RESEARCH ARTICLE

Resources for Clinicians in Pain Medicine: Correcting Medical Mythologies on Prescription of Opioid Analgesics

Richard A. Lawhern, PhD
lawhern@hotmail.com

ABSTRACT

The US regulatory climate pertaining to the prescribing of opioids in acute and chronic pain is presently highly fraught and polarized. The US Center for Disease Control has claimed that over-prescription of opioids by clinicians to their patients is an ongoing major cause of narcotics addiction and overdose mortality. Despite this premise having been conclusively disproved, many US clinicians face disciplinary proceedings and sanctions by State Medical Boards or the US Drug Enforcement Administration (DEA). Those who have not left pain medicine altogether are under pressure to force-taper legacy patients below arbitrary and scientifically unsupported dose thresholds. Patients are being deserted to agony and medical collapse. Clinicians are being imprisoned for no crime other than treating their patients with safe and effective opioid therapy.

This paper offers a compendium of 81 references for clinicians practicing in pain medicine and for their lawyers, who choose to contest undeserved prosecution or legal sanctions by State Medical Boards or the US DEA. Also of interest are recent references that demonstrate beyond any reasonable contradiction that the incidence of iatrogenic addiction to prescription opioids is so low that it cannot be reliably measured. The DEA has known for at least three years that the US opioid “crisis” was not created and is not being driven by clinicians “over-prescribing” to patients.

Among references provided herein are papers demonstrating that the US DEA has been aware for years that over-prescribing of opioid pain relievers is not a dominant cause of either hospital admissions or mortalities involving clinically prescribed opioid analgesics. This awareness may offer grounds for appeal or vacation of court verdicts finding clinicians in violation of “usual and normal” practice of pain medicine.

METHODOLOGY

This paper comprises a critical review and analysis of medical literature pertinent to safety and effectiveness of prescription opioid analgesics employed by clinicians in the management of acute or chronic pain. Taken in combination, the references herein challenge prevailing memes and misdirection in regulation of prescription pain relievers and in otherwise unfounded prosecutions of clinicians by the US Drug Enforcement Administration, State drug enforcement authorities, and State Medical Boards.

The assembled references are selected by the author from over 15,000 accumulated papers and articles acquired during 26 years of reading clinical and popular literature as a data analyst, healthcare writer and patient advocate. Clearly, the author operates from a personal agenda of advocacy on behalf of clinicians and their patients. Evaluation of the scientific and conceptual validity of the references must ultimately rest with Medical Boards and courts in an essentially adversarial process.
Introduction
This resource list provides 80 literature sources that effectively contradict the present vast misdirection of US Federal and State public health policy for regulation of clinicians in their management of severe acute and chronic pain. The paper is intended as education for clinicians and their lawyers, as well as for citizens and advocates who wish to lobby their legislators to demand changes in public health policy. It may also be useful for staffs of US legislators and senior policy makers in American public health and law enforcement, as background preparation for legislative hearings and changes to public law.

References provided herein are grouped in the following subject areas. Each area will be briefly introduced with a summary.

- US CDC and Veterans Administration Opioid Prescribing Guidelines
- Related Government and Non-Government Documents
- Impacts of Public Health Opioid Policy on Patients in Pain
- Undisclosed Conflicts of Interest Among CDC Guideline Writers
- Clinical Research -- Correcting False Memes and Narratives
  - The Mythology of Morphine Milligram Equivalent Daily Dose
  - The Myth of Opioid Induced Hyperalgesia
  - The Importance of Genetics in Opioid Metabolism
  - Opioid Effectiveness, Side Effects and Safety
- Demographics of Overdose and Mortality
- Alternatives to Opioids?
  - Law Enforcement Versus Evidence Based Medicine
  - Alternatives to CDC and VA Guidelines
  - Where Do We Go From Here?

Discussion
As noted above, this paper offers extensive, carefully selected references that contradict prevailing false narratives about asserted relationships between opioid prescribing versus hospitalizations for opioid toxicity or emergence of substance use disorder among clinical patients. Almost all references are hyperlinked to online sources. The intention is to offer resources to clinicians who wish to defend themselves from charges of prescribing opioid analgesic pain relievers “without a medical purpose” or “outside the bounds of accepted medical practice.”

