Victorian Institute of Forensic Medicine

Clinical Communiqué

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Next Edition: September 2017

EDITORIAL

Welcome to the winter 2017 edition of the Clinical Communiqué. Since our last edition, we have seen interest in our publication continue to grow, and we have been heartened by the feedback we continue to receive from our readers about the lessons learned. Professional engagement is one of the keys to making work practices safer, and story-telling is a powerful tool for this. Along with the educational messages, the impact of the stories themselves can be a potent catalyst for individual reflection, conversation and change.

In acknowledging the support of our readers further, we are pleased to announce the recent publication of our study which evaluated the effect that the Clinical Communiqué has on its readers in terms of practice change.*

We conducted a survey of our subscribers after the publication of our first four issues of the Clinical Communiqué. There was a substantial number of respondents with over 1000 subscribers participating in the survey. Our results showed that 53.0% of respondents reported that their practice had changed after reading the Clinical Communiqué. Respondents also found that the Clinical Communiqué raised awareness (96.5%) and provided ideas about improving patient safety and care (94.1%) leading them to discuss cases with their colleagues (79.6%) and review their practice (75.7%). Overall, our study found that the design and content of the Clinical Communiqué has generated a positive impact on the healthcare community. We would like to take this opportunity to thank our readers for their time in responding to the survey. A copy of the study can be downloaded from the Communiqués website at http://www.vifmcommuniques.org/?p=4975.

In this edition, we look at the complex issues surrounding the treatment of pain, and the risks associated with combining sedative medications. We welcome a new case author, Dr Rachel Marr, who works as a general practitioner and a forensic medical officer, and who brings a community perspective to the case summaries.

The societal burden of harm from prescribed sedative and analgesic medications now far exceeds that of illicit drugs. With this in mind, our expert commentary has been written by Dr Shaun Greene, a clinical toxicologist and emergency medicine physician. Dr Greene has a professional interest in recreational drugs and novel psychoactive substances, and is involved in work to reduce harms associated with prescription medication use. He provides an excellent overview on the trends in prescription and over-the counter medications used to treat pain, and includes a number of important resources on the subject for our readers.

* Cunningham N, Pham T, Kennedy B, et al. A cross- sectional survey using electronic distribution of a questionnaire to subscribers of educational material written by clinicians, for clinicians, to evaluate whether practice change resulted from reading the Clinical Communiqué. BMJ Open 2017;7:e014064. doi:10.1136/ bmjopen-2016-014064.

CASE #1 IT MUST BE RIGHT BECAUSE THE DOCTOR SAID SO

Case Number:
1816/07 VIC

Case Précis Author:
Carmel Young RN

CLINICAL SUMMARY

Mrs JB was a 39 year old female at the time of her death. Approximately ten years prior, she had a workplace accident, which left her with recurrent severe migraines. She consulted a physician specialising in pain medicine (Dr K) at the request of her neurologist when the headaches failed to respond to migraine medications. Over the next three years, she received regular ketamine infusions in hospital to treat her pain, with good effect. Her oral medications included Oxycontin (oxycodone) 30mg twice daily and intramuscular Dilaudid (hydromorphone hydrochloride) 2mg, two to three times a week.

At her final consultation with Dr K, Mrs JB was in severe pain, so he changed her medication from Oxycontin to methadone. Three days later, her husband found her deceased.

PATHOLOGY

An autopsy found Mrs JB's cause of death was due to mixed drug toxicity - methadone, oxycodone, hydromorphine, mirtazapine, diazepam and promethazine.

INVESTIGATION

The coroner held an inquest, which lasted one day. Statements were obtained from Mrs JB's husband and Dr K, and an expert in toxicology provided an opinion.

If methadone is to replace another drug such as oxycodone, there can be a danger period when the replaced drug is still present in the body.

Mrs JB's husband stated his wife had told him that Dr K had given her a prescription for methadone, which was a more potent painkiller. She had seemed concerned that it was stronger, but believed that she was to continue taking the other medications. She told her husband that she thought it strange but she trusted Dr K.

Soon after taking the methadone she became very lethargic, and spent most of the next day sleeping. The following day she told her husband that she felt unwell. She died later that evening.

