

# Innovative Approaches to Pain Management in Palliative Care

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# Topics covered (briefly)

- The changing nature of palliative medicine
- Underutilization and misutilization of effective medications
- Alternative approaches to pain management
- Call to action

# Domains of Palliative Care

- Structure and Processes of Care
- Physical Aspects of Care
- Psychological and Psychiatric Aspects of Care
- Social Aspects of Care
- Spiritual, Religious and Existential Aspects of Care
- Cultural Aspects of Care
- Care of the Imminently Dying Patient
- Ethical and Legal Aspects of Care

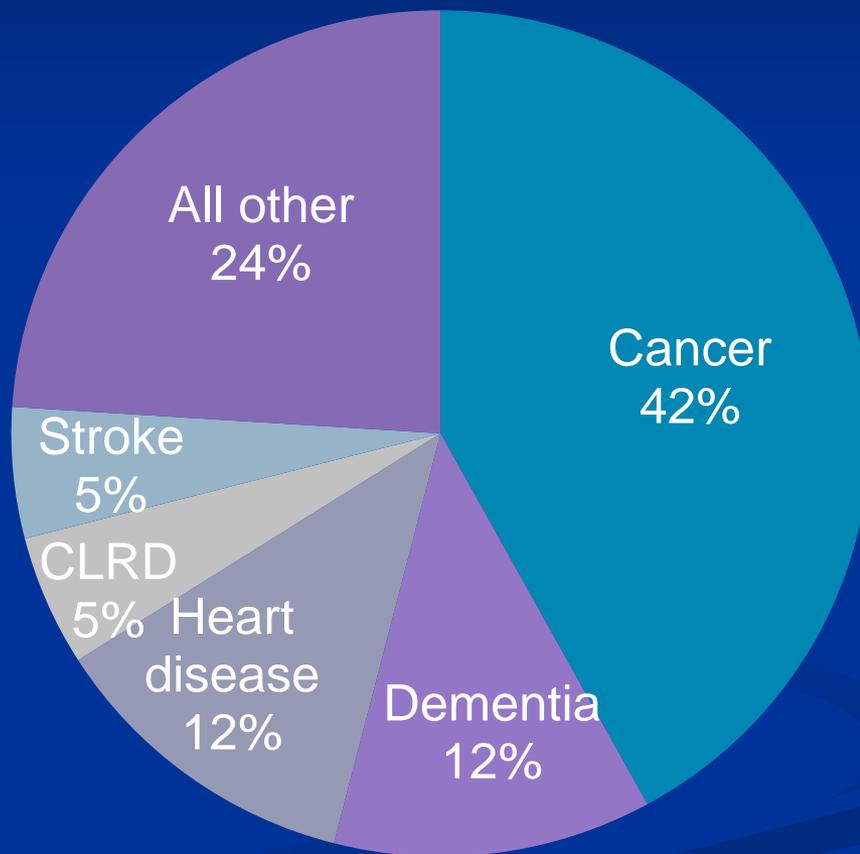
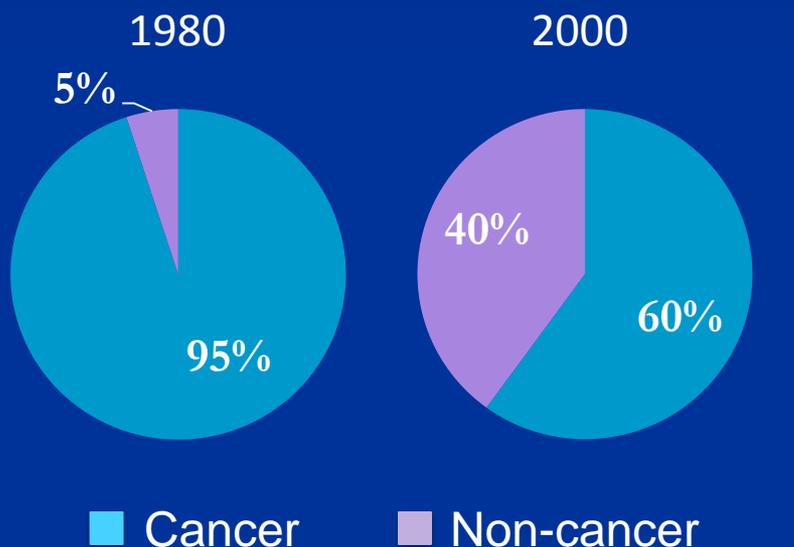
# Hospice

- End-of-life care
- 6 month life expectancy per survival surveys
- Symptom management is main goal