US CDC, VETERANS ADMINISTRATION AND DEPARTMENT OF DEFENSE OPIOID PRESCRIBING GUIDELINES

The following comprise the most recent published guidelines prescription of opioid pain relievers, from US CDC and Department of Veterans’ Affairs

1. Deborah Dowell, MD; Kathleen R. Ragan, MSPH; Christopher M. Jones, PharmD, DrPH; Grant T. Baldwin, PhD; Roger Chou, MD, “CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022” Centers for Disease Control and Prevention,
Resources for Clinicians in Pain Medicine: Correcting Medical Mythologies on Prescription of Opioid Analgesics

**Recommendations and Reports**
November 4, 2022 / 71(3);1–95
https://www.cdc.gov/mmwr/volumes/71/rr/rr7103a1.htm

2. US Department of Veterans Affairs, “Use of Opioids in the Management of Chronic Pain (2022)”
https://www.healthquality.va.gov/guidelines/Pain/cot/

**RELATED GOVERNMENT AND NON-GOVERNMENT DOCUMENTS**

This group of references comprises documents issued by US CDC and the US Agency for Healthcare Research and Quality, that analyze, amplify, or support guidelines noted in the section above. One additional reference by the author summarizes methodological errors in these guidelines.


4. US CDC, “CDC Advises Against Misapplication of the Guideline for Prescribing Opioids for Chronic Pain” April 24, 2019,


https://effectivehealthcare.ahrq.gov/products/nonpharma-treatment-pain/research-2018

7. Agency for Healthcare Research and Quality, “Systematic Review Update: Noninvasive Nonpharmacologic Treatments for Chronic Pain” March 1, 2019,

www.effectivehealthcare.ahrq.gov/reports/final.cfm

9. Richard A Lawhern, “Comments on AHRQ Technical Brief “Prevention, Diagnosis, and Management of Opioids, Opioid Misuse and Opioid Use Disorder in Older Adults”
IMPACTS OF OPIOID-RELATED PUBLIC HEALTH POLICY ON PATIENTS

A substantial body of medical and popular literature demonstrates that major harms to patients have grown from the 2016 CDC guidelines prescription of opioids to adults with chronic pain, and are continuing from the 2022 update. It is the position of the author, that much of this literature shows substantial and willful misdirection on the part of US CDC, prompting calls for legislation to remove this organization from all further roles in development of public health policy for the practice of pain medicine.


22. Alicia Agnoli, MD, MPH, MHS1,2; Guibo Xing, PhD2; Daniel J. Tancredi, PhD2,3; et al “Association of Dose Tapering With Overdose or Mental Health Crisis Among Patients Prescribed Long-term Opioids”, JAMA. 2021;326(5):411-419. https://jamanetwork.com/journals/jama/fullarticle/2782643


UNDISCLOSED CONFLICTS OF INTEREST AMONG CDC GUIDELINE WRITERS

There is published evidence that the 2016 and 2022 CDC opioid guidelines were both biased and fundamentally wrong on science. Moreover, Guideline content was substantially influenced by consultants who had undisclosed conflicts of interest before they were hired by CDC. There is also evidence in the public record of fraud and misrepresentation of medical evidence on the part of CDC senior management who released the 2022 updated Guidelines for publication. References of this section provide details of the evidence.


Resources for Clinicians in Pain Medicine: Correcting Medical Mythologies on Prescription of Opioid Analgesics


guidelines-a-process-pre-destined-to-fail-2988.pdf


CLINICAL RESEARCH - CORRECTING FALSE NARRATIVES

This section provides references that in combination demonstrate that key assertions of the US CDC guideline writers and of the Agency as a whole are directly contradicted by the CDC’s own published data as well as by recognized authorities in both pain and addiction.


