: 3 Opening Questions

During the PAST 12 MONTHS, did you:

1. *Drink any **alcohol** (more than a few sips)?*
2. *Smoke any **marijuana** or hashish?*
3. *Use **anything else** to get high?*

("anything else" includes illegal drugs, OTC & Rx drugs, & things that you sniff or "huff")

Answers direct SBIRT algorithm pathway, CRAFFT use & most effective next steps.

CRAFFT Screening Tool

- Car
- Relax
- Alone
- Forget
- Friends
- Trouble

Mental Health & OPIOID RISK TOOL

- **Stratifies risk groups: Low, medium, high**
- **5 - item initial risk assessment:**
  - Personal history of mental illness (untreated ADHD, depression, bipolar, anxiety, etc.) &/or substance use disorder
  - Concurrent use of psychotropic medications
  - History of preadolescent sexual abuse
  - Family history of substance abuse or mental illness
  - Age 16 - 45 years

Webster L, Webster R. Predicting Aberrant Behaviors in Opioid-Treated Patients: Preliminary validation of the Opioid Risk Tool. Pain Medicine. Vol 6; 2005. www.emergingsolutionsinpain.com

What Is the Addiction Risk?

- Published rates of abuse &/or addiction in chronic pain populations: 3-19%
- Studies suggest that known risk factors for abuse or addiction in the general population would be good predictors for problematic Rx opioid use:
  - Past cocaine use, history of alcohol or cannabis use
  - Lifetime history of substance use disorder
  - Family Hx substance abuse, or legal problems & drug or alcohol abuse
  - Heavy tobacco use
  - History of severe depression or anxiety

Triage Guide

Low Risk	No Hx substance abuse, minimal risk factors	Treat
Medium risk	Past Hx substance abuse, risk factors	Co-manage
High risk	Active substance abuse, high risk factors	Refer

Tolerance

- The need for greatly increased amounts of the substance to achieve intoxication (or the desired therapeutic effect)
- Markedly diminished effect with use of the same amount of the substance
- Develops in virtually all patients who receive chronic opioid treatment

American Psychiatric Association. DSM IV-TR. Diagnostic and Statistical Manual of Mental Disorders Text Revision Fourth Edition ed. Washington DC; 2000.

Withdrawal

- Maladaptive behavioral change, with physiological and cognitive concomitants, that occurs when blood or tissue concentration of substance declines; or when a blocking agent (e.g., naloxone) is administered.
- Present in virtually all patients who receive chronic opioid treatment

American Psychiatric Association. DSM IV-TR. Diagnostic and Statistical Manual of Mental Disorders Text Revision Fourth Edition ed. Washington DC; 2000.

Opioid Withdrawal

Three or more of the following:

- Dysphoric mood
- Nausea or vomiting
- Muscle aches
- Lacrimation or rhinorrhea
- Diarrhea
- Yawning
- Fever
- Insomnia
- Pupillary dilation, sweating or piloerection

American Psychiatric Association. DSM IV-TR. Diagnostic and Statistical Manual of Mental Disorders Text Revision Fourth Edition ed. Washington DC; 2000.

Opioid Abuse

One or more of the following:

- Failure to fulfill obligations at work, school, or home (e.g., repeated school absences, suspension)
- Use in physically hazardous situations (e.g., drinking & driving)
- Substance-related legal problems
- Continued use despite social or interpersonal problems related to substance

American Psychiatric Association. DSM IV-TR. Diagnostic and Statistical Manual of Mental Disorders Text Revision Fourth Edition ed. Washington DC; 2000.

Opioid Dependence

Three or more of the following:

- Tolerance*
- Withdrawal*
- Taken in larger amounts or for longer period than intended
- Persistent desire or unsuccessful efforts to cut down/control use
- Great deal of time spent obtaining, using, or recovering from effects
- Important activities given up/reduced because of use
- Continued use despite physical/psychological harm

