

ADDICTION IN THE ANESTHESIA PROVIDER

Daniel I. Perlin, M.D.
Department of Anesthesiology
MedStar Health, Washington Hospital Center
Northeast Regional Director, Board Federation of State
Physician Health Programs
Chairman Physician's Health Program
Medical Society of the District of Columbia
www.msdc.org

No financial Disclosures

There is a very good chance that no matter where you work, you will come across someone who suffers with addiction to anesthetics or some type of impairment sometime in your career.

Medical Society of the District of Columbia Physician's Health Program

- 10,000 Licensed Physicians in DC
- 3,000 Practicing Physicians in DC
- Incidence of Impairment is 1 in 10 or approximately 300 Physicians
- Capture rate is about 1% Nationally
- Therefore, about 30 Physicians monitored at any given time in the DC.



“Wounded Healers”

3/25/2016

5

- 5 Year monitoring contracts
- Abstinence based
- Therapy
- Random Toxicology Screening
- Assigned a work place monitor
- Must check in with a Clinical Case Manager
- 12 step program

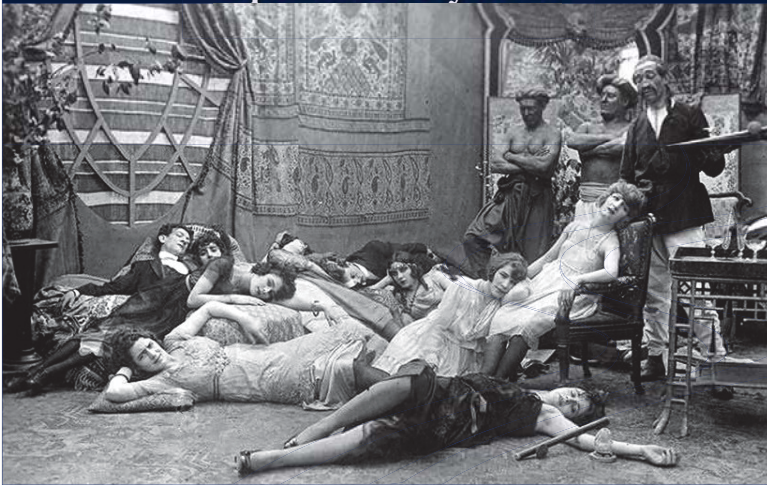
Addiction to anesthetics and the discovery of anesthesia have gone hand and hand throughout history.

Ether Frolics



Addicts are not weak willed, evil, immoral or stupid. They deserve to be treated with respect and dignity and the same as anyone else with a disease

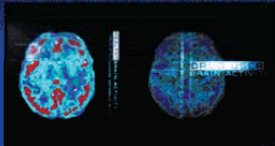
Opium Party 1918



The Incidence of Substance abuse disorder is about 1:10 and the same incidence occurs in medical professionals

ADDICTION IS A DISEASE!!

What is Addiction?
Addiction is A Brain Disease



- Characterized by:
 - Compulsive Behavior
 - Continued abuse of drugs despite negative consequences
 - Persistent changes in the brain's structure and function

NIDA

Distortion of thinking is the hallmark of addiction
--Most notably Denial

Drug use is on the rise in this country and 23.5 million Americans are addicted to alcohol and drugs.

That's approximately one in every 10 Americans over the age of 12 – roughly equal to the entire population of Texas.

But only 11 percent of those with an addiction receive treatment. Sep 28, 2010

1.5 Million Americans enter into substance abuse treatment Programs every year

anesthesiologists are over-represented in addiction treatment programs at a rate about three times higher than would be expected

* Anesthesiologists are 12-15 % of all physicians in treatment programs

* Anesthesiologists only constitute about 4% of all Physicians in the U.S.

Talbott GD et al

- Early experiments by Halsted using cocaine to anesthetize peripheral nerves led to his addiction to the drug.
- Likewise, experiments with Ether, Nitrous Oxide and Chloroform also led to experimenter's addiction to those drugs.
- Not surprising that addiction to anesthetic drugs and anesthesiology are linked and that addiction remains the number one occupational hazard for anesthesia providers.