35. Volkow N and McClellan TA, “Opioid Abuse in Chronic Pain – Misconceptions

Extract:

“Unlike tolerance and physical dependence, addiction is not a predictable result of opioid prescribing. Addiction occurs in only a small percentage of persons who are exposed to opioids—even among those with preexisting vulnerabilities (Table 3). Older medical texts and several versions of the Diagnostic and Statistical Manual of Mental Disorders (DSM) either overemphasized the role of tolerance and physical dependence in the definition of addiction or equated these processes (DSM-III and DSM-IV). However, more recent studies have shown that the molecular mechanisms underlying addiction are distinct from those responsible for tolerance and physical dependence, in that they evolve much more slowly, last much longer, and disrupt multiple brain processes.52


41. Kline T, “CDC 2016 paper falsely switches blame for opioid crisis from Heroin to prescription drugs” https://www.youtube.com/watch?v=2gylppgW1oQ


Extract:

“The absolute rate of de novo addiction among patients who took low doses of opioids for more than 90 days was only 0.72%, less than 1%. How did the difference between a 15-fold risk and less than 1% come about? The answer is that “odds ratio” is a comparison of the actual risk of one group to the actual risk of another. In this case, the absolute risk of de novo addiction among 371,371 patients who were not prescribed opioids was only 4 per 100,000, or 0.004%, exceedingly low. The actual risk among low dose chronic users was 50/6902 or 0.72%, also low. But comparing the two gave a 14.92-fold increased risk. By not providing the actual risk in their abstract, only the odds ratio, Edlund, et al, were able to share what looks like a high risk.”


Note: “Jennifer P. Schneider, MD, PhD, is Board certified in Internal Medicine, Addiction Medicine, and Pain Management. She is the author of 15 books and numerous articles in professional journals. Dr. Schneider, is an executive member of the PPM Editorial Advisory Board, and a nationally recognized expert in two addiction-related fields: addictive sexual disorders and the management of chronic pain with opioids.”

For other published work by Dr Schneider see https://www.practicalpainmanagement.com/author/2460/schneider


The Mythology of Morphine Milligram Equivalent Daily Dose

It has long been known that the concept of “morphine milligram equivalent daily dose (MMED)” is a construct that lacks trials data of any kind. Moreover, there are multiple mathematical models for MMED, which produce different answers for the supposed equivalence between different prescription opioids. None of these models accounts for the wide variability of minimum effective
opioid dose and side effects between individuals that is generated by polymorphism in the CYP-450 liver enzyme series, however, this reality has not kept the US CDC and Veterans Administration from publishing guidelines that proclaim thresholds of increased patient risk based on MMED.


The Mythology of Opioid Induced Hyperalgesia

One of the justifications sometimes quoted for limiting the availability of prescription opioid analgesics is the concept that prolonged patient exposure may cause central nervous system sensitization and hyper-sensitivity to painful stimuli. However, there are fundamental problems with this concept, as noted in the references below.


Genetics of Opioid Metabolism

It has been known for over 25 years that polymorphism in six liver enzymes that mediate opioid metabolism produces a wide range of minimum effective opioid dose and sensitivity to side effects between individual patients. No existing trials of opioid analgesics address genetics in the design of trials protocols. Both CDC and Veterans Administration / Department of Defense prescribing guidelines are silent on the implications of this literature in medical practice. Thus neither guideline can be relied upon as guidance for what comprises “usual and normal” medical practice – in either Medical Board proceedings, or Drug Enforcement Administration prosecutions of clinicians.


Medical Research Archives | https://esmed.org/MRA/index.php/mra/article/view/4860
Management: A Primer” *Pain Therapy*, DOI 10.1007/s40122-017-0069-2, February 5, 2017

55. Skarke C, “Genetic Predictors of the Clinical Response to Opioid Analgesics”, *Clinical Pharmacokinetics*, 2004,
https://www.academia.edu/28334503/Genetic_Predictors_of_the_Clinical_Response_to_Opioid_Analgesics

**Opioid Effectiveness and Side Effects**

Review of medical literature reveals major differences of opinion concerning the effectiveness of long-term opioid therapy. The following references provide broad surveys of this literature to extract trends.


https://www.academia.edu/16660540/Effectiveness_of_opioids_in_the_treatment_of_chronic_non_cancer_pain

58. Lanese N, “Most People Don’t Actually Feel Euphoric When They Take Opioids, Study Finds”, *LiveScience*, October 28, 2019,

**Demographics of Overdose and Mortality**

Incidence of medical opioid overdose and/or deaths involving opioids is still hotly debated in medical literature. However, the following references attempt to extract central trends that bear upon perceived and actual “risks” of overdose or death among clinical patients. These papers confirm that overdose or death involving clinically supervised opioid analgesics are so rare that it is impossible to reliably estimate individual patient risks based on demographic data.


