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*of GRINDS*  
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MICHAEL CROWLEY

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*the RENAISSANCE*  
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*of JUDGES*  
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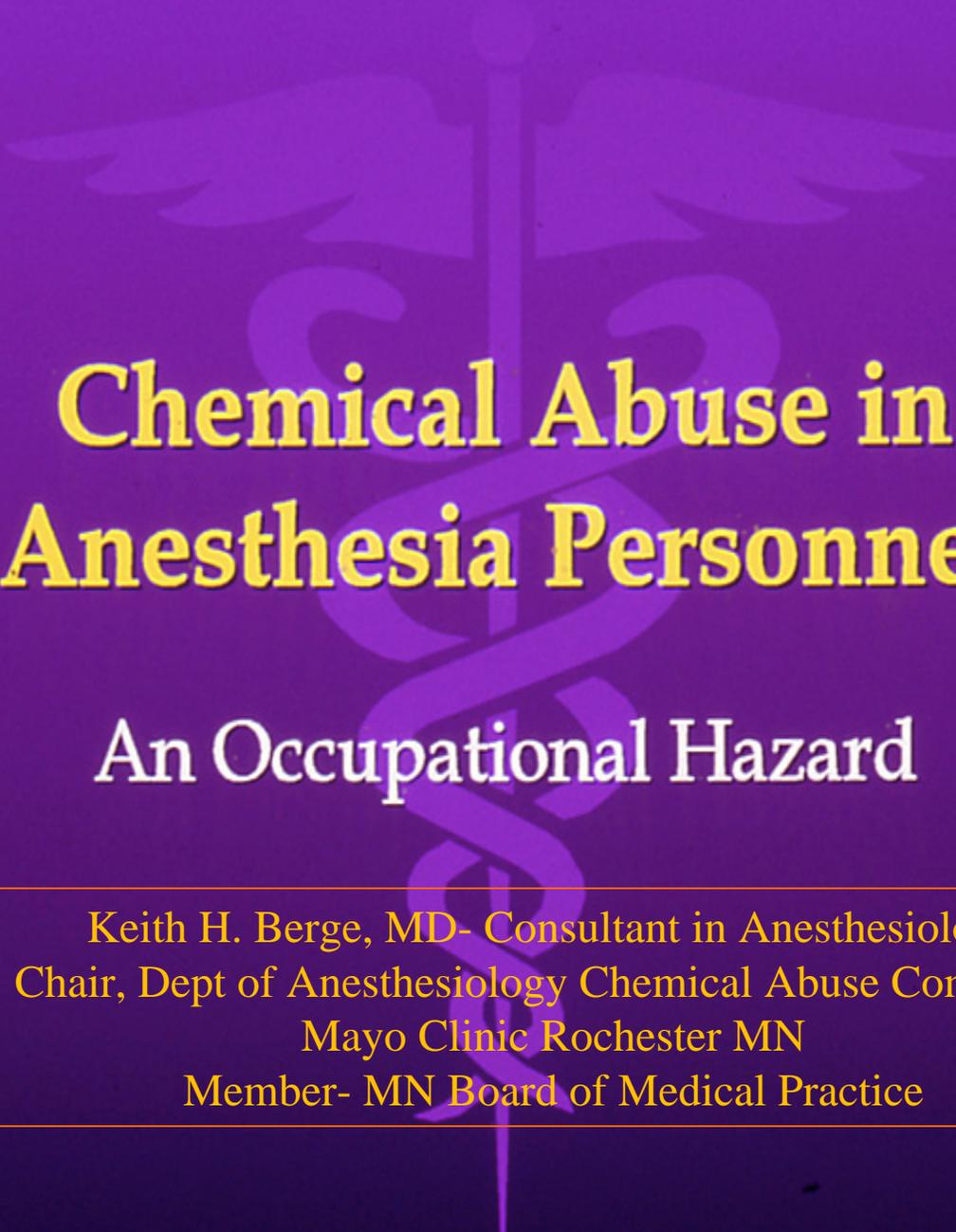
A  
DOCTOR'S  
DEATH  
... and a Profession's  
Struggle with Addiction  
JASON ZENGERLE

*Plus*  
THE TRAGIC  
NOBILITY  
*of DETROIT*  
JONATHAN COHN

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# Chemical Abuse in Anesthesia Personnel

## An Occupational Hazard

Keith H. Berge, MD- Consultant in Anesthesiology  
Chair, Dept of Anesthesiology Chemical Abuse Committee  
Mayo Clinic Rochester MN  
Member- MN Board of Medical Practice

**“I knew as soon as I pushed the plunger on the syringe that I could never live without it.”**

**Former Mayo CRNA  
Fentanyl addict  
Dead at age 50**



# MISTAKES

IT COULD BE THAT THE PURPOSE OF YOUR LIFE IS  
ONLY TO SERVE AS A WARNING TO OTHERS.