Occupational exposure is a clear risk factor

- In both Anesthesiologists and Anesthetists there is an increased risk in the first 5 years of giving anesthesia
- Oral surgery residents report the same incidence of addiction proportionate to time in anesthesia with the same drug profile.

SCOPE OF THE PROBLEM –THE NUMBER ONE OCCUPATIONAL HAZARD FOR ANESTHESIA PROVIDERS

By *MONICA DYBUNCIO / CBS NEWS/ February 23, 2012, 2:36 PM*

One in six surgeons has an alcohol problem

"Alcohol abuse is not a surprising condition to find within hospital walls. But a new study suggests the ones with a drinking problem might be the surgeons."

published in the Feb. 20, 2012 in an issue of the Archives of Surgery

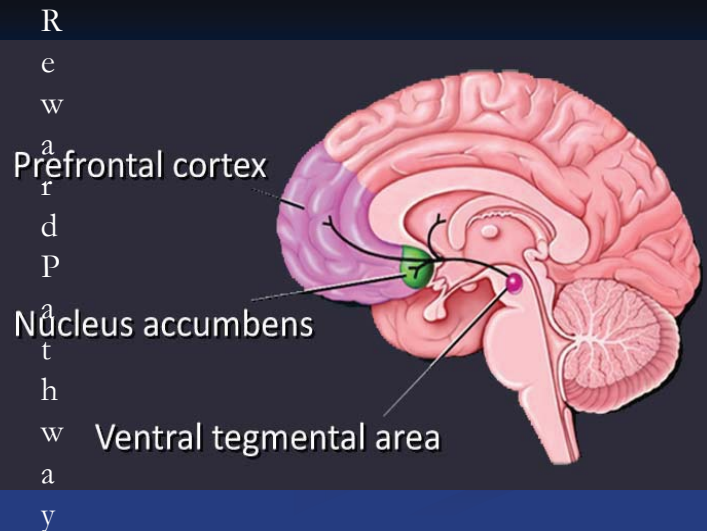
researchers surveyed over 25,000 surgeons about their work, lifestyle, and mood. Only 7,000 of them responded, and the researchers used the information to screen for alcohol abuse or dependence. What did they find? About 15 percent of surgeons who responded had scores that indicated an alcohol problem. Further analysis showed nearly 14 percent of male surgeons and 26 percent of female surgeons.

According to the study authors, the alcohol abuse rates among surgeons are higher than those of the general population.

Scope of the problem –The number one occupational hazard for anesthesia providers

- Booth surveyed 133 programs in 1997
- The response rate was 93%
- **He reported 1.6% addiction rate in residents and 1% addiction rate in faculty**
- This was despite 47% of the respondents reporting an increase in the education of anesthesia and addiction as well as increased steps taken to prevent diversion of controlled substances.

- Collins surveyed 176 programs in 2005
- 66% response rate
- 80% responded by reporting at least one incident between 1991 to 2001
- 19% reported at least one mortality
- Spiegleman reported a 10% mortality in his survey in the 1990's which actually implies an increasing mortality despite all we know and the increased education.



The issue of anesthesia and addiction is not restricted to the United States.

- Berry looked at 304 anesthesia departments in the UK and Ireland between 1990 and 1999 and concluded that one anesthesia provider per month was disabled by addiction in the UK

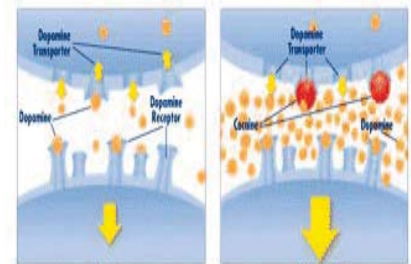
ALL DRUGS OF ABUSE TARGET THE BRAIN'S PLEASURE CENTER

Brain reward (dopamine) pathways



These brain circuits are important for natural rewards such as food, music, and art.

All drugs of abuse increase dopamine



Typically, dopamine increases in response to natural rewards such as food. When cocaine is taken, dopamine increases are exaggerated, and communication is altered.