60. Singer JA, Sullum JZ, and Schatman MS, “Today’s nonmedical opioid users are not yesterday’s patients; implications of data indicating stable rates of nonmedical use and pain reliever use disorder” *Journal of Pain Research*, February 7, 2019,
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6369835/


https://www.science.org/doi/10.1126/science.aau1184
Alternatives to Opioids?

Despite CDC and VA/DoD assertions to the contrary, there are no published studies establishing that either non-opioid analgesics or non-pharmacological interventions provide viable alternatives or replacements for opioids in chronic severe pain.


LAW ENFORCEMENT VERSUS EVIDENCE-BASED MEDICINE

A large body of public commentary and critical analysis supports the insight that the widely discussed US “opioid crisis” was not created by doctors over-prescribing to their patients. Nor will this crisis in opioid-related hospitalizations and overdose deaths be reduced by restrictions on the availability of prescription opioid analgesic pain relievers to patients.

Addiction is not created by drug supply. The contribution of prescription opioid pain relievers to addiction in America is so small that it cannot reliably be measured. Addiction is created instead by the conditions in which people live– socio-economic determinants of health in a “crisis of hopelessness”.

These realities have long been known to both the US CDC and the US Drug Enforcement Administration (DEA). Despite this awareness, DEA has continued to mount a campaign of intimidation and prosecutions against clinicians who treat patients by means of safe and effective opioid therapy.

The work of Jalal et al (cited at 62 above) is important to the understanding that the US DEA has continued its campaign against doctors despite knowing for at least three years that doctors aren’t “the problem” and likely never have been. A figure from Jalal is highly revealing:

Figure 1: US Trends in All Drug-Related Overdose Deaths.
In 2018, Hawre Jalal, Jeanne M Buchanich and their colleagues analyzed records of 599,255 deaths from 1979 through 2016 from the National Vital Statistics System, in which accidental drug poisoning was identified as the main cause of death.

“By examining all available data on accidental poisoning deaths back to 1979 and showing that the overall 38 year curve is exponential, they provided evidence that the current wave of opioid overdose deaths... may just be the latest manifestation of a more fundamental longer-term process.”

However, these authors also demonstrated that prescription opioids are only one of eight contributors to opioid overdose-related accidental deaths. From the data offered in Figure 1 above, it is clear that even during the era of pill mills before 2010, prescriptions have never been dominant in drug-related mortality.

The figures above appeared in a 2020 conference hosted by the Drug Diversion Division of the US DEA. The obvious implication is that DEA knows quite well that prescription opioid pain relievers are not the primary driver of the US opioid crisis – but they have chosen to continue unjustified persecution of US doctors, regardless of this reality.


Other publications are also pertinent in the dynamic between US law enforcement and clinicians:

65. Jeffrey Singer and Colleen Cowles, “War on Us: How the War on Drugs and Myths about Addiction Have Created a War on All of Us”, Cato Institute Events (Interview), March 18, 2020, https://www.cato.org/events/war-us-how-war-drugs-myths-about-addiction-have-created-war-all-us


“In 2018, after publication of the work of Jalal et al, US CDC was forced to acknowledged that it had been over-reporting mortalities due to illegally imported Fentanyl as a “prescription” drug. The consequence of this correction of methodology was to reduce both the number of deaths from all drugs combined, and the number of reported accidental deaths due to prescription drugs, by approximately half in 2010-2016.


ALTERNATIVES TO CDC AND VETERANS ADMINISTRATION GUIDELINES:

If CDC and VA opioid prescribing guidelines are not to be used as a standard for what comprises “usual and normal” clinical treatment of severe pain, then it is reasonable to ask what alternative guidelines may provide guidance for clinicians concerned that they may be sanctioned by a State Medical Board or the DEA. The following references explore such alternatives.


https://www.painweek.org/media/news/what-if-prescribing-guidelines-were-patient-centered

WHERE DO WE GO FROM HERE?

