Oxycodone prescribing: New Zealand solutions to a global problem

Inappropriate prescribing of opioids for non-cancer pain is an international problem. In this article we examine an initiative that was launched by the Capital and Coast District Health Board (CCDHB) to reduce prescribing of oxycodone. The clinical champion of the programme, Dr Peter Moodie, provides insights into how the strategy was implemented and what was achieved.

The increasing problem of opioid prescribing

There is growing global recognition of the harm caused by the inappropriate prescribing of opioids, particularly strong opioids such as oxycodone. More than 165 000 people died from overdoses of opioid medicines in the United States from 1999 to 2014.[1] Furthermore, an estimated 1.9 million people abused or were dependent on opioid medicine in the United States during 2013.[1] Deaths due to prescription opioids are increasingly being reported in Australia;[2] in New Zealand wide variations in the rate of opioid prescribing across DHBs has prompted the Health Quality and Safety Commission (HQSC) to voice concerns.[3]

Efforts are underway to reduce the harm

There have been numerous campaigns to improve opioid prescribing internationally, however, these initiatives have often had limited success due to:[4]

- Lack of co-ordination
- Inability to implement best practice recommendations
- Failure to engage with local communities
- Lack of awareness among patients of the danger of opioids
- Influence from the pharmaceutical industry

Table 1: System-wide strategies to reduce opioid overuse in the United States, adapted from Martin *et al* (2016)[4]

Region	Southern California	Washington State	Oregon
Strategy	■ Education ■ Electronic decision support ■ Limits on dosing quantity and duration ■ Collaboration with pharmacy and medical specialities ■ Prescriber monitoring with feedback reports	■ Developing care plans in collaboration with patients ■ Monitoring of patients ■ Training and education for health professionals ■ Improving referrals to secondary care	■ Identifying patients who were over-using opioids ■ Education for health professionals ■ Quantity limits for prescribing, e.g. no more than 90 pills every 30 days ■ Standardising care for patients with long-term pain ■ Recommending non-pharmacological treatment ■ Opening a long-term pain clinic
Outcome	An 85% reduction in prescriptions of oxycodone (slow release)	Halved the number of non-cancer patients taking daily opioid doses > 120 mg morphine-equivalent	A more than 50% reduction in the number of patients receiving long-term opioid treatment in one year

Opioid prescribing campaigns that have succeeded have involved system-wide approaches with a number of common features (Table 1). A collaborative partnership aiming to reduce the harm from opioids in hospitals was formed between HQSC and DHBs in 2014. To reduce the harm from inappropriate prescribing in New Zealand, further system-wide approaches to optimising opioid use are required.

Further information from the HQSC on the safe use of opioids is available from: **www.hqsc.govt.nz/our-programmes/medication-safety/projects/collaborative/**

New Zealand-based strategies to reduce inappropriate opioid prescribing

The CCDHB launched a project in 2012 which aimed to reduce the prescribing of oxycodone as the first choice strong opioid in primary and secondary care. The project focused on patients with long-term non-cancer pain.

The project targets were reductions in the number of oxycodone prescriptions of:

- 10% across the DHB
- 10% in primary care
- 50% in secondary care

The project was developed around three key prescribing messages:

1. Pain management should be guided by the World Health Organisation (WHO) pain ladder which places oxycodone at step three: a strong opioid
2. Patients taking oxycodone or other opioids long-term should be reviewed to determine if treatment with opioids is still appropriate
3. Highlighting the potential for addiction associated with the use of opioids

The team behind the campaign decided that a two-pronged approach was required to influence prescribing behaviour using the three key messages outlined above. Hospital prescribers were the main focus of the campaign due to their influence on prescribing behaviour in primary care when patients are discharged. Prescribers in primary care were also targeted as they initiate new prescriptions of oxycodone and also continue treatment initiated in secondary care.

Distribution of messages

To maximise the influence of the prescribing campaign clinical champions were engaged from primary and secondary care.

The approach in primary care

The "top 20" oxycodone primary care prescribers were identified in each PHO within the CCDHB via the Pharmaceutical Collection data warehouse. Support for practices with relatively high rates of oxycodone prescribing was provided by pharmacist facilitators which included:

- An oxycodone practice audit accredited by the Royal New Zealand College of General Practitioners
- Campaign posters
- Practice education forums
- Peer review groups

A multidisciplinary pain management education session was held that was attended by 96 clinicians including general practitioners, nurses and pharmacists.

The approach in secondary care

The hospital utilisation of oxycodone for 2011/12 was analysed. Education sessions were delivered by a specialty pain team and staff from the hospital pharmacy to nurses, house surgeons and registrars in the three wards with the highest oxycodone use.

A series of campaign posters was developed which were changed on a weekly basis. A booklet summarising opioid prescribing messages from the bpac^{nz} pain management guidelines with a reminder to contact the pain team for advice and a one-page information sheet was distributed across all wards. The oxycodone prescribing campaign was featured on the hospital intranet site.

