

# Halting Death by Prescription in Utah: An Educational Initiative

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# Prescriptions for Pain

- The Utah Office of the Medical Examiner reported that nearly two-thirds of 476 drug-related deaths in 2006 were caused by legal drugs, either prescription or over-the-counter (1).
- The average decedent was middle aged, and recreational abuse of all drugs other than alcohol is known to decrease in mid life.
- In addition, Utah data on opioid-related deaths 1999-2004 show 47% involvement of a current prescription (2).

# Potential Sources of Harm

- Prescribing errors by medical providers
- Medical misuse by patients
- Recreational abuse
- Opioid- and benzodiazepine-related cardiopulmonary complications
- Use to mask anxiety, depression or other mental illness
- Mixing with other prescriptions, illicit drugs, or alcohol
- The disease of addiction.

# Action Plan

Research - future

Scientific bases for decision-making

Education – present

Use the “best evidence” available to effect change

# Education Audiences

- **Patients** are often unaware of the dangers of over-consuming opioids.
- **Medical providers** sometimes need clarification on safe prescribing methods.
- **The public** sometimes mistakenly believe prescription drugs are “safe” because they come from a doctor’s office.

# Patients: Risky Behavior

- Patients overuse to escape pain
- Patients misuse to “chemically cope”
- Patients seek a reward

# Tools for Safety

- Patient brochures to distribute to all pharmacies in the state
- Posters to display in emergency rooms
- Cardboard counter cards
- PowerPoint presentations
- Public service announcements
- Website

# Six Easy Steps

- **Never take a prescription painkiller unless it is prescribed to you.**
- **Do not take pain medicine with alcohol.**
- **Do not take more doses than prescribed.**
- **Combining pain medicines with other sedative or anti-anxiety medications can be dangerous.**
- **Avoid using narcotic medications to facilitate sleep.**
- **Lock up prescription painkillers.**