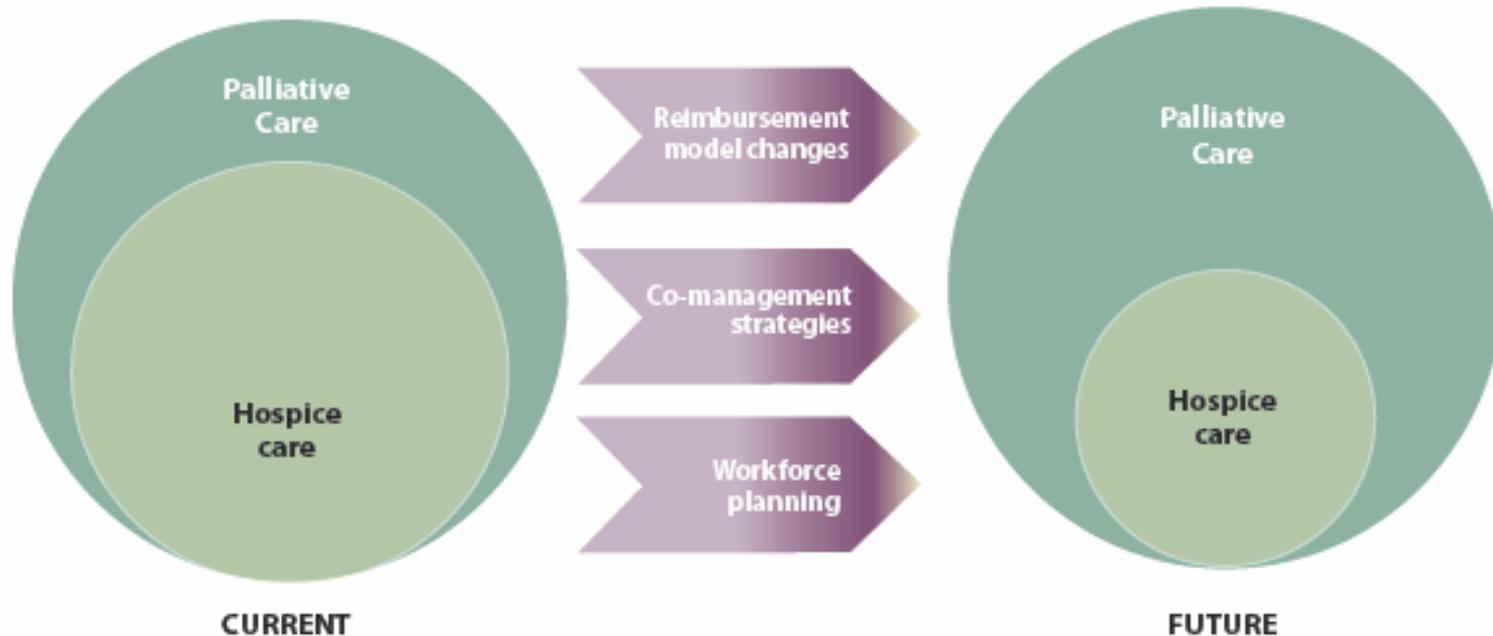
# The changing nature of PC

2010: All PC admission diagnosis

## PC admission diagnosis



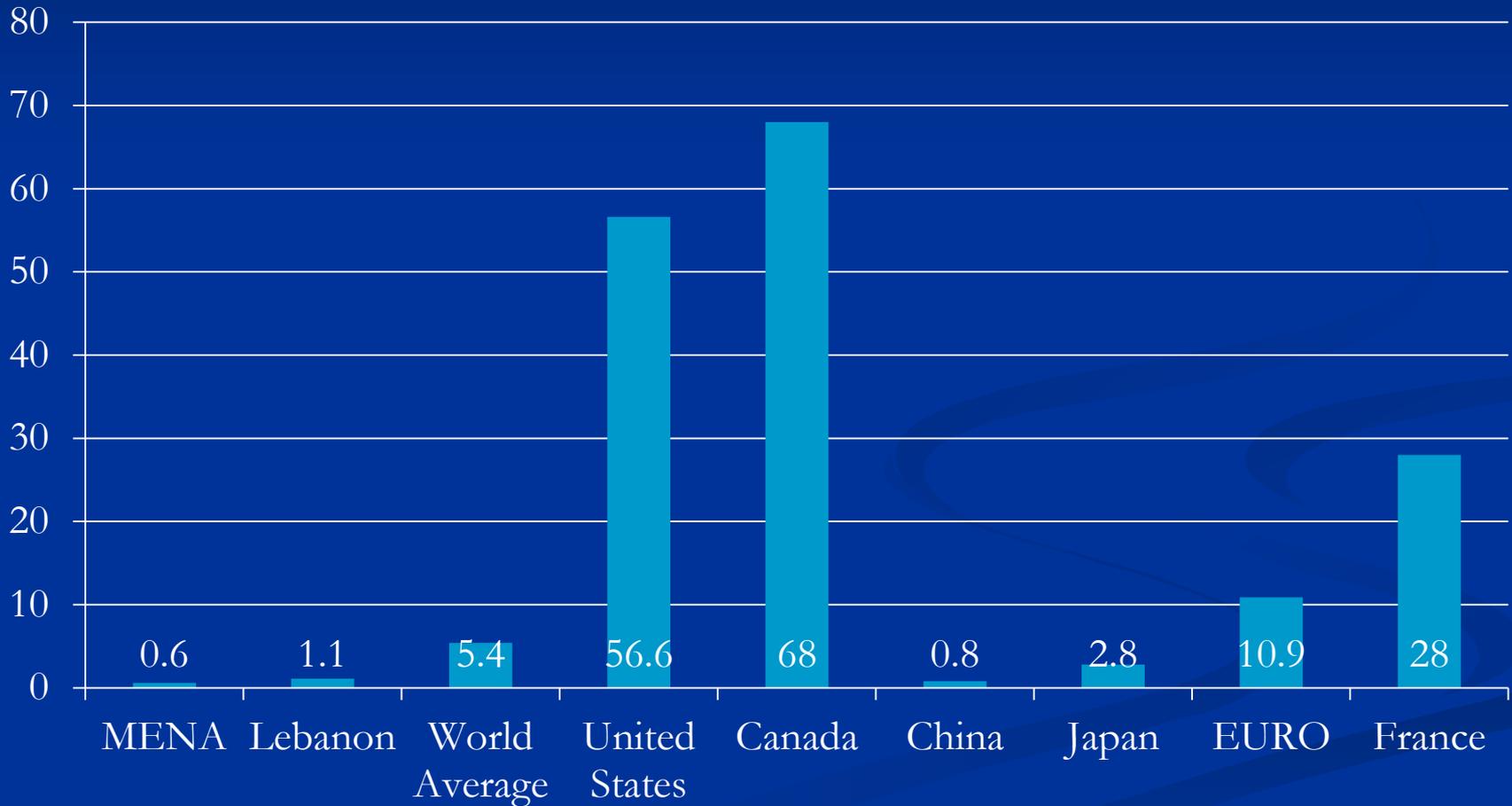
## Expanding the Reach of Palliative Care



**Figure 1:** Conceptual Diagram Illustrating the Evolution in Palliative Care (PC)—from consisting mostly of hospice care, to expanding its reach to more community-based PC provided in conjunction with cancer treatments.