The expert opined that, *"If methadone is to replace another drug such as oxycodone, there can be a danger period when the replaced drug is still present in the body. Too much narcotic analgesic can produce respiratory depression leading to coma and death, almost always when the patient is sleeping. Pulmonary oedema can occur from respiratory depression."*

Dr K stated that he discussed with Mrs JB about changing her medications and wrote a note to her local doctor. He was confident he had explained to her that she was to cease taking the Oxycontin but acknowledged that she may not have understood. He admitted that normally he would document any medication changes for his patients, but failed to do so in this case. He considered that a warning on the box of dispensed medication would be beneficial, and that doctors should provide patients with a written note at the consultation, highlighting the fatal risks of combining narcotic medications.

CORONER'S FINDINGS

The coroner was satisfied that it was Dr K's intention that Mrs JB cease Oxycontin on commencing methadone, and that she misunderstood. The coroner described Dr K's evidence as frank and impressive, and acknowledged that he had been a caring and thorough practitioner to Mrs JB over the years.

The coroner recommended that the Pharmacy Board of Victoria *"direct pharmacists to place warnings on narcotic medication, highlighting the fatal risks associated with combining narcotic medication."*

KEYWORDS

Oxycontin, methadone, drug interactions, pharmacy, narcotic medication, chronic pain management

ACKNOWLEDGEMENTS

This initiative has been made possible by collaboration with the Department of Forensic Medicine (DFM), Monash University, Victorian Institute of Forensic Medicine (VIFM) and Victorian Managed Insurance Authority (VMIA).

FEEDBACK

The editorial team is keen to receive feedback about this communication especially in relation to changes in clinical practice. Please email your comments, questions and suggestions to:

cc@vifmcommuniques.org

CASE #2 THE MEDICATION THAT'S ON HAND

Case Number:
Non-inquest findings, 2014 QLD

Case Précis Author:
Dr Rachel Marr
MBBS (Hons.) FRACGP

CLINICAL SUMMARY

Mr WW was a healthy 22-year-old male who was experiencing pain relating to his wisdom teeth. He arranged with his family dentist, Dr DH, to have three wisdom teeth extracted.

The procedure itself was noted to be *"uncomplicated"*, and Mr WW was given written and verbal information that he should expect bleeding, pain and swelling afterwards. The written information advised the use of Nurofen (ibuprofen) 200mg up to three times a day and Panadol (paracetamol) as required.

After two days, Mr WW was still experiencing significant pain and swelling despite the use of Nurofen and Panadeine Extra (paracetamol 500mg, codeine 15mg), which he had acquired from the local pharmacy. He rang Dr DH, who faxed a script for penicillin V (phenoxymethylpenicillin) 500mg, to be taken four times a day. Mr WW's mother was concerned about the extent of his pain, and arranged with their family friend, Dr JT (a general practitioner), for Mr WW to be reviewed at Dr JT's home that evening. Dr JT was not the family's regular GP.

Dr JT reviewed Mr WW, and gave him a script for Mersyndol Forte (paracetamol 450mg, codeine 30mg, doxylamine 5mg). She also handed him a blister pack with seven tablets of Physeptone (methadone), with handwritten instructions on the box stating *"1 tab every 6-8 hours"*. These were her own tablets, having previously been prescribed to Dr JT for her back pain a few years earlier.

Mr WW's parents noted over the next day or so that his pain seemed better, and he seemed lucid. Two days after Mr WW's visit to Dr JT, his mother was at work and received a distressed call from her daughter, stating she had found Mr WW in his room and she thought he was dead. An ambulance and Dr JT attended the family home, where it was confirmed that Mr WW was deceased.

PATHOLOGY

An autopsy was conducted by a forensic pathologist assisted by a forensic odontologist. Signs of recent wisdom tooth extraction with localised abscess and infection were noted, but this was not considered to have caused Mr WW's death.

Post-mortem toxicological analyses showed the presence of morphine, codeine, methadone, doxylamine, paracetamol and norfluoxetine. The pathologist concluded that, *"While none of these drugs individually are present in potentially lethal levels, when taken together… this is likely to be a lethal combination."*

INVESTIGATION

Mr WW's death was referred to the coroner for further investigation, as his death was sudden and unexpected.

The coroner determined that in the days prior to his death, Mr WW had been taking:

— Ibuprofen 200mg up to three times daily. Six tablets had been used.

— Panadeine extra 2 tablets up to 4 times daily. Acquired without prescription. Twenty of 24 tablets had been used.

— Mersyndol Forte 2 tablets up to 4 times daily. Prescribed by Dr JT. Six of 20 tablets had been used.

