Dr Christopher Rumball, FFPMANZCA FAFOEM (RACP) PhD

OPIOIDS, THE ILLUSION OF UNDERSTANDING, AND MODERN PAIN MEDICINE

THE OPIOID EPIDEMIC - IATROGENESIS ON A GLOBAL SCALE

Disclosures

- Director Australis Medical
- Clinical Senior Lecturer University of Otago
- New Zealand National Committee Faculty of Pain Medicine ANZCA
- Clinical Lead Cortex app development for Sense Medical

- Use of opioids for chronic non-cancer pain
- Pain as an output of the brain
- Endogenous opioid system
- The opioid crisis
- Modern pain medicine

3400BC First documentation of opium use in Mesopotamia

Early 1700s British smuggle Indian opium to China. Addiction increases.

1729 First edict against opium in China

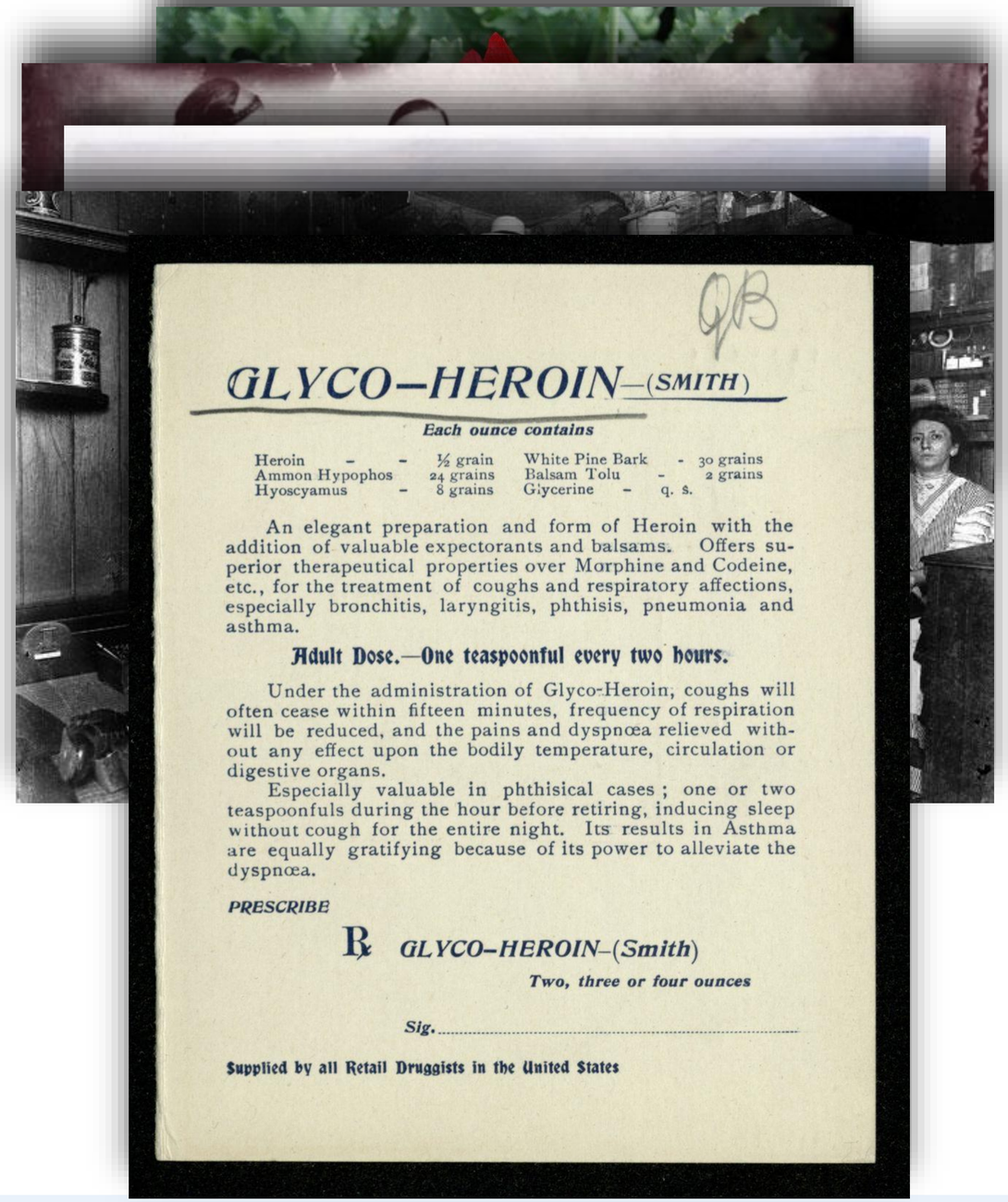
1832-1856 Opium wars

1870s Opium dens in America. San Francisco passes first legislation to limit opium use

1874 Heroin created. In 1890s promoted for use in children suffering from coughs and colds.

1914 Harrisons narcotics act to control sale and use of opiates

1920-80s Avoidance of opiates for medical purposes. Unexplained pain = delusional, malingering



GLYCO–HEROIN–(SMITH)

Each ounce contains

Heroin	½ grain	White Pine Bark	30 grains
Ammon Hypophos	24 grains	Balsam Tolu	2 grains
Hyoscyamus	8 grains	Glycerine	q. s.

An elegant preparation and form of Heroin with the addition of valuable expectorants and balsams. Offers superior therapeutical properties over Morphine and Codeine, etc., for the treatment of coughs and respiratory affections, especially bronchitis, laryngitis, phthisis, pneumonia and asthma.

Adult Dose.—One teaspoonful every two hours.

Under the administration of Glyco-Heroin, coughs will often cease within fifteen minutes, frequency of respiration will be reduced, and the pains and dyspnœa relieved without any effect upon the bodily temperature, circulation or digestive organs.