# PREVALENCE

## Anesthesiologists

- 4.2% of all physicians
- 11.4% of physicians at treatment

Talbott DG



## **ASA Task Force on Chemical Dependence**

**Both the survey data and reports from treatment centers have clearly shown that the potent opioids, fentanyl and sufentanil, are the drugs abused most frequently by anesthesiologists, comprising about 70 percent of cases....**



## **ASA Task Force on Chemical Dependence**

**....In the survey, alcohol and cocaine each accounted for about 10 percent of the cases, while the remainder were divided nearly evenly among several other drugs, including benzodiazepines, potent inhalation agents, nitrous oxide, sodium thiopental, lidocaine and propofol.**

# Re-entry into Anesthesia after Addiction Treatment

## Drugs of Choice- Top 5

- Fentanyl- 50%
- Other Opioids- 10%
- Diazepam- 7%
- Alcohol- 7%
- Inhalation Agents- 5%

Menk, et.al. JAMA 1990

# CME A Survey of Propofol Abuse in Academic Anesthesia Programs

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**BACKGROUND:** Although propofol has not traditionally been considered a drug of abuse, subanesthetic doses may have an abuse potential. We used this survey to assess prevalence and outcome of propofol abuse in academic anesthesiology programs.

**METHODS:** E-mail surveys were sent to the 126 academic anesthesiology training programs in the United States.

**RESULTS:** The survey response rate was 100%. One or more incidents of propofol abuse or diversion in the past 10 yr were reported by 18% of departments. The observed incidence of propofol abuse was 10 per 10,000 anesthesia providers per decade, a fivefold increase from previous surveys of propofol abuse ( $P = 0.005$ ). Of the 25 reported individuals abusing propofol, 7 died as a result of the propofol abuse (28%), 6 of whom were residents. There was no established system to control or monitor propofol as is done with opioids at 71% of programs. There was an association between lack of control of propofol (e.g., pharmacy accounting) at the time of abuse and incidence of abuse at the program ( $P = 0.048$ ).

**CONCLUSIONS:** Propofol abuse in academic anesthesiology likely has increased over the last 10 yr. Much of the mortality is in residents. Most programs have no pharmacy accounting or control of propofol stocks. This may be of concern, given that all programs reporting deaths from propofol abuse were centers in which there was no pharmacy accounting for the drug.

(Anesth Analg 2007;105:1066-71)

**Table 1.** Summary of Propofol Abuse Data and Outcomes

	Attending	Residents	CRNAs	OR/Anes techs	Total
Number found	5	16	3	1	25
Deaths from abuse	0	6	0	1	7
Completed rehab.	4	7	2	0	13
Relapse of use	1	1	1	0	3
Still in anesthesia	1	2	0	0	3
Changed specialty	0	5	0	0	5
Left medicine	4	3	3	0	10

CRNAs = certified registered nurse anesthetists; OR = operating room.

100% Response rate from 126 academic department chairs

18% (23 departments) reported one or more episode of Propofol abuse in the past 10 years for a total of 25

7 deaths, 6 residents, 1 anesthesia tech- 38% mortality rate  
Thus- only 12% returned successfully to anesthesia practice

Death was the presenting event in all 7

18 “interventions”, 13 to rehab, six of these returned, 3 relapsed and out

5 changed specialty, 10 left medicine

# Nine cases with “extra” data obtained by interviews

**Table 3.** Summary of Case Report Data

	Abusing other drugs	Anesthesia as a second career	Psychosocial comorbidity	Previous risk taking behavior*	Pharmacy control of propofol present	Rehab	Relapse	Death	Left medicine
Case 1	X	X		X	N			X	
Case 2	X	X			N	X (with opiate use)	X (with opiate use)	X	
Case 3	X	X			N		X		X
Case 4		X	X	X	N			X	
Case 5	X				N	X (with opiate use)	X (with opiate use)		X
Case 6	X				N				X
Case 7	X	X			N	X			
Case 8			X		N			X	
Case 9			X		N			X	
Percentages	67	56	33		0	11	11	56	33

\* Examples include: racecar driver, skydiver, and high-risk law enforcement.