# Opiate use per capita per year

## Morphine (in mg/capita/year)

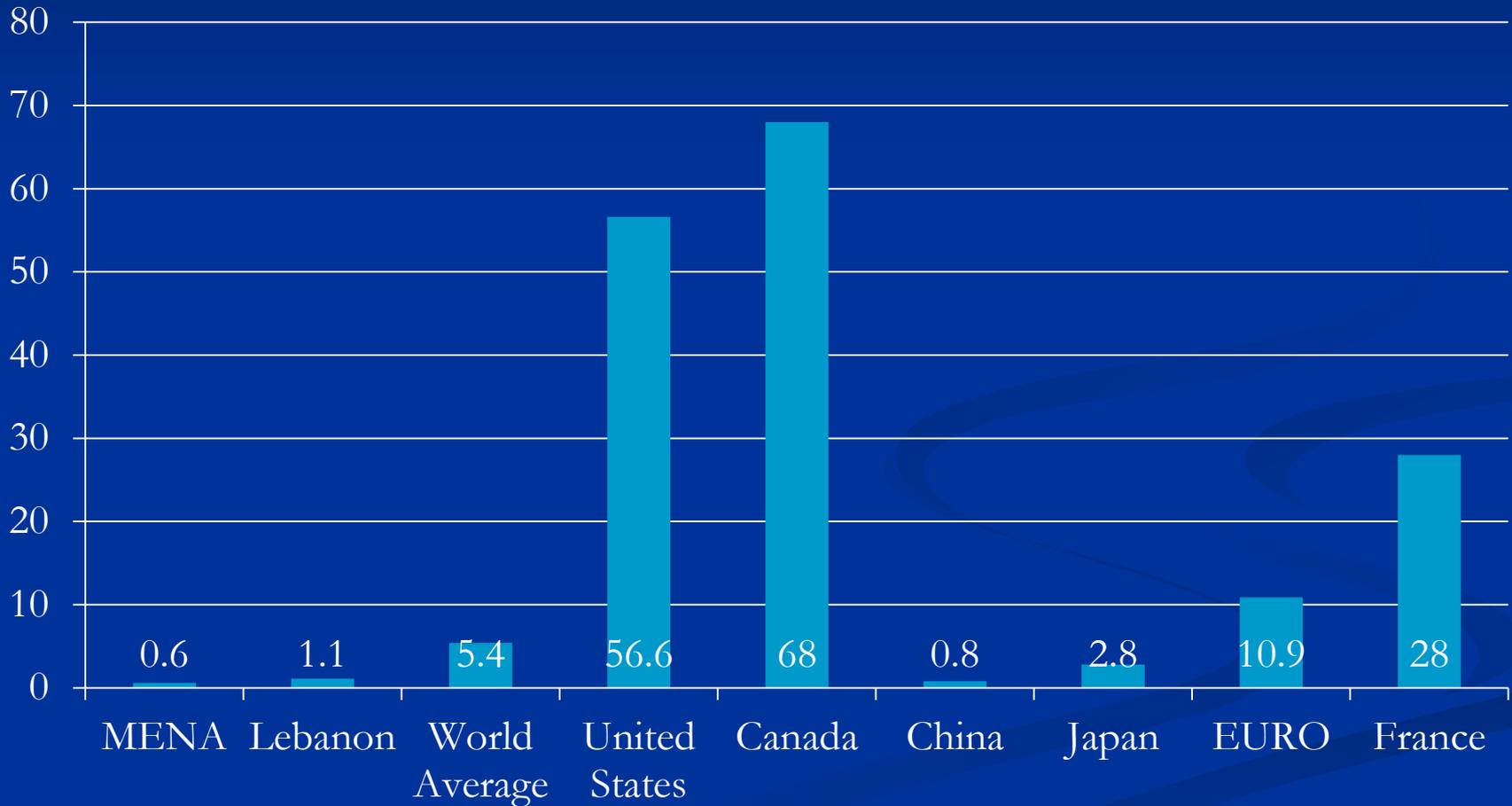


# Equianalgesic Dosing

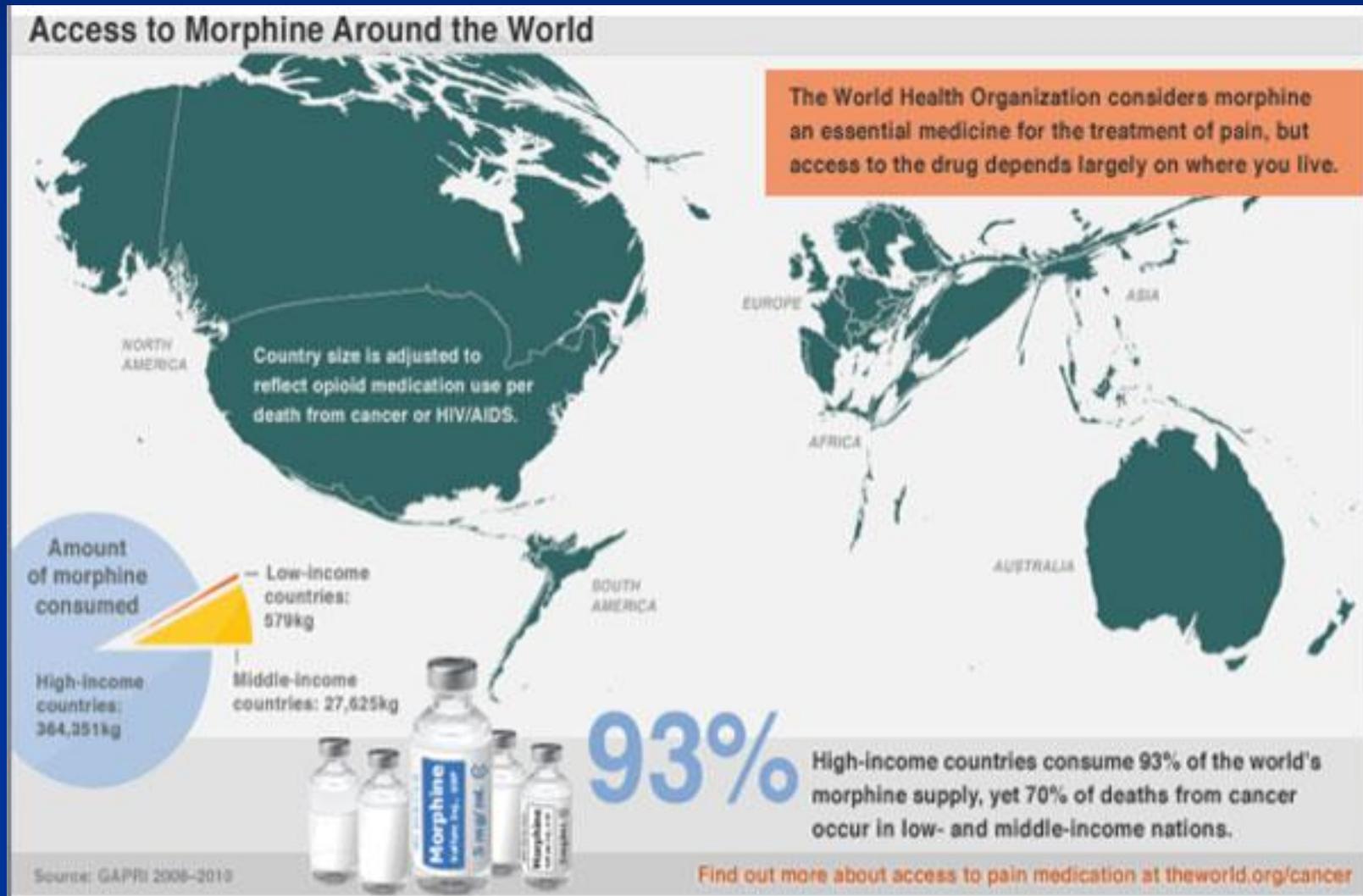
Drug	Oral (mg)	IM (mg)
Morphine	30	10
Hydromorphone	7.5	1.5
Codeine	200	120
Oxycodone	20	NA
Methadone	12.5	10
Levorphanol	4	2
Meperidine	300	75

