THE OPIOID EPIDEMIC - A DOCTOR CAUSED CRISIS?

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Dr Cohen has been a leader in the development of pain medicine as a discipline, in the education and training of pain physicians and in bringing the plight of the person in pain to the attention of the broader medical community.
He has contributed chapters on pain to many textbooks and has written and spoken on topics as diverse as challenges to clinical reasoning and the ethics of opioid treatment.

Dr Cohen's interests are broad and include issues in pain theory and practice, rational pharmacotherapy for pain and implications of persistent pain for public policy or, as he puts it, "from the spinal cord to the supreme court".

When I was preparing this talk I was going to wax lyrical about people such as Henry VIII and Hilary Mantel and how they might relate to "pain", until I realised I only had 20 minutes so that's a talk for another time.

For the record I should tell you, I am not speaking on behalf of the College of Physicians or the Faculty of Pain Medicine or of the St Vincent's Campus. However I am a “mercenary” in that I have accepted money from drug companies in the past - including drug companies that manufacture opioids – but only for educational purposes.

Having got that off my chest I would like to revisit the title - and what a loaded title it is - what epidemic are we talking about? And what is the crisis? And is it "doctor-caused", or rather, what caused what, rather than who caused what?.

As long ago as 1927 the voice of youth told us about our problem with language. In The Advertiser of that year, quoted in The Lancet 30 June 2012, appeared "Johnny, are you in pain? No, Mummy, the pain is in me." However to be more philosophical about the issue of pain, I like Kahlil Gibran’s “Your pain is the breaking of the shell that encloses your understanding” and Elaine Scarry’s “To have pain is to have certainty; to hear about pain is to have doubt.” This is really what happens not only in pain clinics but also in many transactions where one party is experiencing pain and the other is not. If you have pain, you know about it. However sometimes, especially when it is chronic pain, it is really quite difficult to convince the other person that you have a problem.

In my view the main epidemic you have asked me to talk about is that of chronic non-cancer pain (CNCP). Here are some figures from the Global

Burden of Disease 2010. The worldwide prevalence of low back pain is nine per cent or 1.4 billion people. Neck pain is five per cent or 332 million people. While the number one contributor to the global non-fatal health burden is low back pain, headache also affects 1.4 billion people worldwide. There is some overlap in these figures as some people will suffer from more than one pain type.

Australia is comparable with other developed countries with an overall prevalence of chronic pain of around 20 per cent. These are 2007 figures from Access Economics /MBF Foundation, so they are getting a little bit old. It makes the point that with over three million people affected and as most of those people interact with one other person, then you have six million people affected. The projection is that by 2020 five million people or, if you will, 10 million people in Australia will be affected. The total cost to the community in 2007 was over $30 billion. This is the all up cost of chronic pain, not just treatment costs, but productivity costs and welfare costs, among others.

Professor Deborah Schofield has done a lot of work on the economic impact of pain. She has shown that if you have a back pain problem you are almost four times more likely to be out of work than someone not so affected. The other major conditions are arthritis, three times more likely, and of course mental health issues - vastly eclipsing heart disease, diabetes and hypertension. By contrast the "health priorities" in the country including diabetes, obesity and heart disease are not responsible for keeping people out of the workforce. The major economic impact on the community in this context is basically mental health and chronic pain which commonly occur together. Another point made by Deborah Schofield is that if you are not in the labour force due to back pain your income is 87 per cent less than someone who is in the workforce. So there is cost due to not being able to work because of pain .

If there is an "epidemic" then it is really one of chronic non-cancer pain. What we tend to see in the popular media is what I would call the back side or downside of that - the so-called "opioid epidemic". This is because of the not unreasonable association between pain and pain-killers - not that the pain killer actually kills pain - the most common among them being opioids.

If we look at this so-called epidemic statistically we find that in Australia between 1990 and 2010 the population rose by 29 per cent. During that time the supply of opioid base, that is the base for drugs from which the compounds are derived, rose by over 200 per cent and the per capita morphine equivalent consumption rose from 50 milligrams per person per year to 350 milligrams per person per year. So everyone in this room is feeling seven times more comfortable than they were 20 years ago. Of course in the population increase there are a significant number of older people who have more medical, including pain, problems. On those figures there has been a remarkable increase in supply and usage of opioids in our community, greatly overtaking the population increase. That may define an "epidemic".