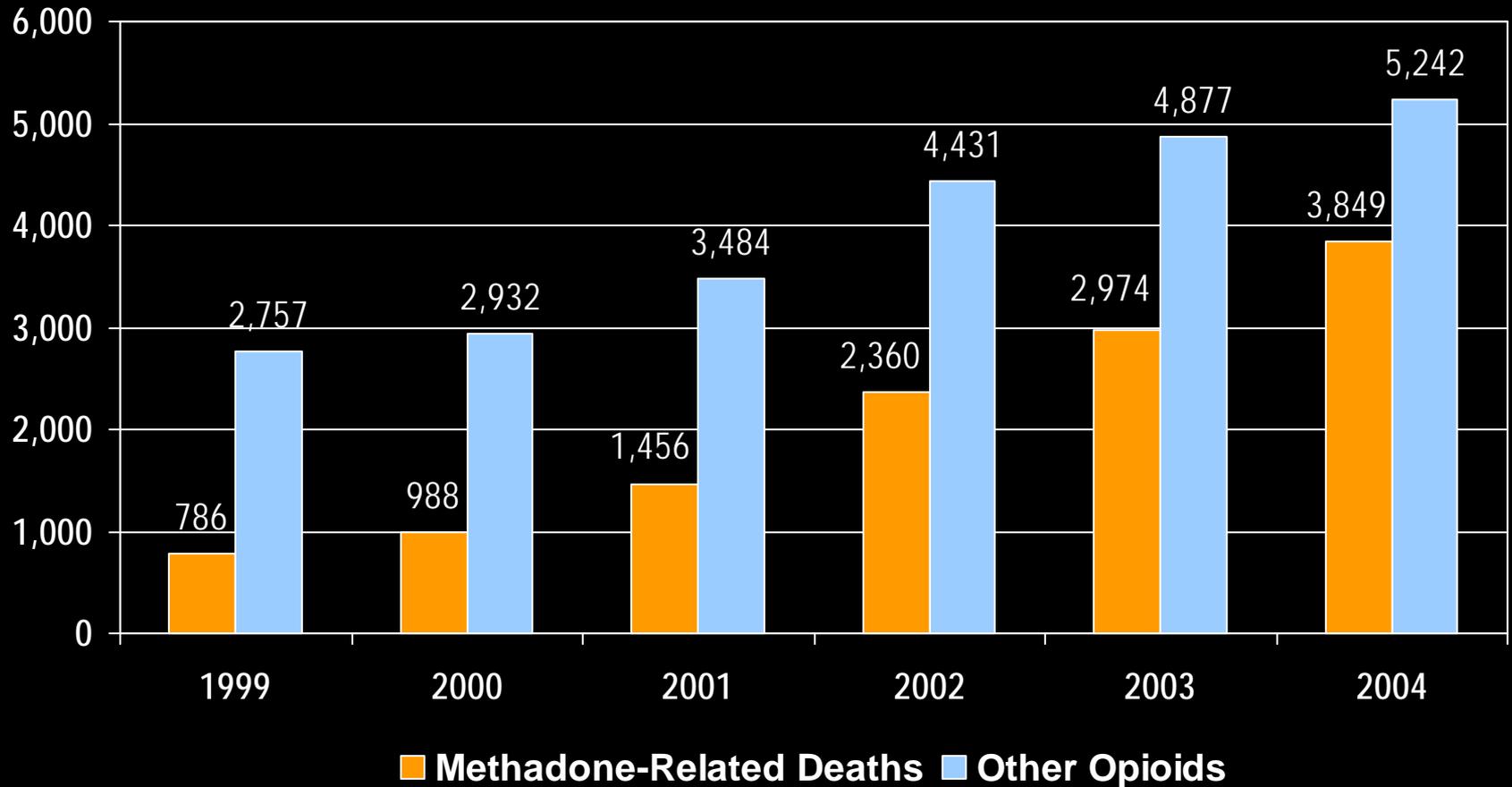
# Providers: Reasons for Concern

- Danger of unauthorized dose escalations
- Self-medicating to treat a co-morbid mental health problem
- Possibility of life-threatening sleep apnea
- Methadone prescribing knowledge deficits

# Methadone: In a Class by Itself

- Disproportionate percentage of opioid deaths are due to methadone
- Pressure by payers to use methadone
- Half life from 17- 100 hours
- Essentially no cross tolerance
- Toxicity enhanced more with benzodiazepines than with other opioids.

# Methadone and Other Opioid Deaths, 1999-2004



Source: National Center for Health Statistics.

Methadone Diversion, Abuse, and Misuse: Deaths Increasing at Alarming Rate. National Drug Intelligence Center. November 16, 2007.

# Effect of Medications on AHI and CAI: Multivariable Models

Variable	Apnea-hypopnea index (AHI)			Central apnea index (CAI)		
	Coefficient	SE	p value	Coefficient	SE	p value
Age	-0.001	0.004	0.790	-0.004	0.005	0.430
Gender	-0.055	0.051	0.281	0.046	0.057	0.422
BMI	0.014	0.007	0.045*	0.000	0.008	0.971
Antidepressants	0.075	0.052	0.152	0.036	0.057	0.537
Non-steroidal analgesics	0.042	0.075	0.571	0.044	0.083	0.598
Muscle relaxants	-0.118	0.055	0.034*	-0.105	0.061	0.087
Anticonvulsants	0.081	0.051	0.116	0.039	0.057	0.493
Antihistaminics	-0.107	0.147	0.467	-0.200	0.163	0.223
Stimulants	0.006	0.065	0.925	0.037	0.072	0.607
Proton pump inhibitors	-0.046	0.088	0.603	-0.148	0.098	0.133
Methadone	0.139	0.051	0.007*	0.164	0.056	0.004*
Benzodiazepines	0.044	0.050	0.376	0.114	0.055	0.042*