Costs of Substance Abuse

Abuse of tobacco, alcohol, and illicit drugs is costly to our Nation, exacting more than \$700 billion annually in costs related to crime, lost work productivity and health care*

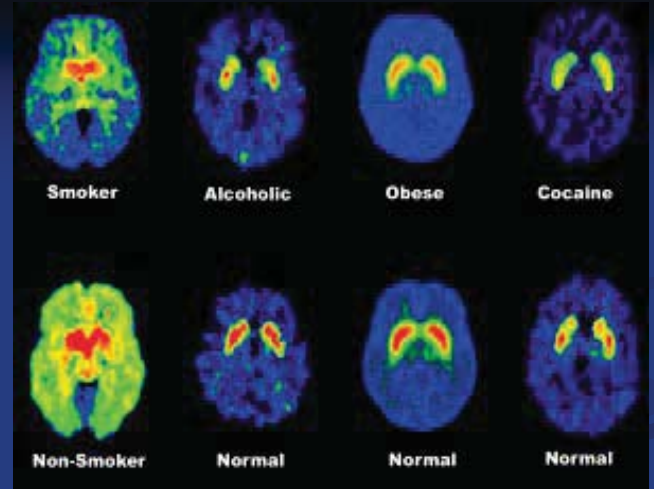
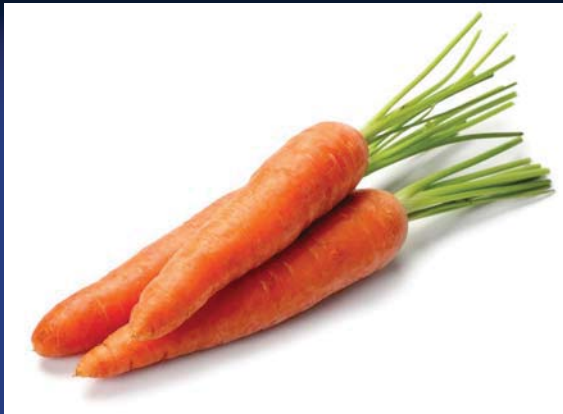
Health Care Overall

Tobacco	\$130 billion	\$295 billion
Alcohol	\$25 billion	\$224 billion
Illicit Drugs	\$11 billion	\$193 billion

*NIDA

Endogenous Neurotransmitters

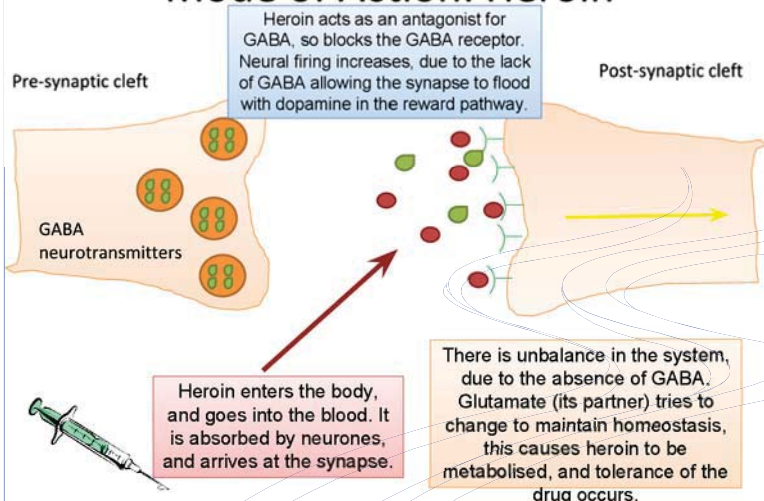
Alcohol	GABA (Excite) Glutamate (inhibit)
Amphetamines	Dopamine
Benzodiazepines	GABA
Cannabis	Anandamide
Hallucinogens & NDMA	Serotonin
Nicotine	Acetylcholine
Opioids	Endorphins
PCP & Ketamine	Glutamate (inhibit) o



Definitions—OLD TERMS

- A. Abuse --use of a psychoactive substance in a manner detrimental to the individual or society but does not meet the criteria for dependence
- B. Dependence--A maladaptive pattern of substance use, leading to clinically significant impairment or distress
- C. Addiction --a primary, chronic medical DISEASE; manifested by compulsive use of an addictive drug, primarily characterized by loss of control and irrepresible craving of the drug

Mode of Action: Heroin



DSMV Addiction is a spectrum (11 criteria) Called "Substance Use Disorder"