It appears to be time for US and State governments to seriously embrace a position taken by six clinical associations representing over 500,000 practicing US doctors and medical students, in the following references.

80. American Academy of Family Physicians, “Frontline Physicians Call on Politicians to End Political Interference in the Delivery of Evidence Based Medicine”, May 15, 2019

Extract:

“Our organizations are firmly opposed to efforts in state legislatures across the United States that inappropriately interfere with the patient-physician relationship, unnecessarily regulate the evidence-based practice of medicine and, in some cases, even criminalize physicians who deliver safe, legal, and necessary medical care.

Our organizations represent more than 560,000 physicians and medical students serving on the front-lines of health care. We care for patients in communities across America over the course of their lives, including when they need to make critical decisions about their futures and families. The insertion of politics between patients and their physicians undermines the foundation of trust this relationship is built on and inhibits the delivery of safe, timely, and comprehensive care. Outside interference endangers our patients’ health by limiting, and sometimes altogether eliminating, access to medically accurate information and to the full range of health care.

Physicians should never face imprisonment or other penalties for providing necessary care. These laws force physicians to decide between their patients and facing criminal proceedings. Physicians must be able to practice medicine that is informed by their years of medical education, training, experience, and the available evidence, freely and without threat of criminal punishment.”

See also:

81. Richard A. Lawhern, “We Need New Laws To Protect People in Pain - The CDC’s revised prescribing guidelines retain an anti-opioid bias and do nothing to reverse the harmful policies inspired by the 2016 version.” *Reason Magazine*, February 14, 2023,
https://reason.com/2023/02/14/we-need-new-laws-to-protect-people-in-pain/
Conclusions and Observations

The references offered in this paper support the following conclusions and observations:

- When employed in the context of an ongoing clinician-patient relationship with regular monitoring of treatment outcomes and side effects, prescription opioid pain relievers are as safe as many other medications widely accepted and used in clinical practice. By contrast, involuntary tapering of opioid dose to meet an arbitrary threshold that may be below the minimum effective dose for that individual patient is actively dangerous and unjustifiable.

- Despite repeated declarations to the contrary by US CDC and others, there is no statistically significant cause-and-effect relationship between rates of opioid prescribing by clinicians versus either hospitalizations for opioid toxicity or mortalities in which a prescription may be a contributing factor. The contribution of prescription opioids to the widely discussed “US opioid crisis” is so small that it gets lost in the noise of illegal street drugs—particularly in recent years, illegally imported Fentanyl in counterfeit pills.

- Due to genetic mediation of opioid metabolism in the liver, there is a wide natural range in minimum effective opioid dose and sensitivity to side effects between individuals. US CDC and Veterans Administration guidelines on prescribing opioids fail even to mention this wide range. This glaring omission is disqualifying of both guidelines, even as clinical advice. Genetics may also bear directly upon clinical decisions to treat individual patients with high dose opioids.

- The entire trials literature on safety and effectiveness of opioid therapy needs to be withdrawn and repudiated. New trials protocols must address variability of minimum effective dose between individuals due to genetics. Gradual titration of opioid dose must be employed in trials as it is in clinical practice. Enriched enrollment, gradual withdrawal trials potentially offer significant improvement over randomized double-blind studies in which many patients in the placebo arm drop out due to unbearable breakthrough pain.

- An extensive literature explores the demographics of opioid addiction and physiologic dependence. Despite historical confusion, it is now clear that the two are not the same medical entity and addiction is not a predictable outcome of opioid prescribing in individuals. There is presently no validated patient profiling instrument that enables direct comparison of predictable risks versus benefits in individuals, as mandated by CDC guidelines. This reality is also disqualifying of derivative State standards for prescribing controlled substances. Lack of such an instrument may be pertinent in legal defense of clinicians from charges of “over-prescribing”.

- The strongest indicator of potentially elevated risk from opioid prescribing in individual patients is a documented history of overdose, substance abuse, clinical depression, other mental health problems, or attempted suicide. Such indicators should prompt clinicians to monitor treatment outcomes in pain management more frequently, and to
refer patients for additional support by specialists in depression, anxiety, or other mental health issues. However, even when such history is documented, refusal to provide effective pain management by whatever means necessary is never ethically appropriate.