— Physeptone 10mg, up to 6-8 hourly. Given to Mr WW by Dr JT. The sheet of seven tablets was empty.

— Florinef (fludrocortisone) 10mcg, 1-2 tablets 4-6 hourly. Seven of 20 tablets had been used.

— Penicillin V. Twelve of the 25 tablets had been used.

— It was not clear when Mr WW took the antidepressant fluoxetine, or at what dose. The presence of its metabolite, norfluoxetine, meant that Mr WW may have consumed it in the last 3-15 days.

Dr JT gave a statement, indicating that she had checked which over-the-counter medications Mr WW was taking before prescribing Mersyndol Forte, and that she had given him verbal instructions to reserve the methadone tablets for night time.

Three independent witnesses (a forensic medical practitioner, a hospital director of pain management, and a pharmacist), were called upon to give expert opinions.

Their opinions covered the following points:

— It was likely that Mr WW had not consumed more tablets than the prescribed dosages.

— It appeared that none of the treating practitioners had optimised the doses of Mr WW's non-narcotic analgesia.

— The presence of morphine on toxicology was likely to be a metabolite of codeine only.

— The doxylamine in Mersyndol Forte has sedating properties that could potentiate the effects of opiates such as codeine and methadone.

— The norfluoxetine may have had the effect of making the codeine less effective as a pain reliever, and it also increases the length of time it takes to metabolise and eliminate methadone.

— Methadone is not an appropriate choice of medication for acute pain in an ambulatory patient, given its long and variable half-life, because there is a significant risk of accumulation causing toxicity.

— Mr WW was opiate-naïve. The dose of 10mg of methadone every 6-8 hours was too high for someone not already tolerant of high doses of opiates.

— The use of methadone in this instance was entirely inappropriate and the 'primary contributor' to Mr WW's death.

CORONER'S FINDINGS

The coroner found that Mr WW's consumption of the methadone tablets was possibly contrary to Dr JT's verbal advice, but not to the handwritten instructions on the box. His death was due to 'inadvertent mixed drug toxicity as a result of medications taken following the development of a dental abscess, which formed after his dental surgery.' Mr. WW's death was tragically avoidable.

The coroner felt there was sufficient evidence to establish the facts of the case, and that it was unlikely that an inquest could help prevent the occurrence of another death in similar circumstances. Dr JT was referred by the coroner to the Queensland Office of Health Ombudsman.

AUTHOR'S COMMENTS

It is important to optimise 'simple analgesia,' such as ibuprofen and paracetamol before using opiates. When opiates are required, it is best to use only one type, and to ensure it is used in an appropriate dose for that patient. Care should be taken to consider concurrent medications which could interact with what is being prescribed.

There are significant pitfalls for a GP who sees a friend or relative for a consultation. This includes but is not limited to a lack of objectivity in forming a management plan. Had Mr WW been seen in a clinic by a GP not personally known to him, it is likely he would not have been prescribed methadone for his dental pain.

RESOURCES

Therapeutic Guidelines - Analgesic: Acute pain, perioperative. Available at: https://tgldcdp.tg.org.au/guideLine?guidelinePage=Analgesic&frompage=etgcomplete

Guidelines for Acute Pain Management, Australian and New Zealand College of Anaesthetists (ANZCA). Available at: http://fpm.anzca.edu.au/documents/apmse4_2015_final

KEYWORDS

Methadone, opioids, codeine, acute pain management, drug interactions, general practitioner

CASE #3 WITHOUT THE BENEFIT OF HINDSIGHT

Case Number:
2008/42 QLD

Case Précis Author:
Dr Nicola Cunningham
B.Med, MForensMed,
FFCFM (RCPA), FACEM

CLINICAL SUMMARY

Mr DP was a 45 year old male who was scheduled to undergo an elective removal of a wrist plate that had been inserted 12 months earlier following a fracture of the left radius. His medical history included diabetes, hypertension, osteoarthritis, and obesity with a body mass index of 40 (normal range 18.5-25).

On the day of surgery, Mr DP informed the anaesthetist (Dr M) during his pre-operative assessment that he had been taking narcotic medications at home to treat the pain he was experiencing from the wrist plate. He was unable to describe the type and quantities, nor the amount of Phenergan (the antihistamine promethazine) that he was also taking.

Dr M raised the possibility of delaying the procedure so that the medication issues could be clarified to better inform the post-operative management of Mr DP's pain, however, Mr DP declined this option.