# Opiate use per capita per year

## Morphine (in mg/capita/year)

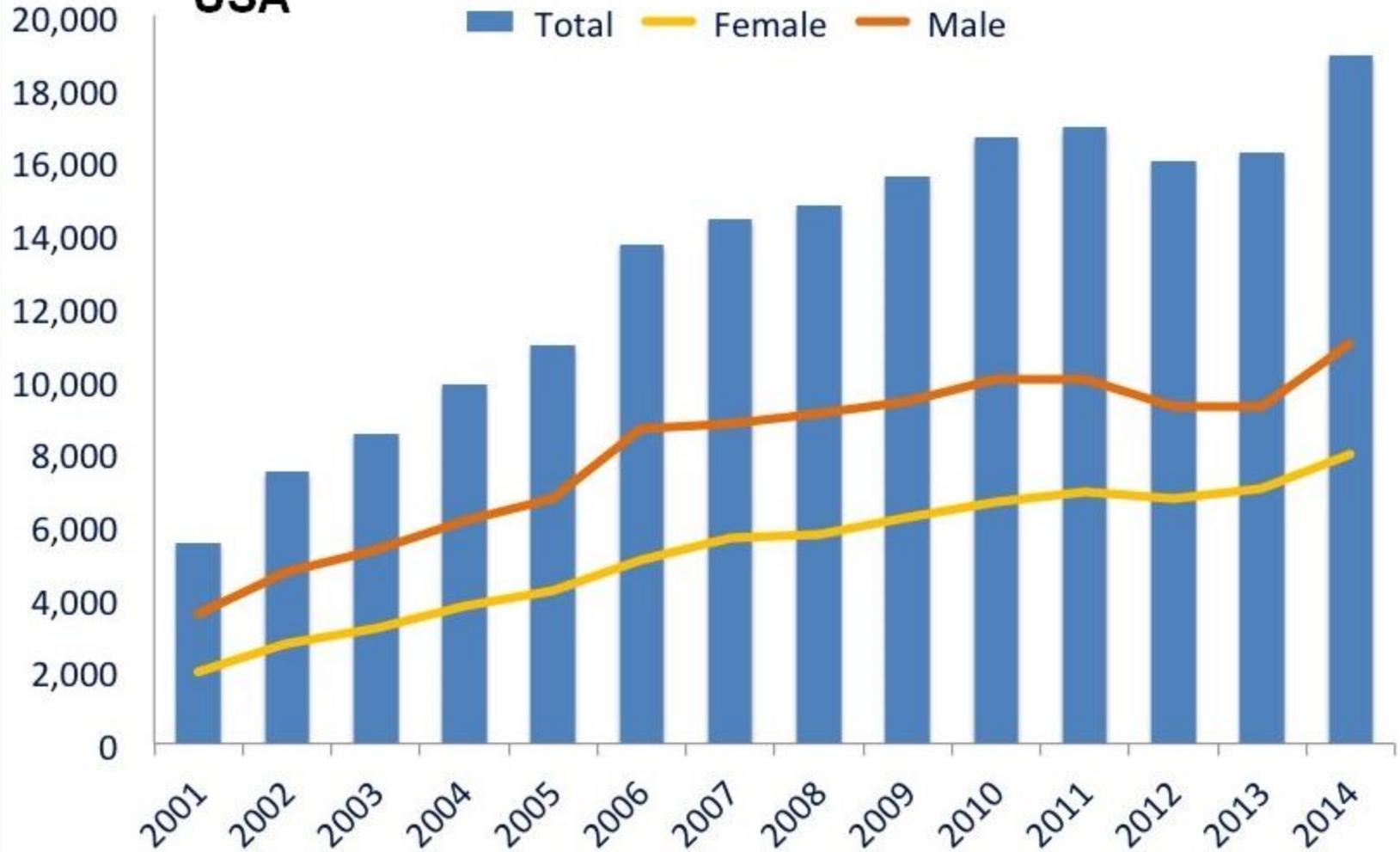


The WHO considers morphine an essential medicine for pain control, yet most patients in low- and middle-income countries do not have access to it.



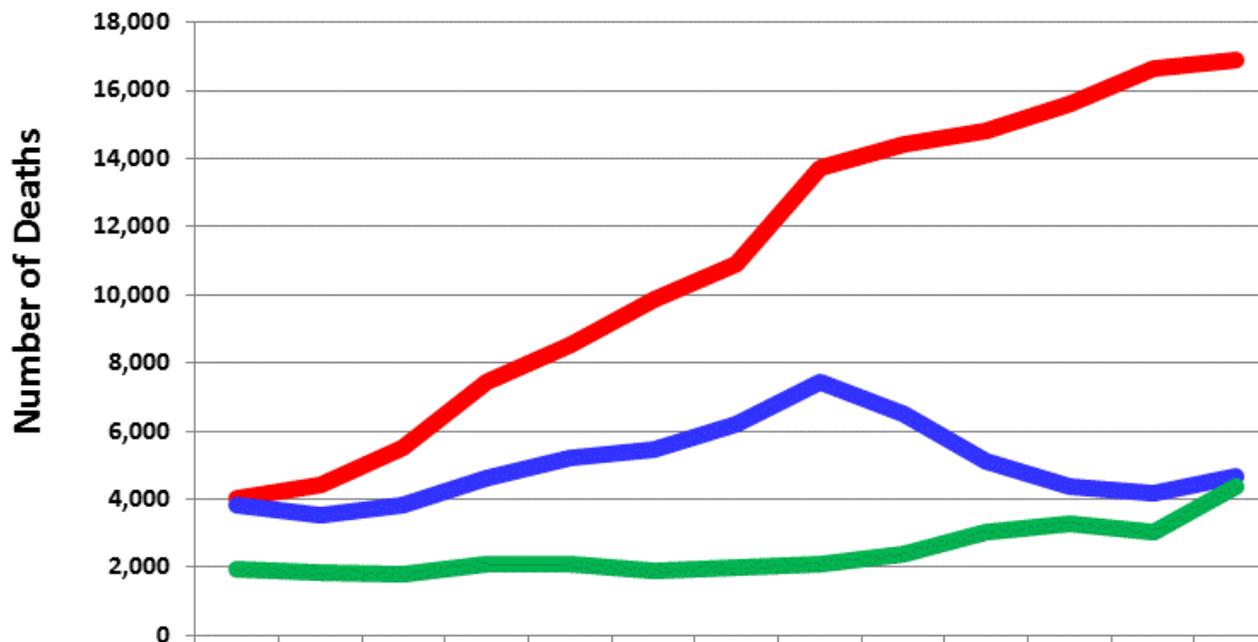
# Number of Deaths from Prescription Opioid Pain Relievers

**USA**



Source: National Center for Health Statistics, CDC Wonder

## Drug Poisoning Deaths Involving Opioid Analgesics, Cocaine and Heroin: United States, 1999–2011



	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>opioid analgesic</b>	4,030	4,400	5,528	7,456	8,517	9,857	10,928	13,723	14,408	14,800	15,597	16,651	16,917
<b>cocaine</b>	3,822	3,544	3,833	4,599	5,199	5,443	6,208	7,448	6,512	5,129	4,350	4,183	4,681
<b>heroin*</b>	1,963	1,843	1,784	2,092	2,084	1,879	2,010	2,089	2,402	3,041	3,279	3,038	4,397

Note: Not all drug poisoning deaths specify the drug(s) involved, and a death may involve more than one specific substance. The rise in 2005–2006 in opioid deaths is related to non-pharmaceutical fentanyl (see <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5729a1.htm>). \*Heroin includes opium.

