The opioid epidemic—a fast developing public health crisis in the first world

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In first-world countries, the opioid epidemic is proving to be one of the greatest health challenges of the 21st century. It is generating a current, but fast developing public health crisis in the first world. This opioid epidemic is due to aggressive prescribing practices, widespread opioid misuse, and mounting rates of prescription and illicit opioid overdose-related deaths.[1]

In an article in this journal,[2] Paul Morrow has looked at the epidemic of opioid/opiate drugs deaths in the US. The US consumes 80% or more of all the opioids manufactured in the world each year.[3] He cautions that "the current epidemic of opioid deaths in the US may be a warning to New Zealand." He proposes "the creation of a rapid reporting system." In suspected drug overdose deaths, data would be collected from coroners and pathologists, emergency departments and St Johns. This would in turn act as an "early warning system" to trigger a response plan.

Shipton et al have recently shown that the rate of opioid-related deaths in New Zealand has increased by 33% from 2001 to 2012.[4] Opioid analgesic deaths were most likely due to methadone, morphine, codeine and latterly oxycodone prescribed by healthcare professionals.[4] There was a relatively high use of methadone and morphine relative to illicit heroin use (due to island isolation).[4] This study showed the steady annual increases in opioid prescriptions in New Zealand from 2001 to 2012, and the rise in opioid analgesic deaths to be associated with the increases in the numbers of opioid prescriptions.[4]

Regrettably, in the US a second equally serious epidemic has emerged in the context of prescription opioid abuse, that being the use of illicit opioids including heroin and fentanyl.[1] As Morrow states: "what initially was considered by many to be primarily a problem driven by prescription medication abuse, is shifting to an illicit pattern". He then goes on to describe the sources of illicit drugs in the US before turning his attention to opioid use mortality rates across the Tasman.

Opioid sales have increased in Australia, although their population-adjusted use is only a quarter to a third of that in the US.[5] Trends in opioid utilisation in Australia from 2006–2015 have recently been published.[6] Number of dispensings, defined daily doses [DDDs] or oral morphine equivalents [OMEs] have been combined with a measure of the number of persons dispensed opioids to gain insights into Australian trends in prescribed opioid use. Total opioid use increased according to all metrics, especially OME/1,000 population/day (51% increase) and dispensings/1,000 population (44%).[6] There was a 238% increase in persons dispensed only strong opioids. The use of strong opioids increased according to dispensings/1,000 population (140%), OME/1,000 population/day (80%) and DDD/1,000 pop/day (71% increase).[6] Weaker opioid use remained stable or declined, and the rate of persons accessing weaker opioids decreased by 31%.[6] There are problems with weak opioids as well. In Australia, codeine-related deaths increased from 3.5 per million in 2000 to 8.7 per million in 2009.[7] Severe harms have been described with codeine use, especially from the consumption of high doses of combination products such as codeine/paracetamol and codeine/ibuprofen.[8] In Australia from 1 February 2018, analgesics containing codeine will be available only on prescription.

Morrow then considers deaths in New Zealand attributed to narcotic or psychedelic

drug poisoning and their demographics. In New Zealand in 2016, four of the leading six causes of disability were chronic pain conditions (chronic low back pain, migraine, chronic neck pain and other muscular-skeletal disorders).[9] Opioids are increasingly being prescribed for chronic non-cancer pain, despite limited data on efficacy.[10] Besides the risk of overdose (unintentional or intentional), chronic opioid use can result in tolerance, physical dependence, addiction, opioid-induced hyperalgesia and sexual and endocrine dysfunctions.

During the period 2008–2012 in New Zealand, 179 (55%) deaths resulted from unintentional opioid overdoses.[4] The high number of unintentional overdoses is tragic as these are potentially avoidable.[4] This underlines the need for education of both prescribers and the public alike. Morrow mentions the value in New Zealand of using multidisciplinary pain management education sessions held for primary and secondary care practitioners.

Morrow indicates that already action has been taken regarding opioid prescription patterns and pain management. What is required is a comprehensive strategy to reduce our reliance on prescription opioids, such as prescription drug monitoring programmes.[1]

More specialist pain medicine physicians are needed in New Zealand. They use multimodal therapy (biopsychosocial rehabilitative approach), and can educate their patients about the risks of opioids and monitor them. In this way they could decrease the risks of opioid therapy.[3] In New Zealand at present there are only three trainee fellowship positions accredited by the Faculty of Pain Medicine. More trainee fellowship positions are desperately needed.