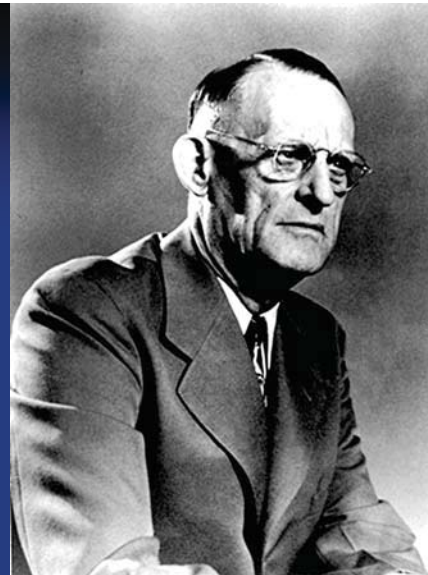
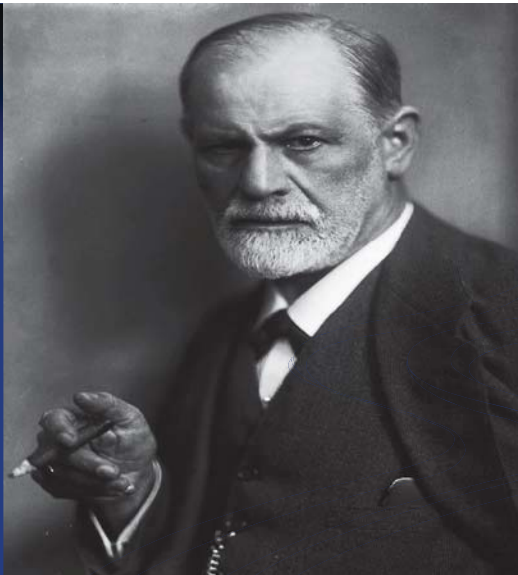
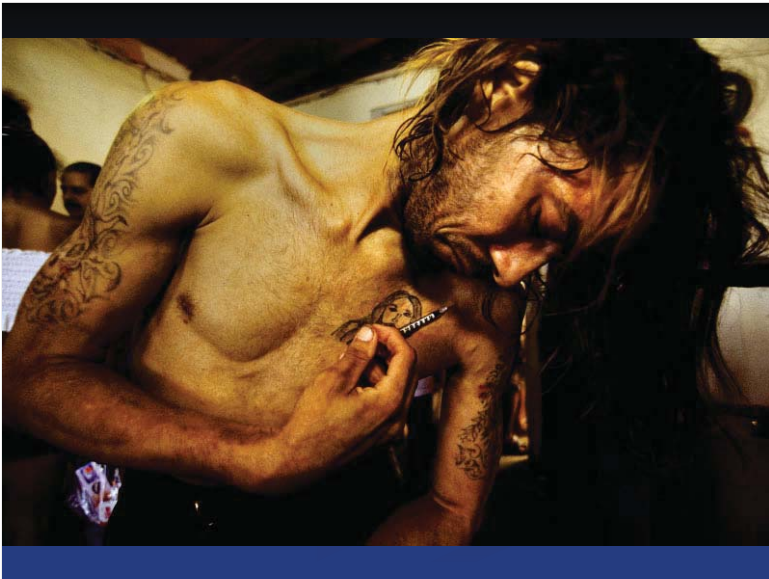
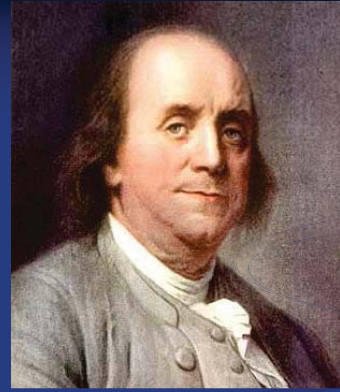
- 2-3 mild
- 4-5 moderate (Within a 12 month period)
- 6-7 Severe

1. Larger amounts over longer time
2. Persistent desire or cant cut down
3. Give up important social, occupational or recreational activities
4. Keep doing it despite physical or psychiatric problems
5. Spend a great deal of time getting, using or recovering
6. Strong Cravings or Urges
7. Fail to fulfill major work school or home obligations
8. Interpersonal problems
9. Physically hazardous situations
10. Tolerance (need for more, or decreased effect same amount)
11. Withdrawal (Characteristic withdrawal or when taken to avoid or relieve sxs)

- Law enforcement taken out
- Cravings added in

- The etiology of addiction is multifactorial with contributions from genetic, psychosocial, environmental and biological factors.