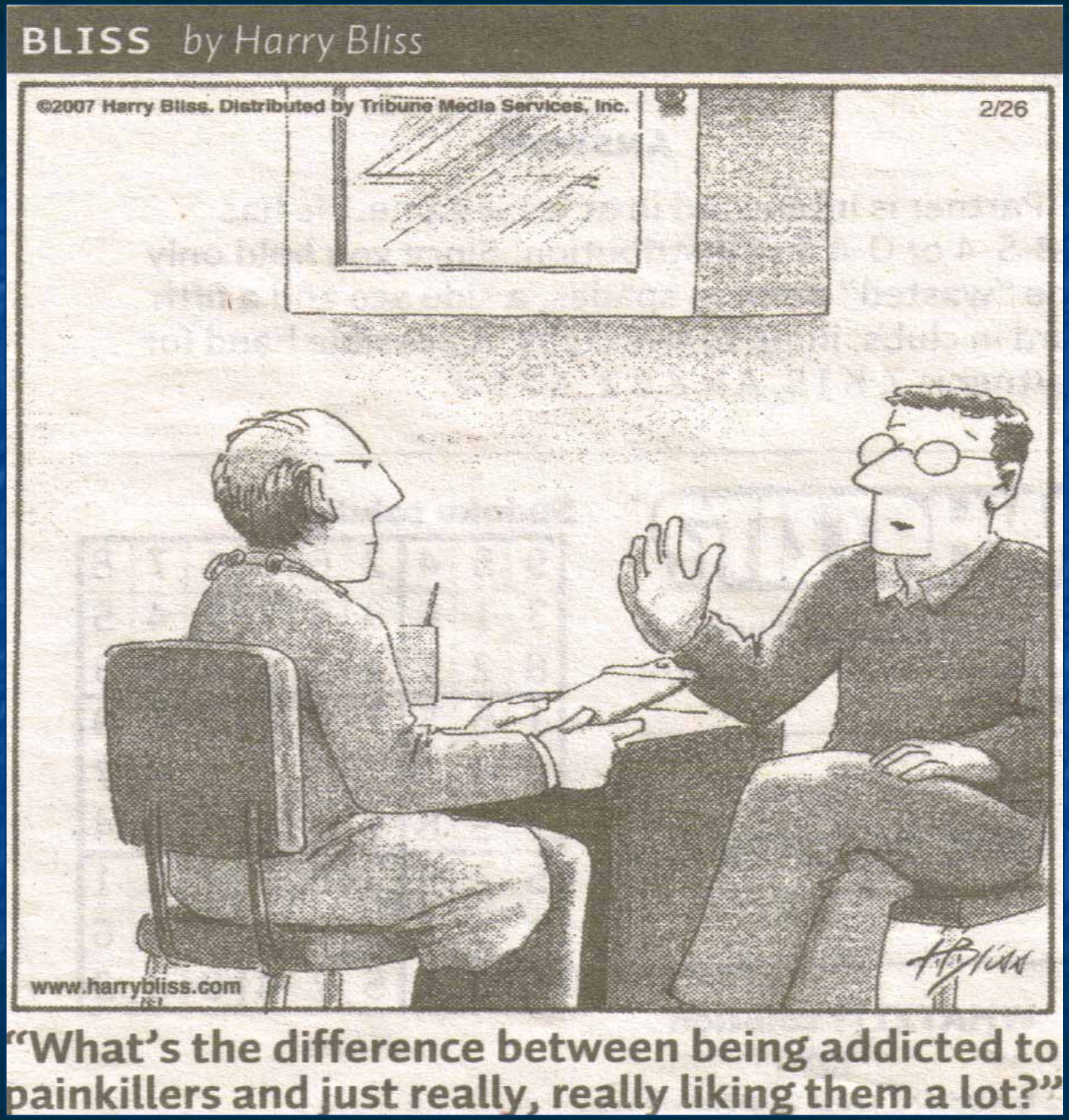
* All opioid dependence (addiction) includes tolerance and withdrawal

American Psychiatric Association. DSM IV-TR. Diagnostic and Statistical Manual of Mental Disorders Text Revision Fourth Edition ed. Washington DC; 2000.

The 5 C's of Opioid Addiction

- **Craving** & preoccupation with non-therapeutic use
- **Compulsive** use
- Loss of **Control** over use*
- **Continued** use despite harm
- **Chronic** maladaptive behaviors associated with use

*Useful discriminator between dependence (addiction) & abuse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www.harrybliss.com
"What's the difference between being addicted to painkillers and just really, really liking them a lot?"

Track Behavior: Patients Receiving Opioids

Pain Patient:

- Stable pattern of use
- Increase overall function
- Concerned about S.E.
- Will follow Tx plan
- Have leftover meds
- No longer preoccupied with obtaining opioids after adequate pain control

Addicted Patient:

- Loss of control
- Decrease overall function
- Desires more despite S.E.
- Won't follow Tx plan
- No leftover meds
- Continues preoccupied with obtaining opioids despite pain control

Clinical Pearls

- **Tolerance** is an expected neuroadaptation to continuous opioid use.
- **Withdrawal** symptoms can emerge even after brief periods of use.
- Patients treated for pain often complain of side effects and DYSPHORIA with pain medication.
- Addicted patients often describe EUPHORIA.
- **Most patients prescribed opioids for appropriate medical reasons do not develop addiction.**

Components of an Effective Opioid Treatment Contract

- Must obtain opioid prescriptions from **one doctor**; fill at **one pharmacy**
- Side effect & withdrawal **education**
- Inform physician of **relevant info** (side effects)
- Limits on **early refills** & **lost/stolen Rxs**
- **Keep/ reschedule all** appointments
- Avoid **improper use** (changing dose/frequency without physician's knowledge, doctor shopping, frequent ED visits, buying from illicit source, selling/diverting)