Especially valuable in phthisical cases; one or two teaspoonfuls during the hour before retiring, inducing sleep without cough for the entire night. Its results in Asthma are equally gratifying because of its power to alleviate the dyspnœa.

PRESCRIBE

℞ *GLYCO–HEROIN–(Smith)*

Two, three or four ounces

Sig......

Supplied by all Retail Druggists in the United States

1980s Liberal prescribing of opiates in terminal conditions

1986 WHO guidelines for treating cancer pain - non-opioid to weak opioid to strong opioid until free of pain

1980s ‘Addiction rare in patients treated with narcotics’ ‘Chronic use of opioid analgesics in non-malignant pain: Report of 38 cases.’ (Portenoy)

1990s opioids become primary modality of treatment for chronic non-cancer pain

1995 ‘pain as the fifth vital sign’, Not prescribing opiates for someone in pain is inhumane . .

1997-2002 Oxycontin developed - ‘lasted for 12 hours’. Oxycontin prescriptions in US increase 10 fold

1990-2010 - shorter consultations, reduced funding for MDT pain programs

SCIENTIFIC AMERICAN February 1990 Volume 262 Number 2

The Tragedy of Needless Pain

Contrary to popular belief, the author says, morphine taken solely to control pain is not addictive. Yet patients worldwide continue to be undertreated and to suffer unnecessary agony

by Ronald Melzack

"Pain," as Albert Schweitzer once said, "is a more terrible lord of mankind than even death itself." Prolonged pain destroys the quality of life. It can erode the will to live, at times driving people to suicide. The physical effects are equally profound. Severe, persistent pain can impair sleep and appetite, thereby producing fatigue and reducing the availability of nutrients to organs. It may thus impede recovery from illness or injury and, in weakened or elderly patients, may make the difference between life and death.

Sadly, there are some kinds of pain that existing treatments cannot ease. That care givers can do little in these cases is terribly distressing for everyone involved but is certainly understandable. What seems less understandable is that many people suffer not because their discomfort is untreatable but because physicians are often reluctant to prescribe morphine. Morphine is the safest, most effective analgesic (painkiller) known for constant, severe pain, but it is also addictive for some people. Consequently, it is typically meted out sparingly, if it is given at all.

Indeed, concern over addiction has led many nations in Europe and elsewhere to outlaw virtually any uses of morphine and related substances, including their medical applications. Even where morphine is a legal medical therapy, as it is in Great Britain and the U.S., many care givers, afraid of turning patients into addicts, deliver amounts that are too small or spaced too widely to control pain.

Yet the fact is that when patients take morphine to combat pain, it is rare to see addiction—which is characterized by a psychological craving for a substance and, when the substance is suddenly removed, by the development of withdrawal symptoms (for example, sweating, aches and nausea). Addiction seems to arise only in some fraction of morphine users who take the drug for its psychological effects, such as its ability to produce euphoria and relieve tension.

Furthermore, patients who take morphine for pain do not develop the rapid physical tolerance to the drug that is often a sign of addiction. Many people who are prone to addiction quickly require markedly escalating doses to achieve a desired change of mood, but patients who take the drug to control pain do not need sharply rising doses for relief. They may develop some tolerance initially, but their required dose usually rises gradually and then stabilizes.

I do not suggest that morphine be prescribed indiscriminately. I do urge lawmakers, law-enforcement agencies and health-care workers to distinguish between the addict who craves morphine for its mood-altering properties and the psychologically healthy patient who takes the drug only to relieve pain.

Morphine is a constituent of opium, which has been a medical therapy for longer than 2,000 years, since at least ancient Roman times. Opium is made by extracting a milky juice from the unripe capsule, or seedpod, of the poppy *Papaver somniferum* (grown abundantly in many Middle Eastern countries) and then drying the exudate to form a gum. This gum—the opium—can be eaten as is or added to a beverage.

By the 16th century opium was being carried by traders to Europe and the Orient. At about that time an opium-containing mixture called laudanum became a popular remedy in Europe for virtually all ailments. Later, smoking opium and tobacco together became yet another popular way to obtain the drug's benefits.

Soon after the turn of the 19th century, a young German pharmacist named Friedrich W. A. Sertürner isolated morphine from opium and identified it as opium's major active ingredient. Morphine's production was followed in 1832 by the isolation of yet another opiate, or opium derivative: codeine.

In the mid-19th century the introduction of the hypodermic needle made it possible to administer large amounts of drugs by injection. The

RONALD MELZACK, who has been studying the neurophysiology of pain for 35 years, is E. P. Taylor Professor of Psychology at McGill University and research director of the Pain Clinic at the Montreal General Hospital. After earning a Ph.D. in psychology from McGill in 1954 and accepting fellowships in the U.S. and abroad, he joined the faculty of the Massachusetts Institute of Technology in 1959. There, he and Patrick D. Wall began discussions that led to the 1965 publication of their now famous "gate control" theory of pain. He returned to McGill in 1963. This is his third article for *Scientific American*.