Of physician deaths (all residents) one death believed to be suicide (previous attempts)

In the other 5, not obviously suicide

Table 2. Pharmacy Regulation of Propofol

	Abuse events	No abuse reported	Total
Propofol secured	3	33	36
Propofol not secured	22	68	90
Total	25	101	126

Fisher's exact test  $P = 0.048$ .

71% of programs did not regulate propofol at the time of diversion

# Recent Survey Conducted by the University of HealthSystem Consortium (UHC) Pharmacy group

- 45 Academic Programs
- 33 Have no accounting of propofol whatsoever
- 1 controls in all settings
- 10 have it locked up



## A survey of inhalational anaesthetic abuse in anaesthesia training programmes★

J. E. Wilson,<sup>1</sup> N. Kiselanova,<sup>2</sup> Q. Stevens,<sup>3</sup> R. Lutz,<sup>3</sup> T. Mandler,<sup>3</sup> Z. V. Tran<sup>4</sup> and P. E. Wischmeyer<sup>5</sup>

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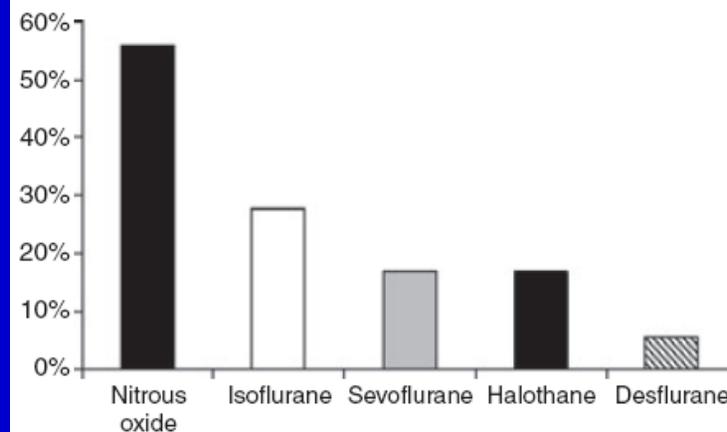
*5 Associate Professor, Department of Anaesthesia, University of Colorado Health Sciences Center, Denver, CO, USA*

# A survey of inhalational anaesthetic abuse in anaesthesia training programmes\*

J. E. Wilson,<sup>1</sup> N. Kiselanova,<sup>2</sup> Q. Stevens,<sup>3</sup> R. Lutz,<sup>3</sup> T. Mandler,<sup>3</sup> Z. V. Tran<sup>4</sup> and P. E. Wischmeyer<sup>5</sup>

**Table 1** Summary of inhalational anaesthetic abuse and outcomes in the 106 survey responses.

	Consultants	Trainees	Nurse anaesthetists	Anaesthesia technicians	Others	Totals
Number abusing inhalational anaesthetics	5	14	6	2	4	31
Deaths from abuse	2	5	0	0	1	8
Successfully completed rehabilitation	1	4	2	0	0	7
Returned to anaesthesia with relapse of use	1	2	0	0	0	3
Changed specialty	1	1	2	0	1	5
Left medicine	0	0	1	0	0	1
Unknown outcome	0	3	1	2	0	6



**Figure 1** Inhalational anaesthetic abused, expressed as a percentage of the total of 21 cases reported.

## A survey of inhalational anaesthetic abuse in anaesthesia training programmes\*

J. E. Wilson,<sup>1</sup> N. Kiselanova,<sup>2</sup> Q. Stevens,<sup>3</sup> R. Lutz,<sup>3</sup> T. Mandler,<sup>3</sup> Z. V. Tran<sup>4</sup> and P. E. Wischmeyer<sup>5</sup>

- **“Thus, among all anaesthesia-based providers found to be abusing inhalational anaesthetics, the overall mortality rate was 26% (8/31). Among trainees found to be abusing inhalational anaesthetics, the mortality rate was 36% (5/15).”**



# REGRET

IT HURTS TO ADMIT WHEN YOU MAKE MISTAKES-  
BUT WHEN THEY'RE BIG ENOUGH, THE PAIN ONLY LASTS A SECOND.