The effect of the campaign on oxycodone prescribing

The oxycodone campaign resulted in a 24% reduction in the number of oxycodone scripts written across the DHB and a 20% reduction in the number of oxycodone items dispensed.[5] The targets of a 10% reduction in the number of oxycodone prescriptions in primary care and 50% reduction in the number of oxycodone hospital prescriptions were achieved.[5] Before the oxycodone prescribing campaign, the CCDHB were reportedly the third lowest DHB for oxycodone usage; following the campaign they were ranked the lowest DHB for oxycodone use.[5] The amount of harm reduction the campaign achieved is hard to quantify, however, the financial savings in reduced medicine use amounted to at least $50 000.[5]

Prescribing changes in primary care

There was a 22% decrease in the annual prescribing of oxycodone across 18 general practices in the CCDHB following the campaign.[5]

Prescribing changes in secondary care

There were substantial decreases in the rate of oxycodone prescribing in the hospital following the campaign with the goal of a 50% reduction being met by most wards (Table 2).[5]

Personalised reports for oxycodone prescribing in primary are available from: **www.bpac.org.nz/Report/2016/February/oxycodone.aspx**

Further information on opioid prescribing across individual DHBs is available from: **www.hqsc.govt.nz/our-programmes/health-quality-evaluation/projects/atlas-of-healthcare-variation/opioids/**

Table 2: Percentage reduction of in-hospital use of oxycodone from June 2011 – July 2012, compared with March 2012 – February 2013[5]

Ward	Percentage reduction
General surgery/vascular	68%
Orthopaedics	58%
Cardiothoracic/cardiology	54%
General medicine, oncology, renal	35%

Best practice points for the use of opioids for non-cancer pain:

- Maximise appropriate non-opioid treatments first
- Morphine is the first-line strong opioid for non-cancer pain unless the patient is intolerant
- Use shared decision-making and ensure the patient is educated about the risks and benefits of opioid treatment
- Avoid prescribing more than three days' supply unless circumstances clearly warrant additional opioid treatment
- Prescribe opioids with caution in elderly patients: take into account renal function and consider prescribing lower doses
- Make sure the patient is aware that opioids can affect their work duties and driving

Analysis of the prescribing campaign

Dr Peter Moodie led the CCDHB opioid prescribing campaign. He works as a general practitioner at the Karori Medical Centre and was Medical Director of PHARMAC until 2013. Dr Moodie provides insight into how the prescribing campaign was undertaken and what was learnt from it.

1. **What were the challenges faced during the prescribing campaign?**
   The greatest challenges for the project were data; accurate data and relevant data. In New Zealand we are blessed with an amazing data repository called the "Pharmhouse" [Pharmaceutical Collection data warehouse]. Every script dispensed in community pharmacies goes into that database and virtually everything on the prescription is searchable, albeit with the patient's name encrypted.

   The downsides are that secondary care data is not included unless their prescription is dispensed outside the hospital and you have to know what you are doing when interrogating the data.

   Once you have the data, putting it into a meaningful format is again critical. It is possible to work out who initiated a prescription when there is chain of scripts for the same person as although the NHIs are encrypted, it is always with the same encryption. This means that if a script was initiated when a patient was discharged it can be followed to see who then continued the prescription.

2. **How was the programme received by prescribers in primary care, in particular the use of individualised prescriber reports?**
   How was all of this received? Well if you are like me, you know what you prescribe and don't need anyone else to tell you; like I knew that I never used oxycodone…well I thought I didn't. When confronted with the data I had lots of excuses: "The other doctor was away and I had to write the script", or "They came out of hospital on it and I just had to repeat it" or "I knew I shouldn't have but I can't quite remember the reason why I did it". And remember I was the clinical champion for the project!

   In other words, we can all get defensive but for groups that do not get audited often it can be even more challenging. For example when pointing out that anaesthetists were often big prescribers, they often blamed it on the orthopaedic surgeon who thought it was a good drug. Why? We all rationalise.

3. **Was it possible to identify which specific aspects of the campaign were effective?**
   The seminars were well attended and the prescribing data was useful but we found that it had to be presented in a manner which encouraged feedback. Simply handing it out didn't do much.

4. **Do you think a similar approach could be successful in other DHBs?**
   The programme should go nation-wide, however, it is important that pressure groups are not allowed to dilute the messages.

5. **What were the learning points that prescribers could take from the campaign?**
   What were the greatest learnings? Firstly, every time we reach for a controlled drug pad and start to write oxycodone or fentanyl, we should ask ourselves why we aren't writing a script for morphine. There are lots of reasons and one of them is possibly, "it's not actually morphine – it's just strong codeine" – yeah right. The other and more insidious is "the pain clinic uses it and I don't want to be old fashioned". Finally feedback from peers is critical. Secondary care needs honest feedback from their peers and likewise primary care.

Acknowledgement: Thank you to **Dr Peter Moodie,** Karori Medical Centre, Wellington for his assistance with this article.

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