'Contrary to popular belief, the author says, morphine taken solely to control pain is not addictive. Yet patients worldwide continue to be undertreated and to suffer unnecessary agony'

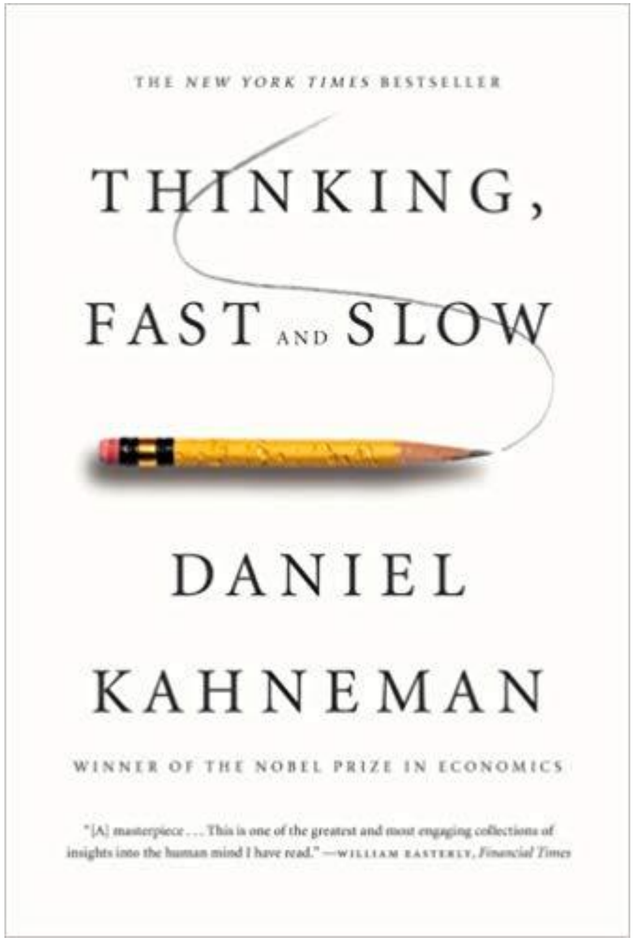
The doctor’s narrative in late 1990s . . .

- Opioids affect the conduction of nociceptive impulses at the spinal cord and are excellent
addiction
those
se
contin) are
more convenient and safer

Therefore, it is appropriate for me to prescribe sufficient opioids to treat patient’s pain

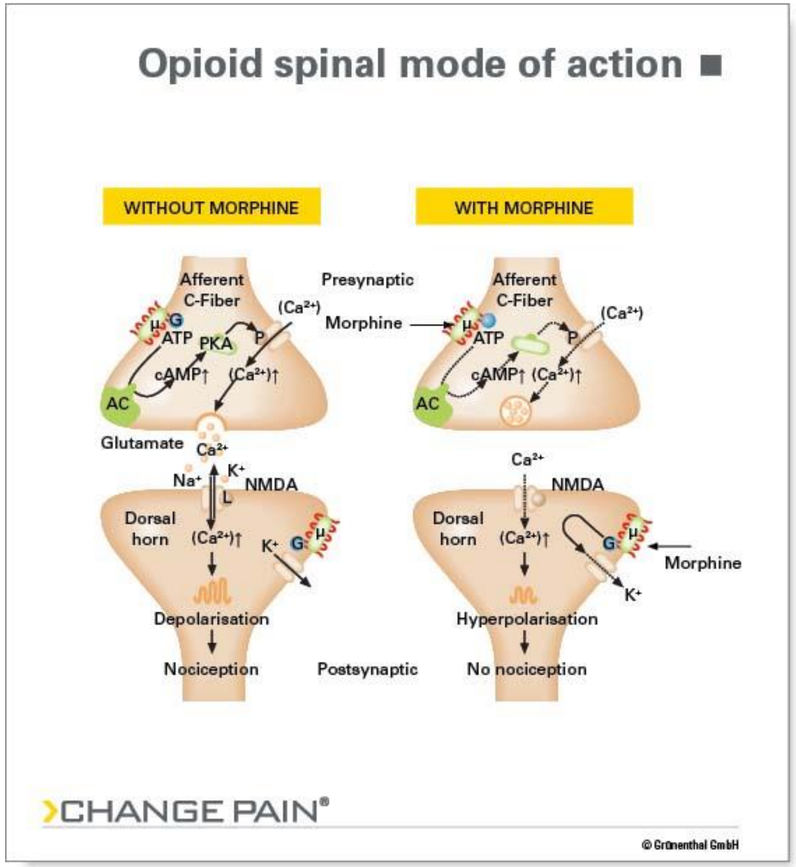
The illusion of understanding

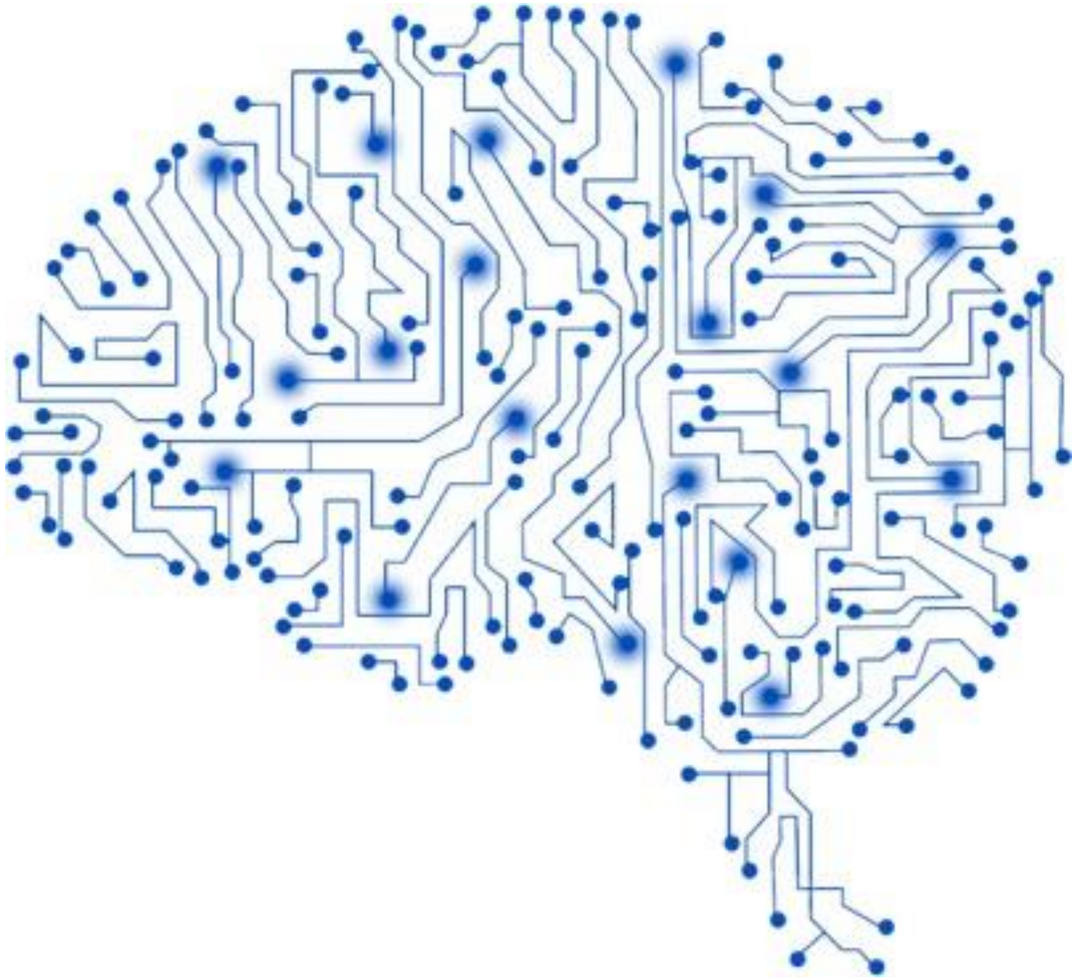
’You build the best possible story from the information available to you, and if is a good story, you believe it’