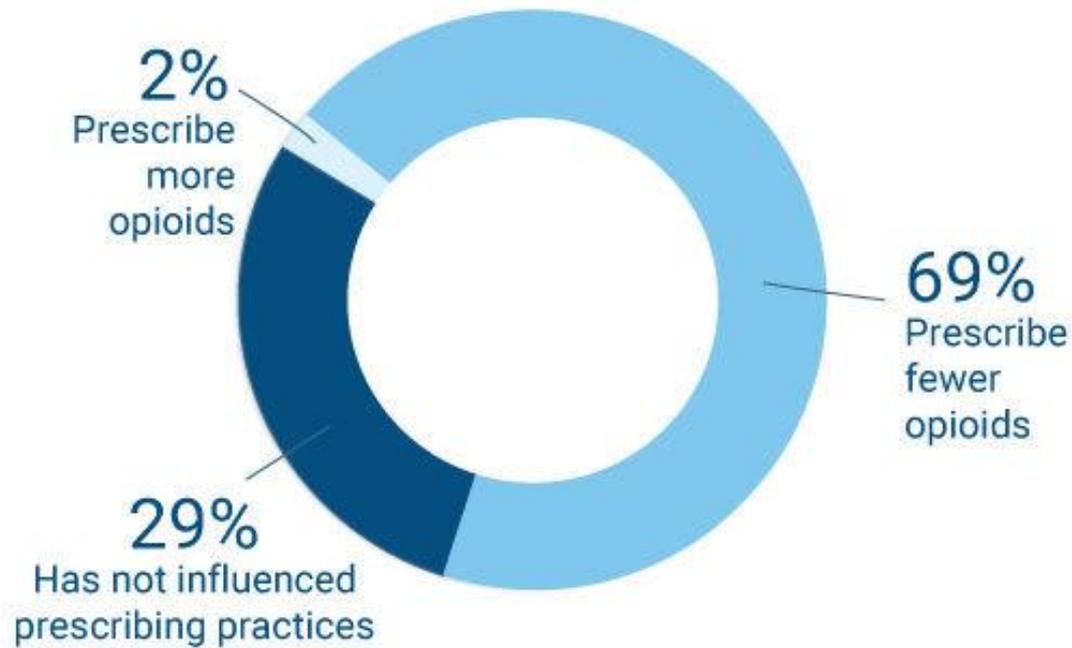
Source: National Center for Health Statistics/CDC, *National Vital Statistics Report*, Final death data for each calendar year (June 2014).

# Time Magazine June 15, 2015



## How Prescribing Practices Have Changed in Recent Years as a Result of the Opioid Misuse and Abuse Epidemic

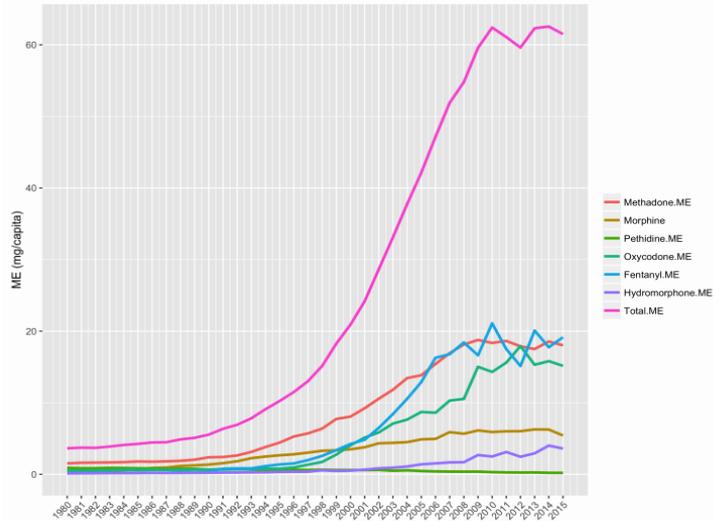
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Opioid Abuse and Misuse: Patients and Providers Speak Up. Medscape, June 2016

## Global Opioid Consumption

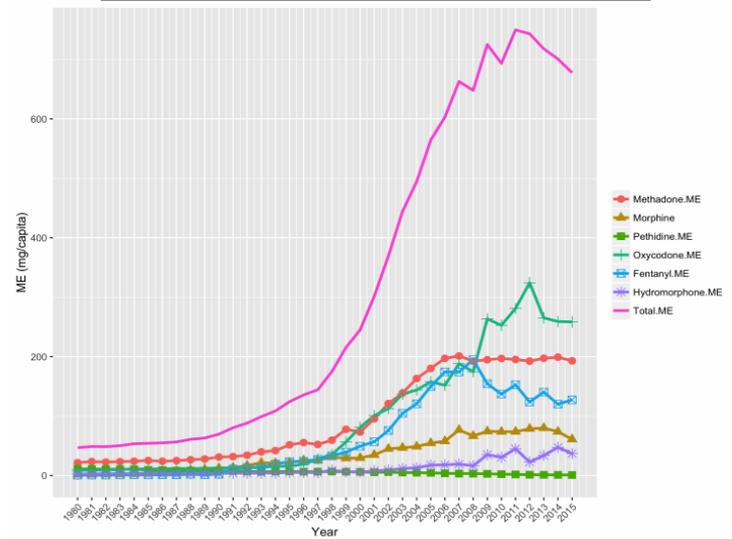
Morphine Equivalence (ME), (mg/capita)



Sources: International Narcotics Control Board; World Health Organization population data  
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2015

## United States of America

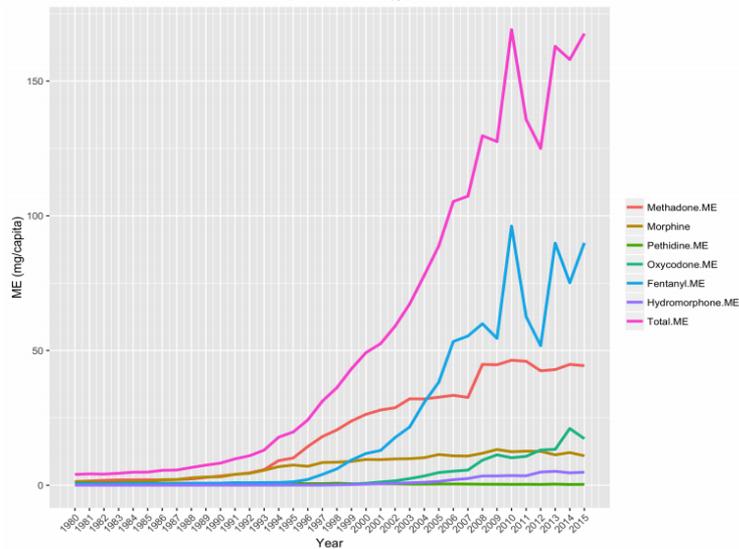
Opioid Consumption in Morphine Equivalence (ME), mg per person