- **It is a disease that is progressive and fatal if untreated.**





© Rex

Howard Markel

AN ANATOMY OF ADDICTION

"on May 5, 1884. A Bellevue Hospital orderly summons Dr. William Stewart Halsted to save the leg of a laborer who has fallen from a scaffolding. Famous for the speed and virtuosity of his surgery, Halsted notes the shattered shinbone piercing through the skin — and abruptly retreats from the examination table, because he's not fit to operate. He takes a cab home and sinks "into a cocaine oblivion that lasted more than seven months."



His obsession with cleanliness was to serve him well through his career. But his enthusiasm for the new anesthetics was his undoing. One of the most effective local anesthetics in those days was cocaine, and within a few months of testing it on himself he had a bad drug habit. He also soon acquired the addict's other bad habits: he lied, missed work, made endless excuses. Finally, a medical paper he published on cocaine anesthesia was such gibberish that his career in New York was effectively over.

Halsted's principles:

modern surgical principles of control of bleeding, accurate anatomical dissection, complete sterility, exact approximation of tissue in wound closures without excessive tightness, and gentle handling of tissues.

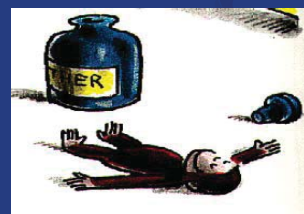
* The first radical mastectomy for breast cancer was performed by Halsted (before this time, such a diagnosis was a virtual death sentence).

* Other achievements included the introduction of the latex surgical glove and advances in thyroid, biliary tract, hernia, intestinal and arterial aneurysm surgery.



Medical Professional Impairment

- unable to fulfill professional duties in an acceptable manner
- Not just a function of addiction or chemical dependence but can have several etiologies



ETIOLOGIES:

physical infirmity
(including illness or injury)

mental illness

Aging

psychosocial disorders

Chemical use/abuse/dependence

Treatment

- application of planned procedures to identify and change patterns of behavior that are maladaptive, destructive and/or injurious to health
- goal: to restore appropriate levels of physical, psychological and/or social functioning

Recovery

a lifelong process of overcoming both physical and psychological dependence on a psychoactive substance

goal: new lifestyle allowing for emotional and spiritual growth in sobriety and avoidance of relapse. (12 step program)

What are the Drugs that Anesthesia providers tend to abuse ?



Relapse

recurrence of psychoactive substance-dependent behavior in an individual who has previously achieved and maintained abstinence for a significant period of time beyond withdrawal

***opioids are the drug of choice for anesthesiologists

**but they may use any other drug known
(poly substance abuse very common)

fentanyl and sufentanil most commonly used

meperidine, morphine

Alcohol --mostly in older anesthesiologists
(it takes a long time to produce apparent impairment)

midazolam
cocaine
oral benzodiazepines
propofol
inhalation agents-- especially sevoflurane

Every possible route of administration has been tried, most commonly used are:

- I.V.
(Hidden veins are often used: feet, groin, thigh, penis)
- I.M.
- oral nasal
- rectal
- sublingual
- inhalation

loss of license, professional standing, position, career, marketability

loss of family

loss of self-esteem

loss of ability to get health/disability insurance

Methods of obtaining abused drugs for anesthesiologists

- false recording on anesthesia record
- giving "breaks" and substituting syringes
- keeping wastage
- switching syringes during own cases
- "breakage" of ampoules
- accessing ampoules and resealing with other substance inside
- poor accountability

"It should be said that a number of studies have shown that direct patient harm associated with impairment due to chemical dependency is very, very rare"

study author:

(surgeons and Alcohol study)

Dr. Michael Oreskovich, a clinical associate professor of psychiatry and behavioral sciences at the University of Washington in Seattle

What are the Risks??