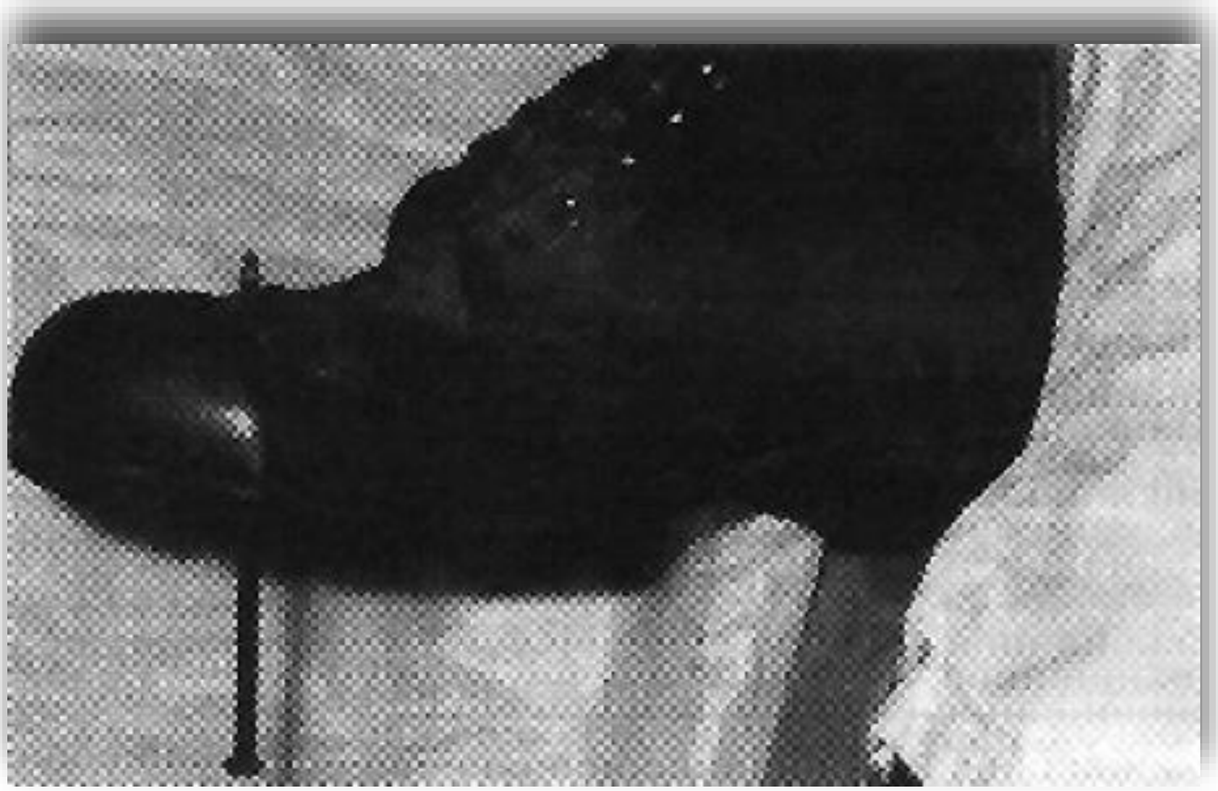
Pain

Opioids

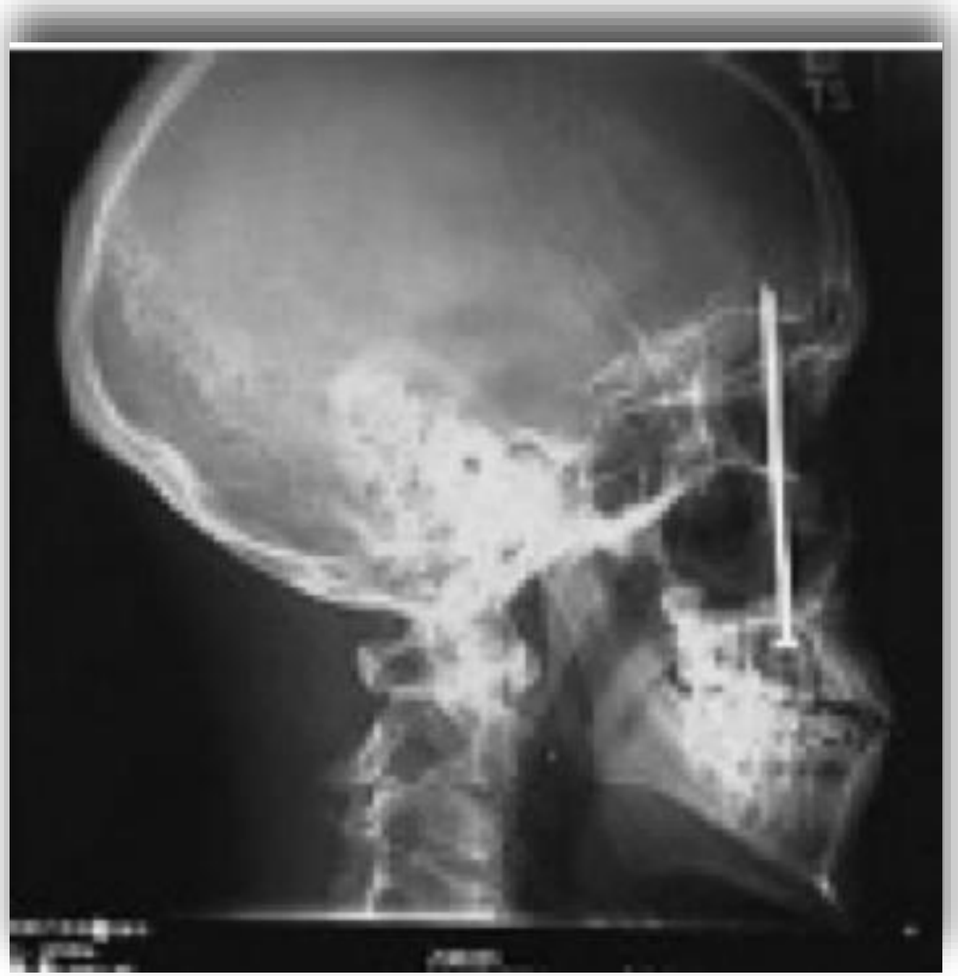