Sources: International Narcotics Control Board; World Health Organization population data  
By: Pain & Policy Studies Group, University of Wisconsin/WHO Collaborating Center, 2015

## EURO Regional

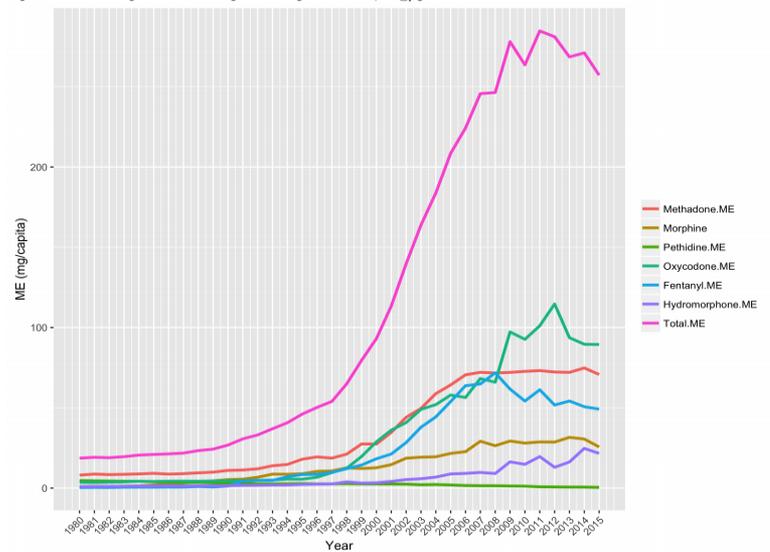
Opioid Consumption in Morphine Equivalence, mg/person



Sources: International Narcotics Control Board; World Health Organization population data  
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## AMRO Regional

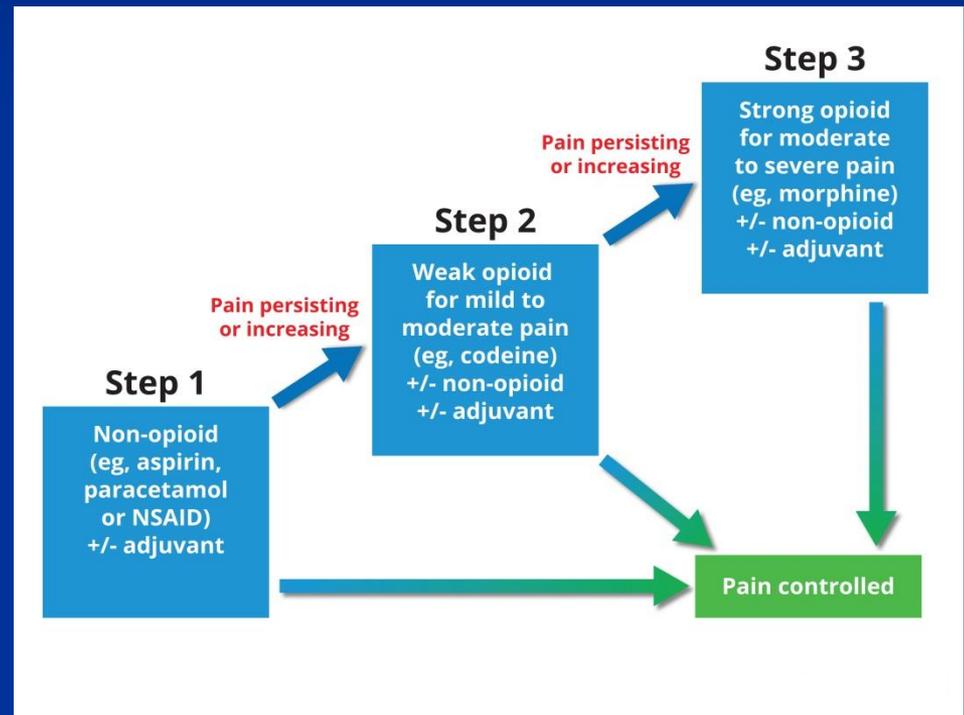
Opioid Consumption in Morphine Equivalence, mg/person



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# The WHO Analgesia Ladder

In 1990 the World Health Organization recommended a simple and effective three-step approach for managing pain based on its severity. The three-step ladder has been shown to provide relief for > 90% of patients with cancer.



