

1 

## **Inpatient Pain Management**

Mark Spiro, M.D.

Medical Director of Pain Management Services  
Scottsdale Healthcare System, Scottsdale, Az

Partner, Valley Pain Specialists  
Phoenix, Arizona

2 

3 

### **Fasten Your Seat belts !**

- Over and Under treatment
- Evolving Concepts
- Big Pharma's Perspective
- Healthcare Reform – ? Implications
- Errors . . .
- 
- 
- 

4 

5 

- Those who cannot learn from history are doomed to repeat it George Santayana

6 

## **Chronic Pain: Over and Under Treatment**

*TWO TRENDS:*

*The Harrison Act (1914) - ? Under*

*VERSUS*

- Portenoy and Foley (1986) - ? Over

7 

**But Remember . . .**

- "Chronic pain was not traditionally treated with opioids, a caution based on prior experiences

such as addiction to Laudanum" when used to treat pain and myalgias (indiscriminately) in the early 20<sup>th</sup> century

- Pain Medicine 2010; 11: 480-481

#### 8 **So: How do we balance these ?**

- 
- ? R.E.M.S. as part of the answer (Risk Evaluation and Mitigation Strategies)
- Pain Medicine 2010; 11: 480-481 (editorial)
- [www.hcplive.com/pain-management](http://www.hcplive.com/pain-management)
- (REMS update as of May 2010 - ?'s)
- 

#### 9 **Evolving Concepts**

- 1) Opioid respiratory depression – identifying patients at risk
- 2) Fentanyl – increased roles
- 3) Intrathecal PTM (Personal Therapy Manager) in hospitalized patients
- 4) Propofol – sedation vacations and ? of analgesia and anti-hyperalgesia
- -

10 

#### 11 **Factoid :**

- 
- 50 % of Code blue events involve patients receiving opioids

Ther Clin Risk Manag 2009; 5:961-8

#### 12 **BUT . . .**

- 
- Context is Everything ! ! !

13 

#### 14 **Opioid Respiratory Depression Risks**

"Traditional" Risk Factors \*:

- Sleep apnea
- Obesity
- Age
- Cardio-Respiratory Disease
- CNS Disease
- (\*APSF 2006 Symposium)

#### 15 **Opioid Respiratory Depression Risks II**

"Non-Traditional" Risk factors:

- 
- Neuraxial opioids (ASA Guidelines, Anesthesiology, 2009)
- 
- ? Genetic factors (APSF Newsletter, 2010)
- 













#### 16 **New Solutions ?**

- 1) New Monitoring protocols (e.g. – Acute pain services (\* Including Pharmacy Input)
- 2) New monitoring technologies (e.g. -Wireless nurse notification)
- Anesthesiology, V 113, No 1, pgs 259-261

17 


#### 18 **Fentanyl – New Roles**

- 1) ICU Care
- 2) Trauma Care - ideal
- (critical care/trauma transport: [Am J Emerg Med 2006 May 24\(3\)286-9.](#))

- 3) "Complete Modality Transition" (e.g. – PCITS, see next slide)
- 19  **Fentanyl Patient Controlled Iontophoretic Transdermal System (PCITS)**
- - 
  - Pre-programmed – no programming errors
  - Fixed dosing parameters
  - "Pump free"
  - Ann Pharmacother 2006 Dec 40(12)2178-86.
  - Br J Anaesth 2007 Jan 98(1)4-11.
  - Clin Pharmacokinet 2005 44 Suppl 1(1)-6.
- 20 
- 21  **Intrathecal PTM**
- 1) What is it ?
  - 2) Inpatient Impact ?
  - 3) Support Services ?
- Pain Pract 2008 May-Jun 8(3)164-70.  
Neuromodulation, 6 (3), 2003 133-141.
- 22  **Propofol /  
Diprivan  
(Chasing the  
White Rabbit)**
- 23  **Propofol I : The Knowns**
- 1) Potent Sedative/Anesthetic
  - 2) Narrow Therapeutic Index
  - 3) Resp/CV Depression
- 24  **Propofol II: The Unknowns**
- 4) Pain Relevance: Synergy (known) + analgesia & anti-hyperalgesia (new study, ? "new" properties?) (Anesthesiology 2010 Jul 6 [Epub ahead of print]. )
  - 5) Not Yet "Controlled" !!!
  - 6) Propofol Infusion Syndrome (PIS)  
(Crit Care Med 2009 Dec 37(12)3169-70.)
- 25  **Propofol III : Sedation Vacations**
- 1) The concept: prevent accumulation of sedatives
  - -> prolonged ventilation, avoid masking new pathology
  - Curr Opin Crit Care 2002 Aug 8(4)290-8.
  - 2) Propofol may have the lowest TOTAL cost for ICU sedation  
(Crit Care Med 2008 Mar 36(3)706-14. )
  - 3) Other agents: Benzodiazepines (higher incidence of delirium) and Dexmedetomidine (only FDA approved for 24 hours, very expensive, ? Reliability of adequate sedation at currently approved dosing )
  - Curr Drug Saf 2010 Jan 5(1)6-12.
- 26    
2
- -
- 27  **Big Pharma's perspective**
- 1) Overview of the "problem"
  - 2) Development – antidepressants & neuropathic drugs as a cautionary tale
  - 3) ? New Delivery Vehicles ?
- 28  **R&D Expenditures of Research Based Pharmaceutical Companies**
- 29  **The Cost of Drug Development (per success)**
- 30  **The Societal Cost of Underserved Medical Need is Significant.....**

31  **But Opportunities for Innovation to be Recognized in the Marketplace are Constrained...**

32 

33  **Healthcare Reform/Accelerated Economic Pressures**

1) ? Limiting formularies ?

2) ? Physician extenders ?

3) Interdisciplinary Hospital Teams – increasing role for the pharmacist

34 

35 

**??? Perception ???**

36 

37 

38 

**Errors . . .**

1) The sickest patients

2) Sentinel events

3) ISM 1999 Report “To Err is Human: Building a safer health system” \*\*\*

39 

**The End . . .**

?

?

?