Pain is an OUTPUT of the brain

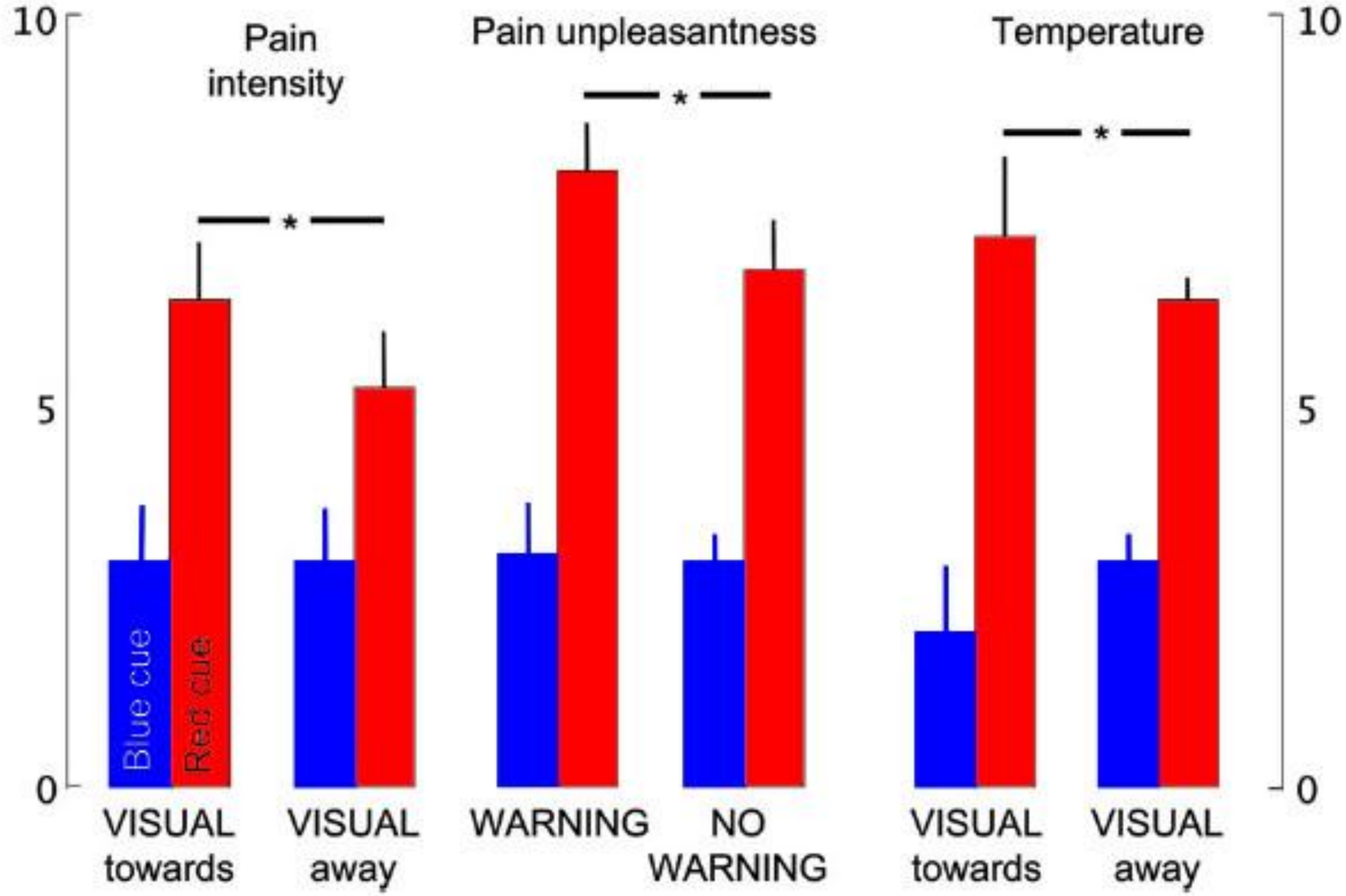


BMJ 1995 310.70 Fisher, J. P. et al.