Risks to Anesthetist

Risks to Patient

Potential liability risks to hospital staff or administration

Risks to Anesthetists

- **high rate of mortality for anesthesia providers with addictive disease.**
(Alexander BH, Checkoway H, Nagahama SI, Domino KB. Cause-specific mortality risks of anesthesiologists. *Anesthesiology*. 2000;93:922-930.)
- **Relapse rate is about 19 percent per year for anesthesiologists with a history of narcotic addiction who have returned to practice**
(Arnold, WP. 1995 substance abuse survey in anesthesiology training programs: A brief summary. *ASA News*. 1995; 59(10):12-13,18.)
- **death may be the presenting symptom for relapse**
Menk EJ, Baumgarten RK, Kingsley CP, et al. Success of re-entry into anesthesiology training programs by residents with a history of substance abuse. *JAMA*. 1990; 263:3060-3062.

Risks to Patient

- work is usually the last affected by addictive disease
- impaired physicians are at **increased risk for malpractice claims**.
- The risk normalizes after treatment and in recovery (Walzer RS. Impaired physicians: An overview and update of the legal issues. *J. Leg Med.* 1990; 11:131-198.)

According to Gold et al. University of Florida
J Addict Dis. 2006;25(1):15-21.
Environmental exposure may predispose
Anesthesiologists to the risk of Fentanyl
addiction



Potential liability risks to hospital staff or administration

- Many state laws require every hospital medical staff to have a committee that advocates for physician health and well-being. Members of the committee are protected from lawsuit if they are acting in good faith and in the best interest of the afflicted physician
- The Medical Staff Executive Committee (MSEC) has a more disciplinary or protective function, i.e., to protect the medical staff and patients. The Physician Assistance Committee may provide recommendations to the Medical Staff Executive Committee

“Second hand exposure may affect treatment outcome and explain anesthesiologist's inability to return to work in the operating room”.

“Not only did we detect propofol and fentanyl in cardiovascular surgery operating room air, we also found the highest concentrations were close to the patient's mouth where anesthesiologists work for hours”.

“Like tobacco, second hand opioid exposure can sensitize and change the brain making abuse, dependence and behavioral disorders more likely”.

What are the Factors that may explain why anesthesia providers have been over-represented in treatment programs?



high addictive potential of fentanyl/sufentanil

more rapid identification of substance use since consequences are more obvious

diversion of sufentanil/fentanyl for illicit use is relatively easy since small doses initially provide an effect desired by the abuse

access to drugs

accustomed to giving large doses of mood-altering parenteral substances with immediate results. There is a huge curiosity about what drugs feel like for the patient

specialty looks for addiction within itself; much more awareness in anesthesiology

lack of "needle taboo"

Anesthesia providers are control-oriented: problems may develop when the environment does not conform to expectations

Why?

- initially for different reasons: curiosity, fun, sleep, self-medication
- in the late stages, all addicted persons use drugs just to stay even and avoid the pain of withdrawal; they think they need to use or they will die

A Medical Professional's risk for addictive disease equals that of the general population but Fentanyl is so addictive that when Anesthesia providers try it out of curiosity they are almost immediately addicted.

Characteristics of addicted anesthesia Providers

"pharmacological optimism"
physicians are comfortable using medications to change feeling or mood. physicians often have a sense of uniqueness and invulnerability.

A Common reason given is:
"I needed to find a way to sleep"
or they say:
"I have excessive fatigue"
(contributes to stimulant use)

*50 percent <35 years old (bimodal distribution)

*Residents and white males are over-represented.

*Often they are the last individuals in your department you would expect.

*A high proportion are members of Alpha Omega Alpha

*65% Associated with Academic departments

(Silverstein JH, Silva DA, Iberti TJ. Opioid addiction in anesthesiology. *Anesthesiology*. 1993; 79:354-375.)

HOW TO RECOGNIZE THE ADDICTED ANESTHESIA PROVIDER

- The only pathognomic sign is witnessed self-administration of drugs. There is NO explanation for that activity other than one requiring treatment

Denial is universal to friends, colleagues, family and faculty

- Symptoms appear first in the community, then the family and finally at work.
- Addicted individuals feel that as long as they can do their job, they do not have a problem.