# ASA 1995 Substance Abuse Survey in Anesthesiology Training Programs

Population	Rate (percent) Retrospective 1/86-6/90	Rate (percent) Prospective 7/90-6/94
Residents addicted to fentanyl or its derivatives	0.59	0.34
Residents abusing other drugs	0.30	0.15
<b>Incidence rate for residents</b>	<b>0.89</b>	<b>0.48</b>
Attending addicted to fentanyl or its derivatives	0.09	0.04
Attending abusing other drugs	0.02	0.04
<b>Incidence rate for Attending</b>	<b>0.11</b>	<b>0.08</b>

# RESIDENTS IN TRAINING

**0.7% per year**

**x 3 years**

**x 65 residents**

---

**= 1.4 per year at Mayo**

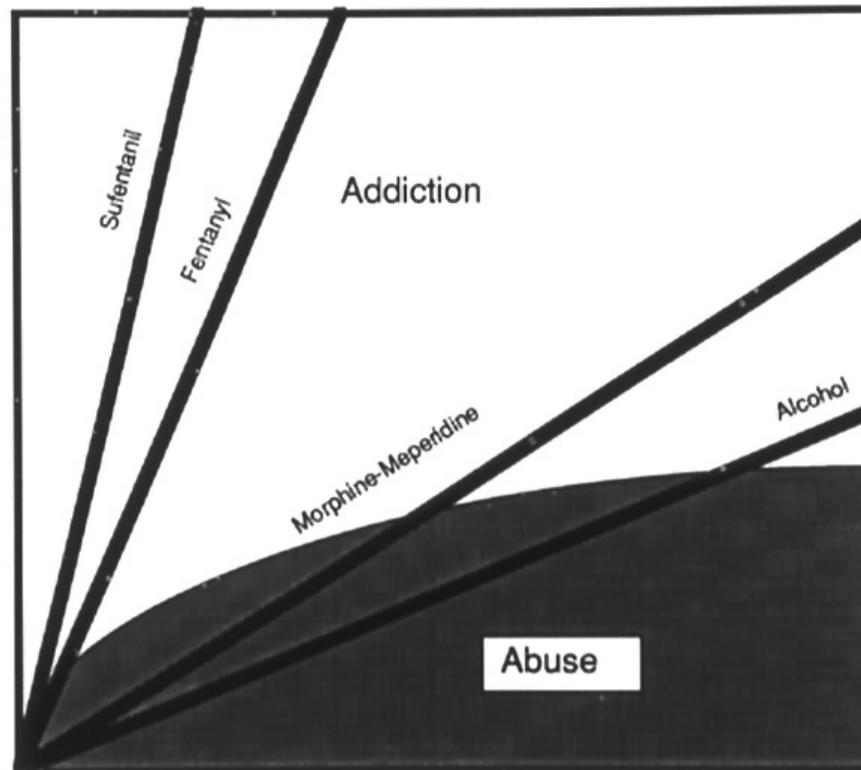
# How Do We “Catch” Them?

- Generally very subtle clues
- With narcotics- they function well
- But...



Understanding this graph could save  
your career,

AND PERHAPS YOUR LIFE!



Time course of addiction

Adapted from Arnold: Anesthesia, ed. Miller

# Take Home Point



**Is successful re-entry predictable?**

# Re-entry into Anesthesia after Addiction Treatment

- ❖ 180 unique cases
- ❖ 26 deaths from substance abuse
- ❖ 113 Trainees re-entered 61 Programs
  - 87 Parenteral opioid addicts
    - 52 (66%) relapsed
    - 14 suicides or lethal ODs in reentry group
    - 13 (16%) dead as 1<sup>st</sup> sign of relapse
  - 26 Other drugs
    - 7 (30%) failures
    - 1 (4%) death

# Chemical Dependency Treatment Outcomes of Residents

Letters to the Editor

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- **14/16 anesthesia residents abusing opioids (1 propofol, 1 alcohol)**
- **11/14 (69%) returned to work**
- **7/14 returned to anesthesia**
- **5/16 (31%) ultimately died**
- **Only 15% successfully reentered anesthesia practice**

# **Re-entry into Anesthesia after Addiction Treatment**

**“This study suggests that drug rehabilitation followed by redirection into another specialty may be the most prudent course for the anesthesiology trainee who abuses parenteral opioids.”**

Menk, et.al. JAMA 1990

# Risk Factors for Relapse in Health Care Professionals With Substance Use Disorders

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Scott Alberti

Lynn Hankes, MD

**T**HE PREVALENCE OF CHEMICAL dependency (excluding nicotine) among physicians has been estimated to be 10% to 15%,<sup>1</sup> similar to that in the general population.<sup>1-3</sup> Following completion of primary treatment, recovery is best achieved through continuing group therapy and regular attendance at mutual help groups.<sup>4</sup> Because of the proclivity to relapse, ongoing monitoring can help ensure sustained remission of individuals occupying safety-sensitive positions. Monitoring methods have changed over the past decade and now include frequent contact for behavioral assessment, random urine testing with observed micturition, and workplace surveillance.<sup>5,6</sup> Treatment programs estimate that up to 70% of health care professionals successfully

**Context** Substance use disorders among physicians are important and persistent problems. Considerable debate exists over whether use of major opioids, especially among anesthesiologists, is associated with a higher relapse rate compared with alcohol and nonopioids. Moreover, the risk factors for relapse with current treatment and monitoring strategies are unknown.