(reprinted from Associated Press, World Wide Photos 16/01/2005)

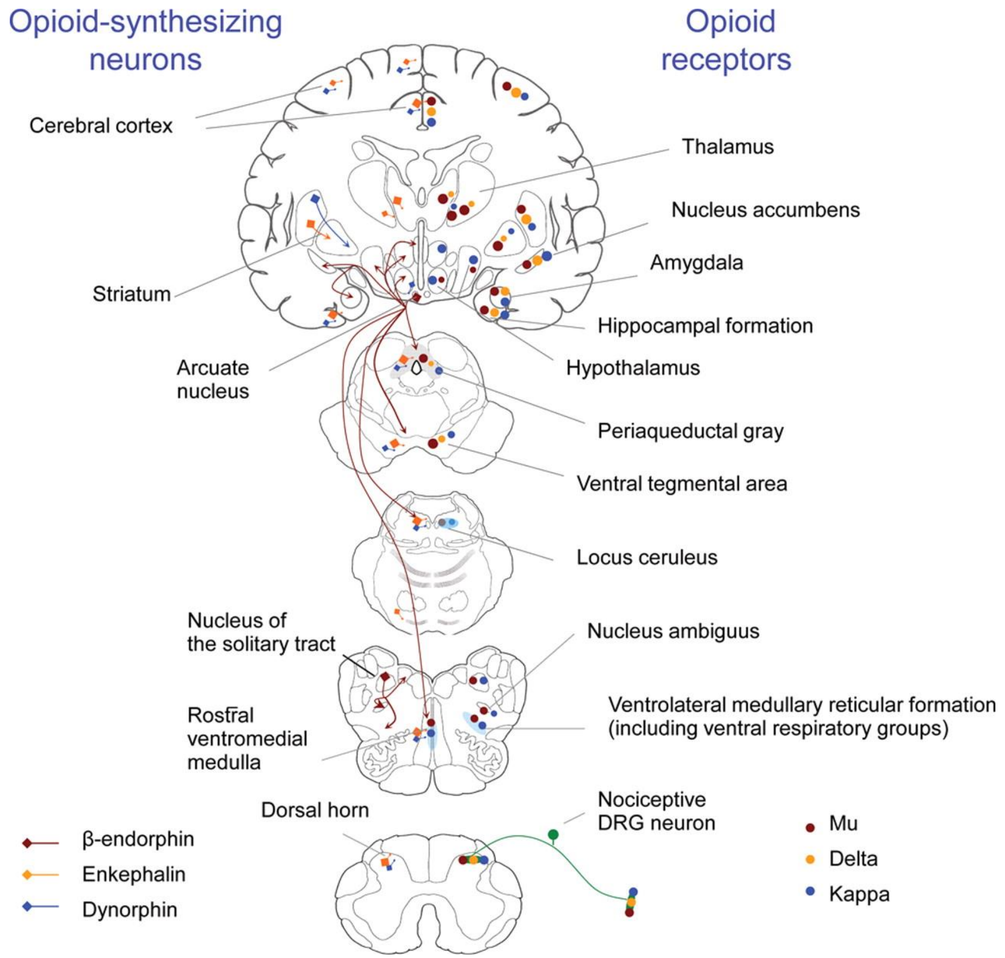
- Tissue damage is neither necessary nor sufficient to have pain . . .
- The mental image of our body powerfully influences pain . . .



Moseley GL, Arntz A, The context of a noxious stimulus affects the pain it evokes, Pain (2007)

“Pain is a call to action. Like hunger, thirst and desire for sleep, pain is part of the body’s survival systems that collectively are responsible for protecting the organism”

The Endogenous opioid system



The Social Life of Opioids

New studies strengthen ties between loss, pain and drug use

By Maia Szalavitz on September 18, 2017

Credit: Anita Hernadi *Getty Images*

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Major Science Report Lays Out a Plan to Tamp Down Opioid Crisis

Fighting the Opioid Crisis with Vaccines and Better Chemistry

Wave of Overdoses with Little-Known Drug Raises Alarm Amid Opioid Crisis

'Doctors are men who prescribe medicines of which they know little, to cure diseases of which they know less, in human beings of whom they know nothing.'

Voltaire

What happened in the US . . .?

- Marketing, financial bonuses for reps getting doctors to prescribe more
- Limited insurance for other treatments
- Pill mills - 9 min consultations
- Oxycontin duration of action