Effective Opioid Tx Contract (cont'd)

- Agreement for **random urine screens** (confirm medication is present, other drugs/alcohol absent)
- **Communication** among all health care providers
- Parents control meds at all times; supervised dosing
- Pill counts at EVERY visit
- Terms of **non-disciplinary termination** (no improvement, pregnancy, side effects/toxicity)
- Terms of **disciplinary termination** (medication misuse, substance abuse, improper behavior, missed/failed lab tests, missed appointments, other contract violations)

Pseudo-addiction (or Under-treated Pain?)

- Iatrogenic misinterpretation of behaviors caused by under-treatment of pain that the clinician diagnoses as inappropriate (aberrant) drug-seeking behavior
- **Not a diagnosis**. Is description of dysfunctional relationship between patient & health care team
- Behavior ceases once patient receives adequate treatment for pain.

Kowal N. What is the issue?: pseudoaddiction or undertreatment of pain. Nurs Econ 1999;17:348-9.

Signs of Pseudo-addiction

- Drug hoarding
- Requesting specific drugs
- Unsanctioned dose escalation
- Complaining needs more medication
- Unapproved use of drugs to treat symptoms
- Anxiety related to severe symptoms

Portenoy R, Payne R. Acute and Chronic Pain. In: Lowinson J RP, Millman R, Langrod J, ed. Substance abuse: a comprehensive textbook. Baltimore, MD: Williams and Wilkins; 1997:563-90.

Pain Treatment

- Accept and respect report of pain
- Pt. with Hx substance use may be under-treated for pain
  - Medication requests are often seen as drug seeking
- Maximize non-opioid based therapeutics
- If prescribing opioids: Discuss risks openly with patient/ parents
  - Sign an opioid contract
  - Identify one prescribing physician
  - Medicate to point of pain relief without side effects
  - Prescribe limited number of pills and re-examine for pain
  - Parents hold medications, dispense & observe all doses
  - Discard any remaining pills

Portenoy RK. Opioid therapy for chronic nonmalignant pain: a review of the critical issues. J Pain Symptom Manage 1996;11:203-17.

Safe Opioid Prescribing System
Instructions for Office Staff

- Post sign in waiting room displaying state Controlled Substances Policy
- Use only tamper- & copy-proof Rx pads; serialized pads best. Secure pads like cash.
- Flag charts/EMR in non-obvious way (i.e. colored sticker) to indicate patient on chronic opioid therapy
- Establish relationship w/ urine toxicology lab (quantitative testing using GC/MS)

Guidelines for Prescribers

- Are you treating acute or chronic pain? Give patients and families **realistic expectations** about the efficacy of long-term opioid therapy
- Maximize **non-pharmacologic** interventions
- **Treat pain aggressively**; prescribe opioids judiciously (risk vs benefits)
- **Combination therapy:** Optimize balance of pain relief and side effects (opioids + acetaminophen or NSAID)

More Guidelines for Prescribers

- **Rational polypharmacy:** Try moderate doses of agents w/ different mechanisms instead of high doses of single agent
- **Tailor** the regimen: fixed LA + prn short-acting for breakthrough pain
- Opioid **rotation:** safety first; obtain specialty consultation when converting to methadone
- **Start low…go slow…**

Summary

- Treatment of pain with opioid medication does not necessarily cause addiction, but caution should be taken when prescribing to young populations.
- Remember to rule out "pseudo-addiction" if hoarding or escalating dose of medications occurs.
- Symptoms of greatest concern are maladaptive or "street" behaviors.

Summary

- First, do no harm!
  - Always use safe opioid prescribing guidelines
- Maximized pain relief reduces Rx opioid abuse
- Never worry alone!
  - Reassess frequently and obtain consultation w/ pain specialists, mental health professionals &/or addiction specialists
- Recovering, addicted patients can be safely & carefully treated for pain!

Resources

- SAMHSA http://oas.samhsa.gov
- The NSDUH Report: Trends in Nonmedical Use of Prescription Pain Relievers 2002 to 2007. SAMHSA website.
- National Institute on Drug Abuse. *NIDA InfoFacts: Prescription and over-the-counter medications.* http://www.drugabuse.gov/Infofacts/PainMed.html http://www.drugabuse.gov/drugpages/prescription.html NIDA Centers of Excellence for Physician Information: www.drugabuse.gov/coe
- Monitoring the Future Study: www.monitoringthefuture.org
- The Partnership for a Drug-Free America http://www.drugfree.org/Portal/DrugIssue/Features/Prescription_Medicine_Misuse