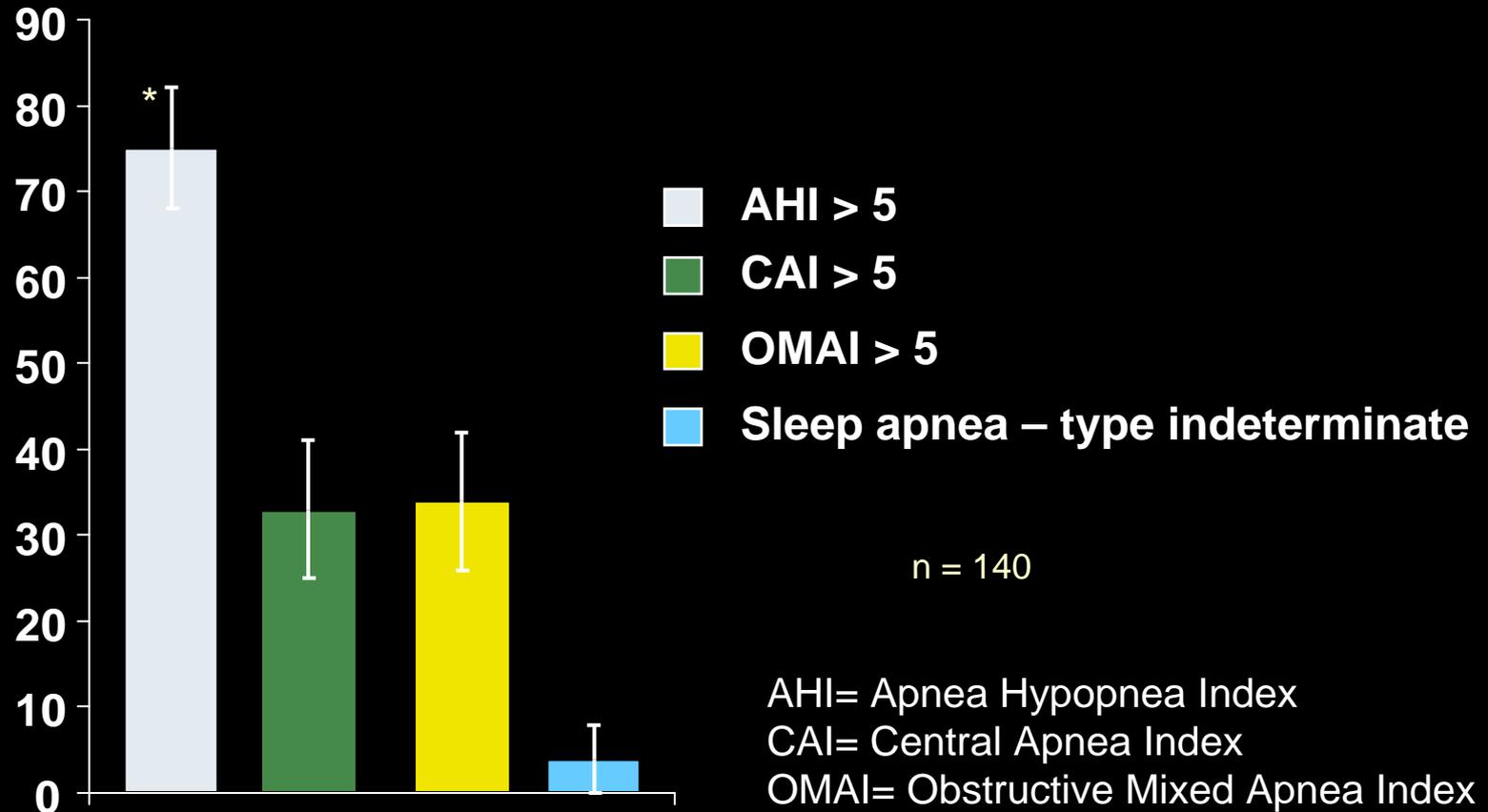
\* Indicates p <0.05

# Dose-Response relations between Opioids, Benzodiazepines and the Indices of Sleep Apnea: Multivariable Models

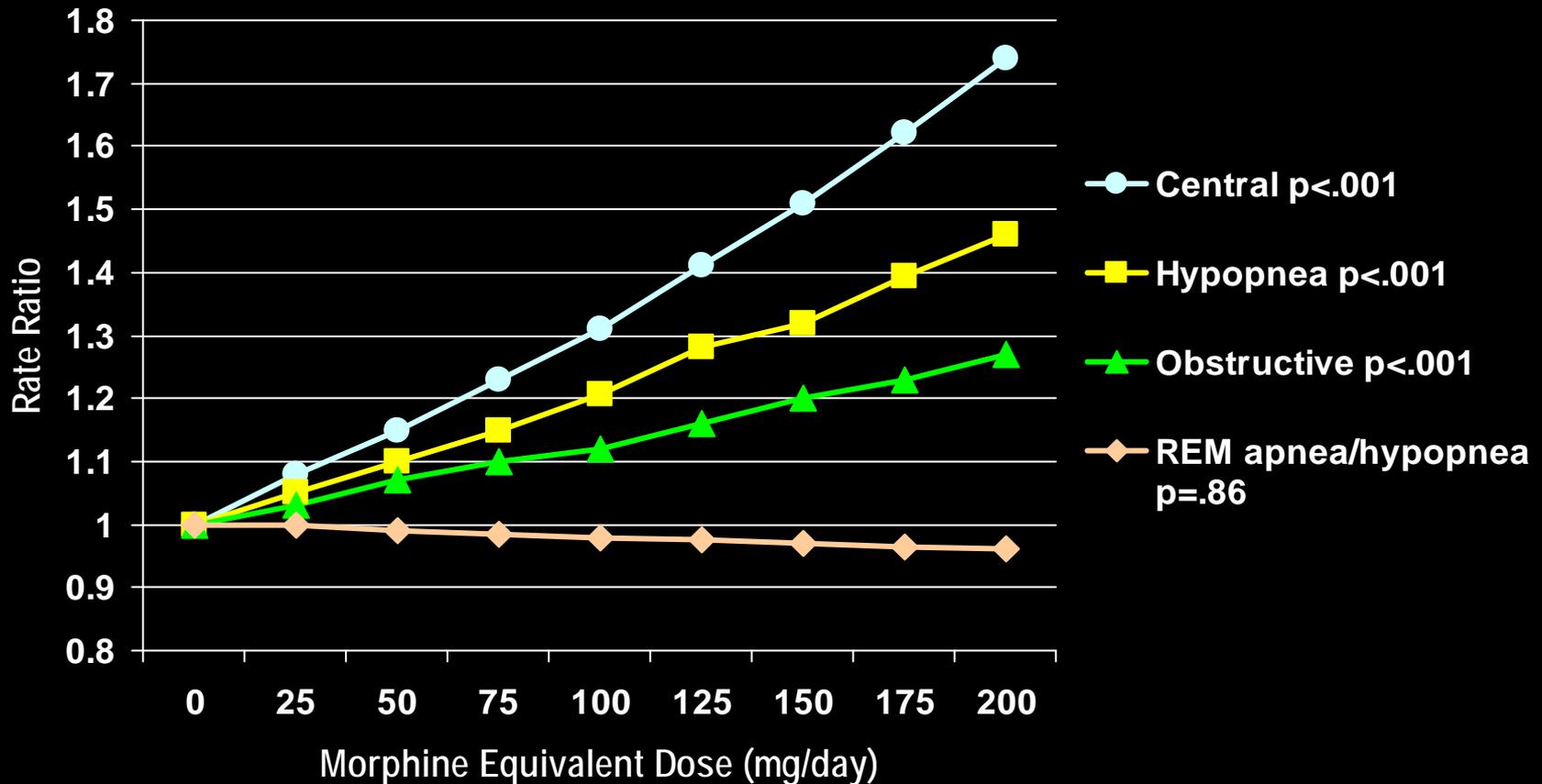
Variable	Apnea-hypopnea index (AHI)			Central apnea index (CAI)		
	Coefficient	SE	p value	Coefficient	SE	p value
Age	0.000	0.004	0.998	-0.002	0.004	0.636
Gender	-0.065	0.049	0.186	0.026	0.054	0.631
BMI	0.013	0.007	0.069	-0.003	0.008	0.743
Benzodiazepines	0.107	0.077	0.166	0.247	0.084	0.004*
Methadone	0.138	0.044	0.002*	0.130	0.049	0.008*
Non-methadone opioids	0.113	0.076	0.140	0.073	0.083	0.285
Muscle relaxants	-0.109	0.054	0.046*	-0.104	0.059	0.081

\* Indicates p <0.05

# Sleep Disorders and Opioids – Events per Hour



# Rate Ratios by Increase of Morphine Equivalent Dose



# The Public:

## An Awareness Campaign

- Opioids are powerful medications
- Opioids are life-saving for many
- Used outside medical direction, can be deadly
- Individuals have some personal responsibility to prevent diversion for inappropriate use

# Additional Messages

- Recognize drug abuse or addiction
- Spot the warning signs of respiratory depression
- Know that sleep-disordered breathing may contribute to overdose
- Realize the importance of never escalating or mixing doses without medical guidance
- Consume all analgesics only as directed
- Safeguard personal medications from children, teenagers and others

# Partnership for Patient Safety

- LifeSource Foundation
- Utah Hospitals and Health Systems Association (UHA)
- Utah Pharmacist Association (UPhA)
- Utah Medical Association
- National Pain Foundation
- Utah Department of Health
- HealthInsight

# Campaign for Patient Safety

- Must not become opioid phobic
- Recognizes thousands of Utahns and millions of Americans obtain life-saving benefits from opioid pain relief
- Education must be data driven
- Need more research to better understand risk factors associated with opioid-related deaths
- Overdose deaths can be reduced with an effective educational campaign