OxyContin 80 pills (Liz Baylen / Los Angel

A TIMES INVESTIGATION

‘YOU WANT A DESCRIPTION OF HELL?’ OXYCONTIN’S 12-HOUR PROBLEM

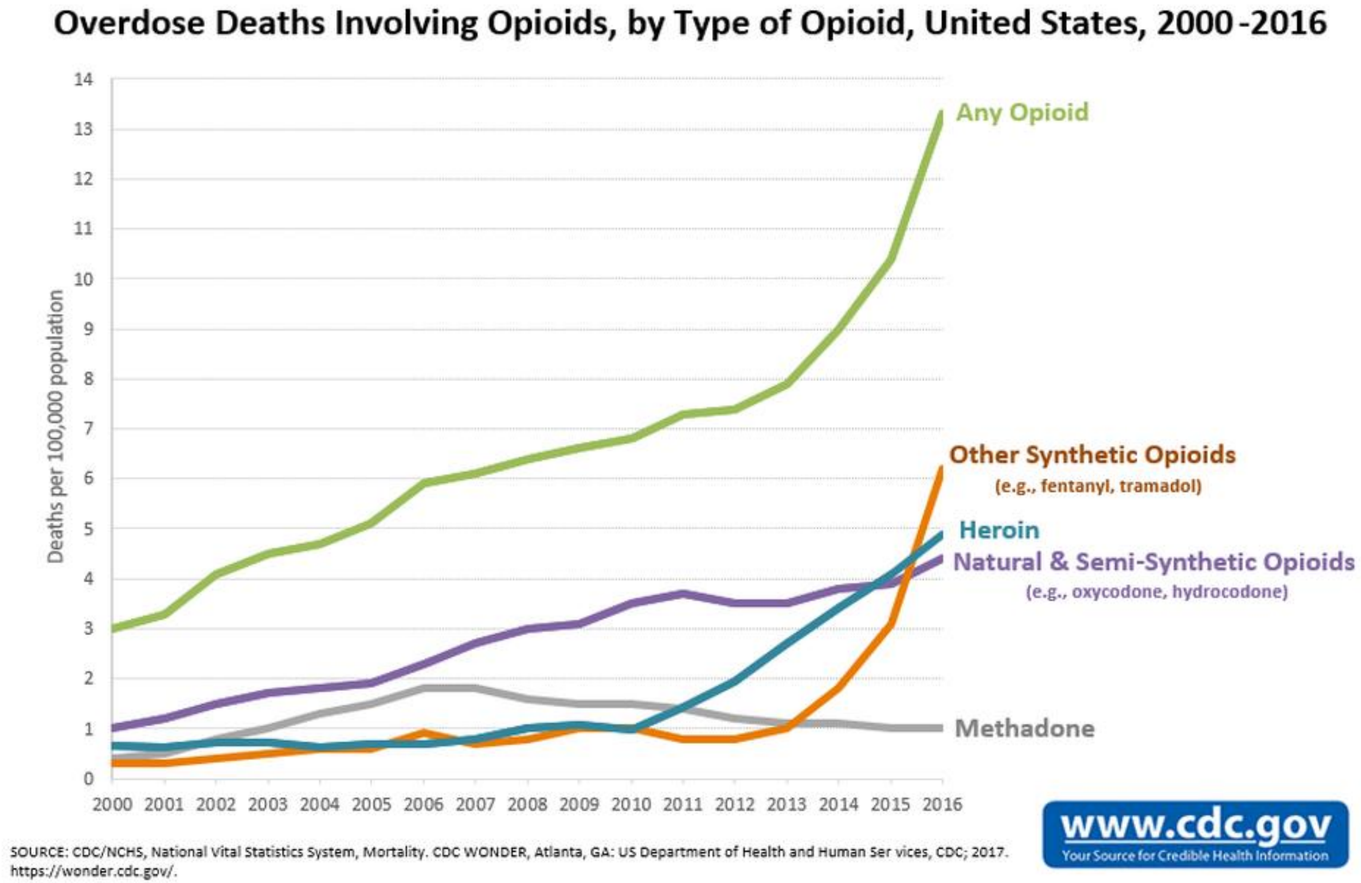
by HARRIET RYAN, LISA GIRION AND SCOTT GLOVER

MAY 5, 2016

The drugmaker Purdue Pharma launched OxyContin two decades ago with a bold marketing claim: One dose relieves pain for 12 hours, more than twice as long as generic medications.

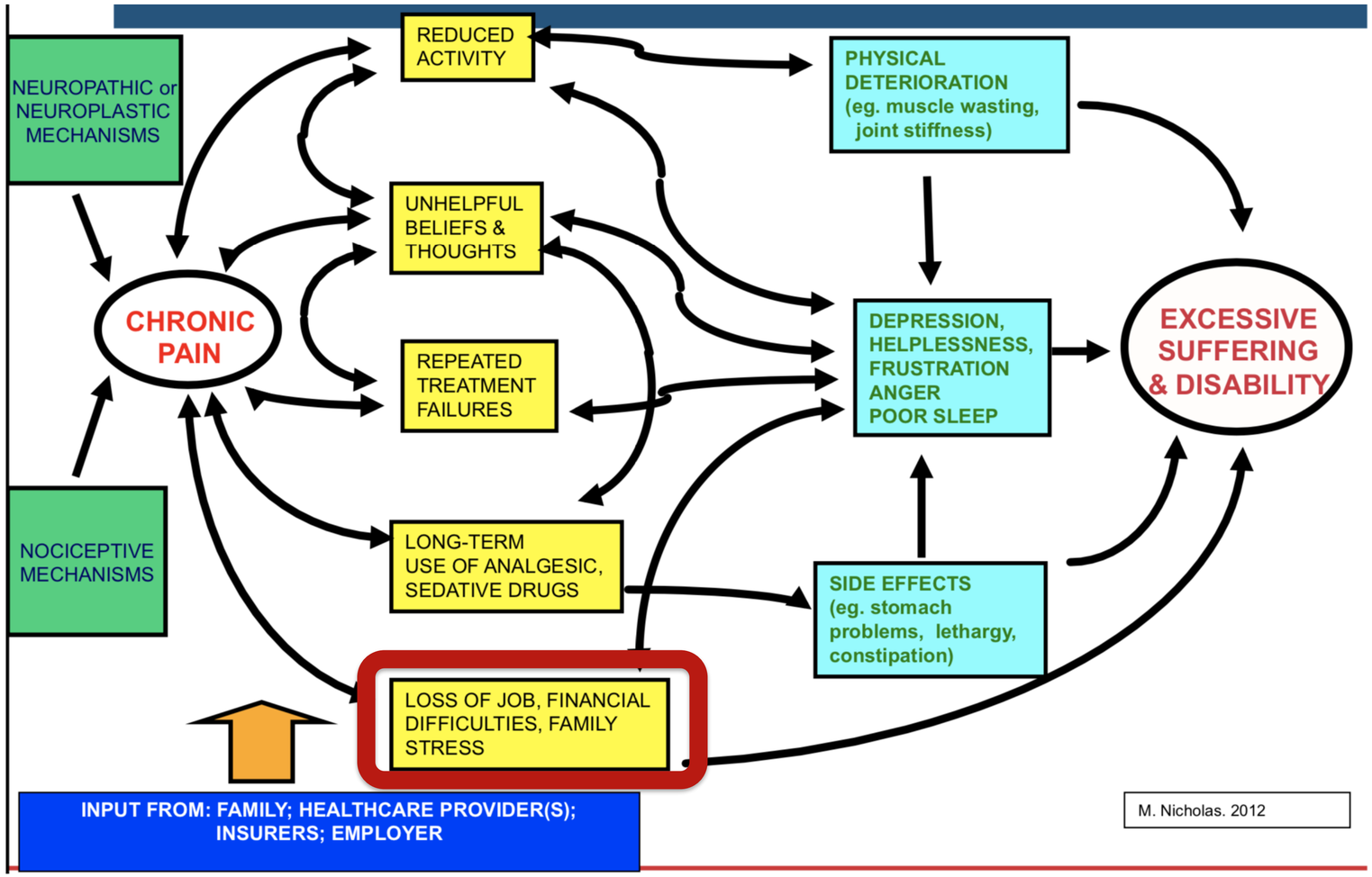
Patients would no longer have to wake up in the middle of the night to take their pills, Purdue told doctors. One OxyContin tablet in the morning and one before bed would provide “smooth and sustained pain control all day and all night.”