Morrow states that New Zealand "is an island nation with more easily defended borders, at least as far as illicit drug importation may be concerned". Fentanyl patches became fully funded in New Zealand without special authority from February 2011. The risk of fatality with fentanyl patches arises when given to opioid naïve patients.[11] However, illicit fentanyl can be indistinguishable from prescription fentanyl, and can be ordered over the Internet.

The use of opioid assessment screening tools, random urine testing, opioid treatment agreements and use of universal precautions (making a diagnosis; evaluation of psychological status and addiction risk; treating improvable aetiologies and comorbid psychiatric syndromes) are additional essentials in managing opioid abuse.[12,13]

In this article, Morrow has proposed an "early warning system", and has reminded the New Zealand medical profession not to become complacent about the dangers of the opioid epidemic spreading here, and to take timely steps (some of which have been discussed here) to prevent this from occurring. For us in the medical profession we should heed his wise advice.

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Nil.

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REFERENCES:

1. Clark DJ, Schumacher MA. America's Opioid Epidemic: Supply and Demand Considerations. Anesth Analg. 2017; 125(5):1667–74.
2. Morrow P. The American opioid death epidemic—lessons for New Zealand? N Z Med J. 2018; 131(1469):59–63.
3. Brown RE Jr, Sloan PA. The Opioid Crisis in the United States: Chronic Pain Physicians Are the Answer, Not the Cause. Anesth Analg. 2017; 125(5):1432–4.
4. Shipton EE, Shipton AJ, Williman JA, Shipton EA. Deaths from Opioid Overdosing: implications of Coroners' Inquest Reports 2008–2012 and annual rise in opioid prescription rates: a population-based cohort study. Pain Ther. 2017: DOI 10.1007/s40122-017-0080-7.
5. International Narcotics Control Board (INCB). Report 2016 - Narcotic drugs: estimated world requirements for 2017; statistics for 2015. United Nations Publications, New York; 2015. http://www.incb.org/incb/en/narcotic-drugs/Technical_Reports/narcotic_drugs_reports.html (accessed 12 April 2017).
6. Karanges EA, Buckley NA, Brett J, Blanch B, Litchfield M, Degenhardt L, Pearson SA. Trends in opioid utilisation in Australia, 2006–2015: Insights from multiple metrics. Pharmacoepidemiol Drug Saf. 2018: in press.
7. Roxburgh A, Hall WD, Burns L, Pilgrim J, Saar E, Nielsen S, et al. Trends and characteristics of accidental and intentional codeine overdose deaths in Australia. Med J Aust. 2015; 203(7):299.
8. Mill D, Johnson JL, Cock V, Monaghan E, Hotham ED. Counting the cost of over-the-counter codeine containing analgesic misuse: A retrospective review of hospital admissions over a 5 year period. Drug Alcohol Rev. 2018: in press.
9. GBD 2016 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. Lancet 2017; 390(10100):1211–59.
10. Warner EA. Opioids for the treatment of chronic noncancer pain," Am J Med. 2012; 125(12):1155–61.
11. Taghogho Agarin M, Andrea Trescot M, Aniefiok Agarin M. Reducing opioid analgesic deaths in America: what health providers can do. Pain Physician. 2015; 18:E307–22.
12. Kaye AD, Jones MR, Kaye AM, Ripoll JG, Galan V, Beakley BD, Calixto F, Bolden JL, Urman RD, Manchikanti L. Prescription Opioid Abuse in Chronic Pain: An Updated Review of Opioid Abuse Predictors and Strategies to Curb Opioid Abuse: Part 1. Pain Physician. 2017; 20(2S):S93–109.
13. Kaye AD, Jones MR, Kaye AM, Ripoll JG, Jones DE, Galan V, Beakley BD, Calixto F, Bolden JL, Urman RD, Manchikanti L. Prescription Opioid Abuse in Chronic Pain: An Updated Review of Opioid Abuse Predictors and Strategies to Curb Opioid Abuse (Part 2). Pain Physician. 2017; 20(2S):S111–33.