**Objective** To test the hypothesis that chemically dependent health care professionals using a major opioid (eg, fentanyl, sufentanil, morphine, meperidine) as drug of choice are at higher risk of relapse.

**Design, Setting, and Participants** Retrospective cohort study of 292 health care professionals enrolled in the Washington Physicians Health Program, an independent posttreatment monitoring program, followed up between January 1, 1991, and December 31, 2001.

**Main Outcome Measure** Factors associated with relapse, defined as the resumption of substance use after initial diagnosis and completion of primary treatment for chemical dependency.

**Results** Twenty-five percent (74 of 292 individuals) had at least 1 relapse. A family history of a substance use disorder increased the risk of relapse (hazard ratio [HR], 2.29; 95% confidence interval [CI], 1.44-3.64). The use of a major opioid increased the risk of relapse significantly in the presence of a coexisting psychiatric disorder (HR, 5.79; 95% CI, 2.89-11.42) but not in the absence of a coexisting psychiatric disorder (HR, 0.85; 95% CI, 0.33-2.17). The presence of all 3 factors—major opioid use, dual diagnosis, and family history—markedly increased the risk of relapse (HR, 13.25; 95% CI, 5.22-33.59). The risk of subsequent relapses increased after the first relapse (HR, 1.69; 95% CI, 1.13-2.53).

**Conclusions** The risk of relapse with substance use was increased in health care professionals who used a major opioid or had a coexisting psychiatric illness or a family history of a substance use disorder. The presence of more than 1 of these risk factors and previous relapse further increased the likelihood of relapse. These observations should be considered in monitoring the recovery of health care professionals.

*JAMA*. 2005;293:1453-1460

[www.jama.com](http://www.jama.com)



# Risk Factors for Relapse in Health Care Professionals With Substance Use Disorders

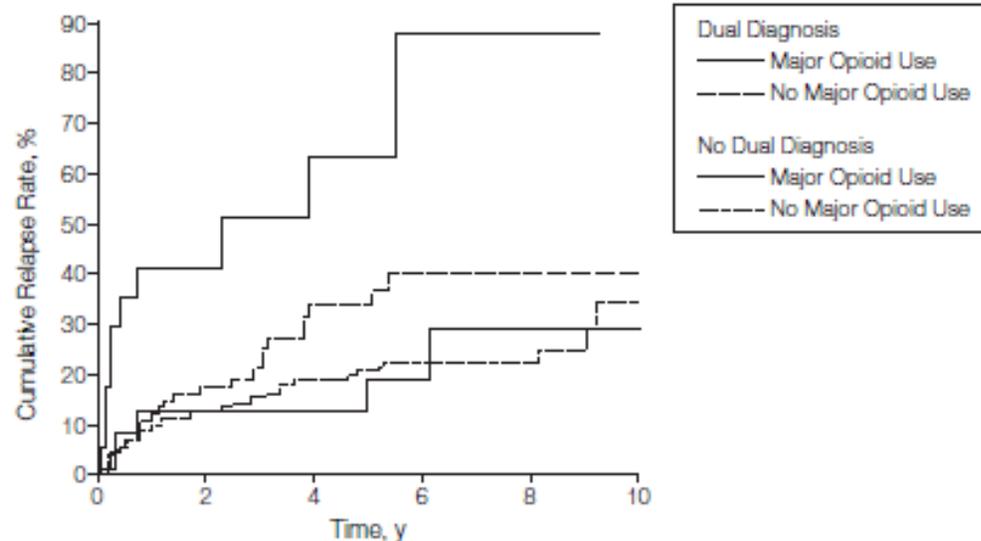
Karen B. Domino, MD, MPH

**Table 5. Multivariate Mo**

Family history of substance
Major opioid and dual diagn
No major opioid and no
Major opioid with dual d
Major opioid without du
Dual diagnosis without r