Dr M noted that Mr DP had used Phenergan and Oxycontin (oxycodone) during his earlier admission and suspected he was opioid tolerant. Dr M raised the possibility of delaying the procedure so that the medication issues could be clarified to better inform the post-operative management of Mr DP's pain, however, Mr DP declined this option.

The operation proceeded uneventfully, during which time Mr DP received bolus doses of morphine and fentanyl. Dr M noted a small amount of brown secretions in the endotracheal tube intraoperatively, but no other concerns arose, and Mr DP was transferred to the recovery ward without incident. There he received further bolus doses of morphine as authorised by Dr M, up to a total of 25 mg.

A PCA (patient controlled anaesthesia device) was prescribed by Dr M when recovery staff communicated that Mr DP required more pain relief.

The prescription included the following information: *"referral to the acute pain management service for out-of-hours coverage (and not to prescribe a sedative without reference to the service)…a background infusion of 2mg of morphine plus a demand dose of 2mg morphine with a 10 minute lockout. One hourly observations during the first six hours… two hourly observations for the following six hours, cease device within two hours after that."*

Mr DP was transferred to a post-surgery ward at 18:00 hours where several nurses were involved in his care. At 20:55 hours, he appeared drowsy and agitated and would not keep his oxygen mask on, so the nurses decided to turn off the background infusion of morphine. At approximately 21:15 hours, Mr DP woke to discover that a backscratcher he had been using (a metal garden fork), had been confiscated by one of the nurses. He became verbally abusive, demanding it be returned to him. His behaviour frightened other patients and the nursing staff, who called their supervisor and security personnel to attend. The after-hours nursing manager was also contacted, who began making arrangements to transfer Mr DP to another ward.

The surgical ward on-call doctor (Dr A) was called to Mr DP after the nursing staff could not reach either the anaesthetist or the orthopaedic registrar. Dr A had already worked 13 hours of her shift when she first saw Mr DP. She encountered a chaotic scene with an agitated patient and distressed staff who appeared to offer conflicting information about what should be done.

His respiratory rate and pulse rate readings were elevated, while his oxygen saturations were low. There was a high temperature recorded at 38.6 degrees.

She reviewed Mr DP's chart and tried to contact the medical registrar and the medical ward on-call doctor for advice but could not reach anyone. Dr A then prescribed 20 mg temazepam to calm Mr DP, and 30mg Phenergan to alleviate his itch. She subsequently left for a meeting.

When she returned to the ward at approximately 22:45 hours, she noted that Mr DP was more drowsy. His respiratory rate and pulse rate readings were elevated, while his oxygen saturations were low. There was a high temperature recorded at 38.6 degrees. She spoke to the medical registrar over the phone about the findings, who recommended a septic screen and supplemental oxygen to keep the oxygen saturations above 90%.

Dr A left the ward after these tasks were completed. Serial entries for Mr DP's oxygen saturation levels throughout this period were recorded as 92-95% (20:30 hours), 84% (21:30 hours), 81% (22:30 hours) and 96% (22:55 hours). He did not access any demand doses of morphine after 21:30 hours.

Shortly after 23:00 hours, two orthopaedic registrars attended and spoke to Mr DP about the evening's events. Mr DP apologised and no further issues were noted or documented. He was then transferred to another ward.

A set of observations for Mr DP taken in the receiving ward around midnight were recorded as blood pressure 140/70 mmHg, oxygen saturations 93% and pulse rate 83/min. He was drowsy but obeying commands. At 00:30 hours he was snoring loudly but woke to voice and started to scratch himself. At approximately 01:30 he was asleep and snoring. When the nurse returned to the room at 02:00 hours, he was unresponsive and taking slow, shallow breaths. His oxygen saturation level was 33%. A cardiac arrest was called and Mr DP was resuscitated and transferred to intensive care. He did not make a neurological recovery and died four days later.

The synergistic effect of the combination of medications, and the possibility of sleep apnoea as a contributing factor, were considered as causes of the hypoxia.

PATHOLOGY

The forensic pathologist performed an autopsy and concluded that Mr DP died due to hypoxic–ischaemic brain injury sustained following an episode of prolonged hypoxia. The synergistic effect of the combination of medications, and the possibility of sleep apnoea as a contributing factor, were considered as causes of the hypoxia. Underlying coronary atherosclerosis was a contributory factor.

INVESTIGATION

An inquest was called to examine the complex factors surrounding Mr DP's care, and to consider with hindsight what measures could have been taken in this case and might be considered in the future to improve patient safety. The doctors and nurses involved were called as witnesses.