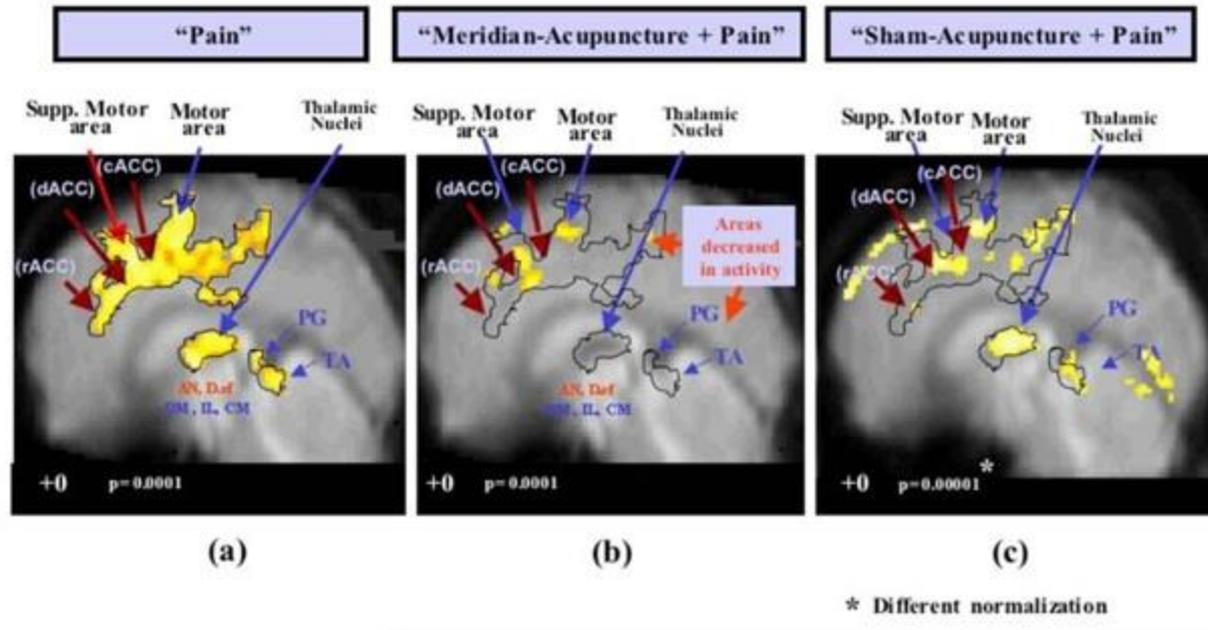
# Nonpharmacological Management

- Psychotherapy
- Distraction techniques
- Physical therapy
  - Exercise
  - Massage
  - Heat and/or cold therapies
  - Ultrasound
  - Chiropractic intervention

# Nonpharmacological Management

- Neuro-stimulation
  - TENS unit
  - Acupuncture
- Cognitive and/or behavioral modification
  - Meditation
  - Relaxation techniques
  - Hypnosis
  - biofeedback

Comparison of “Pain”, “Meridian-Acupuncture + Pain”, and “Sham-Acupuncture + Pain”, Experiments.



“There is sufficient evidence of acupuncture’s value to expand its use into conventional medicine.”

– National Institute of Health, 1997 Consensus on Acupuncture

# Adjuvant Medications

- Corticosteroid: used for bone and soft tissue pain, spinal compression, and intracranial mass lesions (dexamethasone 4 mg bid-qid). May also elevate mood, stimulate appetite, and reduce inflammation.
- NSAIDS. May be effective when an inflammatory component is present.
- Anticonvulsants: used for neuropathic pain. May also elevate the pain threshold.
- Antidepressants: for neuropathic pain and treatment of depression.
- Anticholinergics: for visceral pain.

# Adjuvant Medications

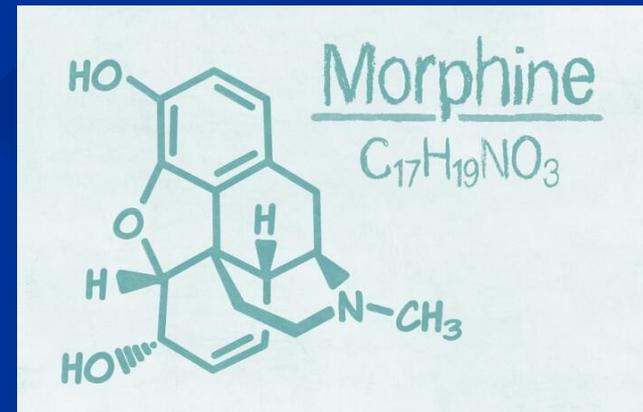
- Neuroleptics
- Anxiolytics
- Antihistamines
- Muscle relaxants

Avoid Placebos.

# Therapeutic paradigm shift

Complimentary and Alternative Medicine (CAM) has grown in popularity so rapidly over the past decade that ...

... opiates have become the alternative therapy!



# Misconceptions About Opioids

- *Opioids lead to addiction.* Physical dependence results from long-term opioid use but this should not be confused with addiction.

## Definitions

- 1- Addiction (psychological): a primary chronic neurobiological disease with genetic, psychosocial, and environmental factors influencing its development, and is characterized by compulsive use despite harm, craving, and seeking behavior.
- 2- Physical dependence: physiological adaptation manifested by withdrawal symptoms with abrupt cessation of drug.
- 3- Tolerance: Decreased physiological effect of medication with chronic use due to down regulation.

# Misconceptions About Opioids

- *Opioid use means imminent death.* Many patients and family members are reluctant to use opioid because they equate them with imminent death. Physicians may inadvertently reinforce this misconception due to their reluctance to use opioids. Patient/family education is necessary. Opioids are now being used for chronic conditions, such as osteoarthritis.

# Misconceptions About Opioids

- Opioids lead to respiratory depression.
  - Clinically significant respiratory depression is exceedingly rare when opioids are carefully titrated.
  - Opioid respiratory depression must be differentiated from the normal dying process: erratic respirations, extreme weakness, decreased alertness, and cool extremities, all of which may be mistakenly attributed to opioids.
  - When respiratory depression is due to opioid, and is clinically relevant, naloxone can be used to cautiously reverse the effect.

# What can you do as a healthcare provider?

1. Realize your key role in the passage of your patient's life
2. Learn how to use narcotics the right way
3. Use other disciplines
4. Understand your patient's wishes
5. Realize your own vulnerabilities
6. Recognize the naturalness of dying
7. Advocate at the state level for drug availability
8. Educate

# The good, the bad, and the ugly!

- Over 80% of patients with cancer pain can achieve adequate pain control with proper management.
- Less than 50% of patients with cancer experience sufficient pain relief.
  - 40-50 % of cancer patients reported moderate-severe pain.
  - 25-30 % of cancer patients reported very severe pain.
  - 80 % of cancer patients had more than one type of pain, and 34 % had  $\geq 4$  types or causes of pain.
  - ~ 40 % of current hospice care is for nonmalignant conditions.
- ~ 60 % of current hospice care is for nonmalignant conditions.

*If we know that pain and suffering can be alleviated,  
and we do nothing about it, then we ourselves  
become the tormentors.*

–Primo Levi.