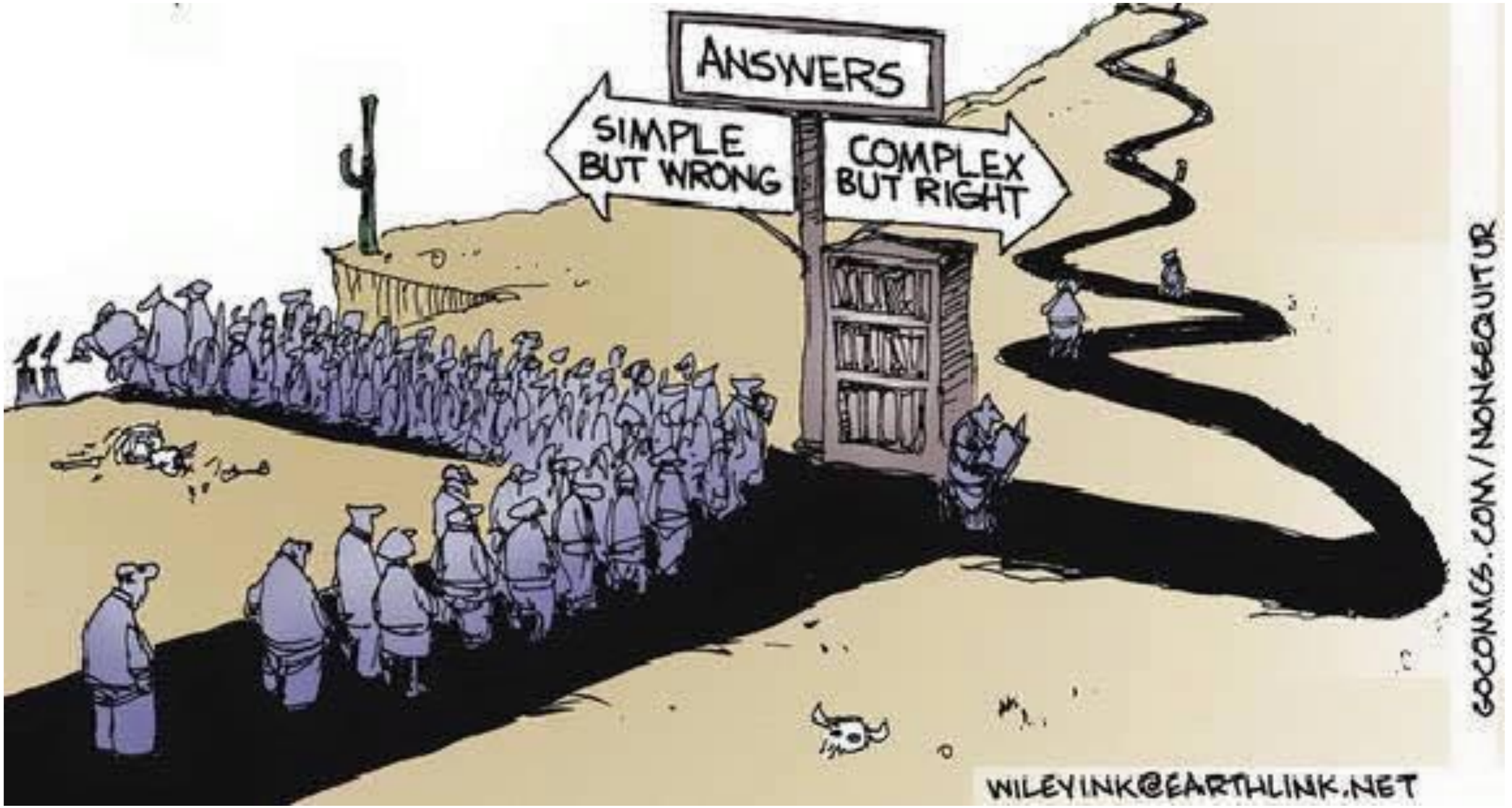
Opioid overdose deaths in the US 2000-2016



“Clearly, if I had an inkling of what I know now then, I wouldn’t have spoken in the way that I spoke. It was clearly the wrong thing to do.” - Portenoy

And where are we now . . . ?




ANSWERS
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