CASE #3 WITHOUT THE BENEFIT OF HINDSIGHT (Continued)

The coroner heard that the acute pain management service was the most appropriate reference point for advice but had not been called by the nursing staff or by Dr A, who was insufficiently knowledgeable about the PCA regime.

Sedation scoring and measurements of carbon dioxide through blood gas readings should have been performed.

Mr DP had been moved from a ward where staff were experienced in post-surgical care patients, to a ward where there was a break in continuity of care and the potential to miss observations. Sedation scoring and measurements of carbon dioxide through blood gas readings should have been performed. When the court examined the acute observation form, it was found that the time entries had all changed by overwriting the original times. The coroner was unable to determine when this had occurred or who was responsible, and concluded that the chart could not be relied upon, and confused the other evidence.

He reflected that there was a lack of appreciation of Mr DP's risks in the ward, and an opportunity to identify problems and seek help from more experienced staff was missed.

Dr M gave evidence that in hindsight, the rising temperature over time, elevated respiratory rate, and evidence of coloured liquid in the endotracheal tube against a potential background of sleep apnoea, could suggest poor lung function and a respiratory infection. He reflected that there was a lack of appreciation of Mr DP's risks in the ward, and an opportunity to identify problems and seek help from more experienced staff was missed.

Two expert witnesses with different professional backgrounds were called to provide an opinion on the effects of the medications. The first, a non-medical professor in toxicology, doubted that the combined effects would have caused significant respiratory depression as the morphine should theoretically have been cleared from his body. The other witness, a clinical director of an acute pain service, opined there was a strong possibility of a significant interaction involving the drugs given and the build-up of carbon dioxide.

The clinical director highlighted the issue that recommended dosing strategies for morphine on PCA prescriptions differed between specialists and was influenced by factors such as opioid tolerance and respiratory disease (her preference was for a background infusion of 1mg morphine and an on-demand dose of 1mg each time). She also noted that some health services allow the use of Phenergan with a PCA, while others ban it due to safety concerns.

CORONER'S FINDINGS

The coroner found that the possible factors that precipitated the state of hypoxia included respiratory depression arising in the context of obstructive sleep apnoea, morbid obesity, possible respiratory infection, and the administration of morphine, Phenergan and temazepam.

The coroner acknowledged the work done by the hospital to implement formal systems of patient monitoring following their review of the circumstances of Mr DP's death. The coroner underlined the need to review the integrated assessment process regarding anaesthetic risk, and the critical importance of nursing observations. A copy of the inquest findings and related materials was forwarded by the coroner to the Australian and New Zealand College of Anaesthetists, to assist in their ongoing discussions regarding anaesthetic and pain management practices.

KEYWORDS

Phenergan, morphine, temazepam, PCA, anaesthetic, sedation, drug interactions

EXPERT COMMENTARY TOO MUCH OF A GOOD THING: THE UNINTENDED CONSEQUENCES OF TREATING PAIN

Dr Shaun Greene

MBChB, MSc, FACEM, FACMT

Clinical Toxicologist and Emergency Medicine Physician

Medical Director Victorian Poisons Information Centre

Director Austin Toxicology Service

Unintentional or accidental deaths resulting from exposure to both prescription and over-the-counter (OTC) medications have risen at an alarming rate in Australia during the last decade. Overwhelmingly these deaths are the result of exposure to excessive quantities of sedative medications, not infrequently combined with ethanol. In a number of Australian jurisdictions, numbers of deaths occurring in association with exposure to pharmaceutical medications mirror that of the road toll.

The combination of aggressive marketing and the commendable desire of clinicians to effectively treat every patient's pain, has led to prescription rates for medications such as oxycodone increasing more than 20-fold since 2000.

The reasons for this tragic increase in unexpected deaths, which often occur in young productive members of society, is complex and multi-factorial. The cases presented in this edition illustrate some of those factors.

The past 20 years has seen the development and widespread use of high-potency opioid analgesics available in oral form. The combination of aggressive marketing and the commendable desire of clinicians to effectively treat every patient's pain, has led to prescription rates for medications such as oxycodone increasing more than 20-fold since 2000.

Global rates of depression are increasing, and in many cases depression exists concurrently with anxiety disorders, or a chronic pain condition. Advances in the development of antidepressants and highly effective anxiolytic benzodiazepines such as alprazolam have provided effective treatments, but also increased the number of patients taking combinations of analgesics, antidepressants and anxiolytic drugs, often with devastating clinical consequences.