\*Hazard ratios (HRs) and 95% c family history plus major opioid (HR, 1.95; 95% CI, 0.65-5.83

**Figure.** Influence of Drug of Choice and Coexisting Psychiatric Disorder



No. at Risk	0	2	4	6	8	10
Dual Diagnosis						
Major Opioid Use	17	6	3	1	1	0
No Major Opioid Use	90	52	28	17	9	2
No Dual Diagnosis						
Major Opioid Use	25	19	16	8	6	2
No Major Opioid Use	160	121	100	64	34	6

Represents a cumulative percentage in each group over time after program entry. Major opioid users with dual diagnosis had an increased risk of relapse compared with nonopioid users with or without a dual diagnosis ( $P < .001$ ). Without dual diagnosis, major opioid users and nonopioid users did not have a significantly different relapse risk.

All Th

Should anesthesiologists using major opioids return to the practice of anesthesiology? From experience with only 22 individuals, we are not comfortable making a definitive recommendation, yet certain of our observations may shed helpful light on this question. First, because the risk of relapse for major opioid users without other risk factors is no higher than that for users of other drugs with no other risk factors (Table 5), perhaps anesthesiologists who have used fentanyl or other major opioids but who have no other risk factors and no history of relapse might be reasonable candidates for return to their specialty. Second, a coexisting psychiatric disorder and family history of substance use increase the likelihood of relapse, as does each relapse; the combination of more than 1 of these con-

ditions appears to further compound the risk. Thus additional risk factors and relapse make return to anesthesia practice more problematic. Whatever the decision on this question, more intensive and more prolonged monitoring and treatment might enhance the odds for successful recovery. To better explore the question of the advisability of returning to the practice of anesthesiology, aggregating the experience from other physician health programs would be highly desirable.

# Hedberg's Re-entry Criteria- Talbott Program

## *I. Return after appropriate treatment (for health care professionals)*

1. Accepts and understands disease of addiction
2. Bonding with AA/NA with active sponsorship
3. Good relapse prevention skills
4. Other psychiatric disorders in remission
5. Healthy family relationships
6. Balanced lifestyle
7. Anesthesia department supportive
8. Committed to five-year monitoring program
9. Confident to be in operating room, administer anesthetic drugs and not relapse
10. All of the above required for immediate return to anesthesia

## *II. Possible return, with reassessment after one or two years*

1. Incomplete bonding to AA/NA but improving
2. Some denial / minimizing
3. Lacks complete confidence to be in operating room and not relapse to chemical use
4. Recovery skills improving
5. Brief relapse may have occurred
6. Other psychiatric disorders improving
7. Dysfunctional family members improving (may require therapy)
8. Healthy attraction to anesthesia

## *III. Never return to clinical anesthesiology (any of these conditions)*

1. Prolonged addiction history
2. Significant relapse despite adequate treatment
3. Lacks confidence to return to operating room and not self-administer anesthetic drugs
4. Significant Axis I or II psychopathology
5. Inability to follow treatment and monitoring contract
6. Poor bonding to AA/NA and recovery skills
7. Significant family pathology

# **Berge's Law**

**Addicts are smart, we are smart**

**They are desperate**

**We are not**

**Therefore:**

**They are going to outsmart  
us every time**



# FUTILITY

YOU'LL ALWAYS MISS 100% OF THE SHOTS YOU DON'T TAKE,  
AND, STATISTICALLY SPEAKING, 99% OF THE SHOTS YOU DO.

# **This Editorial stimulated some discussion**

- **“Draconian”**
- **“Disposing of our best and brightest”**
- **“Unsupported by the recovery literature”**
- **“One size fits all approach”**
- **“These were good doctors when they were doped up, why wouldn't they be when sober?”**

# Anesthesia Providers in Recovery

- Biological specimen monitoring
- Monitored Naltrexone?
- For how long should they be monitored?

# How Do They Get Their Drugs?

They will tell you they stole waste, and never diverted from the patient

Old Chemical Dependency Joke:

How do you know when an addict is lying?

**Their lips are moving**

It is a Virtual Certainty That This Person:  
If it seems that I lack compassion for these  
folks, consider these statements:

Stole Narcotics for his own use  
Stole them from his own patient...

Who was under general anesthesia...

Thereby meeting every definition of being  
vulnerable, and...

Was therefore under dosed and  
may have awoken in agonizing  
pain

Make no mistake...



# This Represents a Staggering Breach of...

Where do I even begin...  
Pretty much everything in the  
Doctor-Patient Relationship

# Nancy Reagan had it Right all Along!