ADDICTION IS A DISEASE

The only way to treat addicted colleagues is to recognize that they have an illness

They are not immoral, evil, crazy, stupid or weak-willed.

- This allows for a diagnosis, evaluation and development of a therapeutic plan and re-entry into society
- Brain reward regions involving the control of motivated behavior have been identified. All the highly addictive drugs mimic or enhance the actions of specific neurotransmitters (GABA, serotonin). Dopamine serves as a final common pathway in transmission from the forebrain (nucleus accumbens and ventral tegmental area) to end in the limbic and cortical regions

(Leshner AI. Understanding drug addiction: Implications for treatment. *Health Practice* 1996; 21: 47-50)

Symptoms of opioid addiction in the hospital

1. unusual changes in behavior -- wide mood swings, periods of depression, anger and irritability alternating with periods of euphoria
2. sign-out increasing quantities of narcotics and frequent breakage of narcotic vials
3. inappropriately high doses for procedure being performed
4. increasingly sloppy and unreadable charting
5. desire to work alone
6. refuse lunch relief or breaks
7. frequently relieve others
8. volunteer for extra cases (especially cardiac, where narcotics are being used in large quantities)
9. volunteer for extra call, come in early and leave late
10. at the hospital when off duty to stay near supply
11. frequent bathroom breaks
12. difficult to find between cases, often napping after using or unexplained absences

What to do

- Preparation: A little preparation goes a long way
- Awareness through education and experience
Accepting this as a disease is the key to treating properly
- Have policies and procedures, contacts and referrals determined in advance, allowing one to think about it medically rather than emotionally in a crisis
Inconsistent or poorly thought out intervention, management and treatment hinders short-term care and compromises long-term prognosis

13. desire to administer narcotics personally in postanesthesia care unit
14. Their patient's pain is out of proportion to narcotic record
15. wear long-sleeved gowns to hide needle marks and stay warm
16. pinpoint pupils
17. signs and symptoms of withdrawal, especially diaphoresis, tremors, mydriasis, rhinorrhea,
18. myalgias, nausea and vomiting
19. weight loss and pale skin
20. undetected addicts found comatose
21. untreated addicts are found dead
21. quality of care issues -- malpractice, behind on charts

Educate the members of your department

- Educating your staff about identifying chemical dependence is difficult; the early signs are subtle and diagnosis is not always obvious
- need a level of suspicion and be willing to believe it could be happening

Observation

quality assurance

- anesthesia record and narcotic utilization review
- random testing of narcotic waste syringes
- urine testing for cause

Intervention -- With concern, compassion and firmness (no hidden agendas)

- this is a life-changing event for both the intervening physicians and the patient. It must be done with preparation and extreme care

DO NOT INTERVENE ONE-ON-ONE!

- Utilize your hospital committee or call the state medical society for assistance. You may include the family if they are not in denial

When symptoms are identified

- MAINTAIN CONFIDENTIALITY
- information gathering (not an investigation)
- document facts and behavior
- confirm identified signs; do not rely on or convey rumor
- have compelling evidence sufficient to report to disciplinary authority if the individual refuses treatment
- corroboration with urine/blood testing

■ Diversion of controlled substances results in revocation of medical license.

Entering voluntary treatment often avoids that punishment

■ newly identified addicted physicians are at a HIGH risk of suicide when confronted. Do NOT leave them alone until they are in a treatment program

■ Expect hostility, threat of lawsuit, denial. USUALLY IT DOES NOT HAPPEN, but be ready with your license hammer

Convene your well-being (physician assistance) committee

- very helpful to have an anesthesiologist on the committee before a crisis occurs
- consult a local addictionologist with experience treating/referring physicians
- Before you need it, you should have the telephone number and contact person of at least one pre-selected addiction treatment program with experience in treating anesthesiologists and Anesthetists.

Returning to work

- Graduated re-entry into the work environment.
- Supportive environment a must.
- Random Urine Tox screens.
- Compliance with Medical Society Contract with periodic reports sent to Physicians Health committee.
- 12 step program.
- Not everyone is suitable to return to Anesthesia. Rely on Addiction specialist and psychiatric consultation for guidance.

The first sign of relapse is often a dead Anesthesiologist or Anesthetist!



Thank You
Questions??