Many psychotropic drugs and analgesics (e.g. codeine, selective serotonin reuptake inhibitors and tricyclic antidepressants) are CYP2D6 substrates or inhibitors for cytochrome P450 2D6 enzymes.

CYP2D6 activity is subject to significant genetic polymorphism, leading to a predictable range of drug concentrations across a defined racial population, but unpredictable concentrations within any one individual.

Competitive inhibition of CYP2D6 substrate metabolism through co-administration of CYP2D6 substrates (e.g. codeine and tricyclic antidepressants) may lead to lethal toxicity, as seen in this case where methadone and norfluoxetine were combined.

Asking patients direct questions about OTC medication use should be a part of all medication histories.

Many commonly available OTC drugs including codeine-containing analgesics and anti-histamines produce significant sedation. Patients do not always appreciate potential dangers of OTC medications, especially when combined with sedatives including ethanol and prescription medications. Asking patients direct questions about OTC medication use should be a part of all medication histories.

Increased prescribing of new analgesic and psychotropic medications has not been accompanied by significant changes in prescriber education. Medical students receive varying, but in general inadequate tutelage regarding safe medication prescribing. Existing prescribers are not universally required to undergo specific training to improve prescribing of high-risk drugs. Such training is now mandatory for prescribers in areas of North America, where prescription analgesic related harm is endemic.

Prescribers may not always be aware of dangers posed by co-existence of other disease states, including obesity, chronic respiratory disorders, and obstructive sleep apnoea. Potential medication interactions may not be obvious, particularly pharmacokinetic processes affecting drug metabolism and distribution.

Initial utilisation of effective analgesics associated with minimal adverse effects such as paracetamol, should occur before provision of high potency opioid analgesics.

The genetic pre-disposition to addiction is seldom appreciated; patients with previous drug or ethanol addiction who are at high risk of opioid-analgesic addiction are often not identified during the prescribing process. Guidelines for the management of chronic pain are numerous and readily accessible, but are not consistently followed.

Pain should be treated with a ladder approach. Initial utilisation of effective analgesics associated with minimal adverse effects such as paracetamol, should occur before provision of high potency opioid analgesics. *"Primum non nocere"* is a concept no less important when treating suffering caused by pain, than with any other medical condition.

Ineffectiveness of opioid analgesia has been proven in conditions including chronic headache and chronic back pain, and yet opioids are often prescribed.

There is no high-quality empirical research evidence for efficacy of opioid analgesics in treatment of chronic non-cancer related pain. Many studies illustrate clinical outcomes similar to placebo, delayed recovery to normal function and a high incidence of adverse effects. Ineffectiveness of opioid analgesia has been proven in conditions including chronic headache and chronic back pain, and yet opioids are often prescribed. Methadone is a high potency analgesic with an established role in opioid substitution therapy.

However, methadone exhibits variable response amongst individuals, has a long half-life, is difficult to dose and can cause QT interval prolongation and lethal arrhythmias. Methadone has no place in managing chronic pain in the vast majority of patients.

Societal beliefs and expectations, and the convenience of delivering a potential solution in a busy surgery or emergency department by placing a pen on a prescription pad, mean many proven pain-management interventions including exercise, physiotherapy, acupuncture and psychotherapy are under-utilised.

Increasing specialization and fragmentation of medical care means patients often receive medications and instructions from multiple practitioners.

Any one prescriber may be unaware of the full extent of an individual's medication use, making adverse interactions with newly prescribed medications possible. A universal electronic patient record and real time prescription monitoring systems will mitigate this risk, but they are currently available in only a minority of jurisdictions.

A multifaceted problem deserves multifaceted solutions at various levels in our health care system, from policy maker to prescriber and pharmacist.

Ultimately, we all hold the key to the supply of sedative medications and possess the ability to educate our patients with regard to safe medication use. Reviewing our own prescribing practices, and ensuring our knowledge regarding sedative medications is current, is a good place to start on the journey to reducing the number of sedating medication deaths.

RESOURCES

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Royal Australasian College of Physicians. (2009). Public Health and Social Policies. Prescription Opioid Policy: improving management of chronic non-malignant pain and prevention of problems associated with prescription opioid use: https://www.racp.edu.au/docs/default-source/advocacy-library/prescription-opioid-policy.pdf

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