- In post-surgical patients who are prescribed opioid analgesics for pain, likelihood of continued long-term prescribing is much more sensitive to the type of surgery involved than to prescription opioid type, dose or duration. Highly accurate predictive modeling reveals that for patient groups at highest risk for opioid overdose, suicide attempts or successful suicide following surgery, only one among the top eleven risk factors relates to past medical treatment for pain as such. Mental health factors in clinical history are on the order of twice as significant as opioid dose or type in dangerous outcomes among patients.

- Use of odds ratios in developing public health policy may be viewed as deliberate misinformation unless accompanied by absolute incidence figures. Multiple published sources reveal that the absolute incidence of iatrogenic opioid addiction is so low as to be within the range of measurement confounds and clinician diagnostic errors.

- Prescription of opioid analgesics is not the default therapy for all forms of pain. Nor are prescriptions a “fire and forget” solution. Patient safety requires periodic monitoring of outcomes in an ongoing doctor-patient relationship, with education for both the patient and resident caregivers on the sedating and respiratory depression effects of opioids and the need to store opioids securely at home.

- Chronic pain is frequently accompanied by significant depression and/or anxiety, which can greatly compromise patient quality of life or contribute to suicide. Clinicians who treat pain should also monitor for and aggressively treat these conditions.

- Non-pharmacological and non-invasive therapies may be useful adjuncts to an ongoing program of analgesic therapy for severe chronic pain -- for some patients, some of the time. However, effects of non-opioid therapies are known to be temporary and marginal. Medical evidence for non-pharmacological therapies is almost uniformly assessed as weak. Thus non-pharmacological therapies are not “preferable” to opioids, despite claims to that effect by the US CDC. There are no published trials that directly compare opioid therapy to non-pharmacological therapies on an either/or basis.

- When opioid therapy is medically indicated in the judgment of a clinician, principles for initiation and monitoring of therapy outcomes have been understood for over 40 years from widely used frameworks such as the World Health Organization Ladder of Pain Management. Therapy begins with low doses of less powerful opioids, with dose gradually titrated upward either until adequate pain management is obtained or unacceptable side effects occur. If unmanageable side effects render one opioid impractical, then that therapy may be gradually tapered down as another agent or combination
of agents with different analgesic action is titrated up. Legal defense of clinicians accused of over-prescribing may be aided by documentation of the clinician’s use of such frameworks.

- It is well known that medical school education of clinicians is generally poor and incomplete for diagnosis of both painful conditions and addiction. Less well known is that neither the 5th edition of the Diagnostic and Statistical Manual for Mental Disorders nor the 10th edition of the International Classification of Diseases offers a useful framework for management of addiction in patients who present with severe pain. It is reasonable to challenge the court testimony of any DEA or State Board “expert” witness who lacks this understanding.

- State Medical Boards have a legitimate role to play in oversight of clinicians to prevent careless, unprofessional or dangerous mistreatment of patients. However, the fact that a clinician prescribes high volumes of opioids in their practice or to an individual patient is not a de facto indicator of either unprofessional or dangerous conduct. Some patients who are poor metabolizers or hypermetabolizers of opioids may thrive on doses measured in grams rather than milligrams per day. Likewise, overprescription of opioids should not be a default assumption when a patient dies while under care for pain. Medical Board proceedings must acknowledge these realities.

- In the presently hostile US regulatory environment, appearance of multiple pharmacies or clinicians in Prescription Drug Monitoring Program records is not a valid indicator for “doctor-shopping” or drug diversion. Drug shortages have resulted in patients being forced to visit multiple pharmacies, and doctors retiring from pain medicine have contributed to patients being seen by multiple practitioners within a year. The volume of prescriptions made by a doctor is likewise not a valid indicator for drug diversion and cannot legitimately be the sole basis for sanctions against the doctor.

Taken in combination, the findings summarized above provide a potentially powerful counterpoint in court testimony supporting clinicians who are prosecuted for prescribing outside the bounds of usual and normal practice.
Conflict of Interest Statement: None

Funding Statement: None

Acknowledgement Statement: None