Those figures might seem alarming, but in the world stakes Australia is well behind other countries in terms of per capita consumption. Australia is one of

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the six countries in the world that uses 95 per cent of the world's opioids, the other five being the United States, Canada, Denmark, Sweden and Norway. The other five per cent are used by perhaps 80 per cent of the world's population. It could also be said, that 80 per cent of the world's population does not have access to opioids for events such as childbirth and end of life, let alone major trauma. Yet in Australia and other like countries we have “enjoyed” a remarkable choice and availability of opioids to treat pain.

In terms of global supply the United States, with 5.3 per cent of the world's population, uses 56 per cent of the world's opioid. Australia and New Zealand, with 0.4 per cent of the world's population, used just three per cent. The 82.5 per cent of the world's population which is not in the United States, Canada, Europe, Australia or New Zealand, uses just seven per cent of the global supply - the same amount as Canada alone, with its 0.6 per cent of the world's population. The same position pertains to the global supply of oxycodone where the United States in 2010 used almost 80 per cent of the world's supply. Here Australia and New Zealand used two per cent, which was the same as that used in the 82.5 per cent of the world in which these drugs are not available. So there is a huge disparity in availability of opioid but the United States leaves the rest of the world, including us, “for dead”.

Opioid is the generic word for any drug or substance that stimulates a morphine-type receptor. The opioids I will talk about are the naturally occurring morphine, the semi-synthetic oxycodone and the synthetic fentanyl. In Australia over the 20 year period 1991-2012, there has been a remarkable increase in the base supply, especially of oxycodone and its incarnation Oxycontin. By contrast the supply of morphine has more or less plateaued and that of methadone is pretty static. The use of pethidine has dropped dramatically with its elimination from the public system in New South Wales. The use of codeine, a relatively useless drug, is also diminishing.

Dr Malcolm Dobbin has calculated the per capita consumption of all opioids, expressed as morphine equivalents, has risen from about 15 mg in 1980 to over 400mg in 2011. Now why is this? One could argue that it is because of better management of pain and as a pain specialist I like to think that that was the case.

Perhaps pain is being treated more aggressively than before. This is certainly the case with acute pain but that is not really the problem. Over the last couple of decades there has been a tendency to treat all pain, but especially chronic non-cancer pain, with opioids. It was thought to be a good idea in the 1990s. This is no longer the position as I will discuss shortly.
Over this time the population has aged. Older people do have a lot of medical co-morbidities and prominent amongst those is pain. All you need is age-related osteo-arthritis of the knees or hips and you stop moving as when you try to it hurts. Also older people commonly suffer from persistent back pain, which has really been very difficult to treat. Another reason perhaps is that when it comes to treating pain, the easiest thing for a physician to do is prescribe a drug, even though we know that is only part of the whole picture. Given the time pressures, especially in primary care medicine, the easiest

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thing often is just to prescribe a drug. It is not surprising then that in 2010 in Australia, $18 million of the Pharmaceutical Benefits Scheme were devoted to the publically subsidised opioid analgesics.

What I think the "opioid epidemic" refers to is the downside - that is, people who are hospitalised or even die not necessarily caused by but associated with opioids. This is what we read about in the papers. Up until the early 2000s the nasty drug was heroin but then a heroin drought saw misuse turn to prescription pharmaceutical opioids, mainly Oxycontin. Malcolm Dobbin has shown an increase in oxycodone-related deaths in Victoria paralleling the increased oxycodone supply. Most of this morbidity, including the mortality, is due to misuse of the drug, by overdose, often inadvertent, sometimes by injection and the complications of injection.

How do we navigate our way through this? I like Alex Wodak's concept of overlapping markets for opioids. Firstly we have people who have pain due to cancer. I am sure no one would deny such a person adequate analgesia for their predicament, especially if they have reached the stage where the cancer is untreatable and terminal.
Secondly there are the chronic non-cancer pain patients who make up 20 per cent of the population. I am not suggesting for a moment that all those people need to become patients, let alone be treated. However it does represent a big potential case-load. Thirdly there is what you might call the problematic and illicit drug users. The problematic users are the people for whom the drugs are prescribed but who use them in a way which is not intended, including by injection. The illicit drug users who could not obtain heroin during the drought, and who do not have access to opioid substitution programs because of their mal-distribution and inadequate funding have turned to prescription opioids, obtained in various ways, usually illicitly.

We have a problem, almost paradoxical, between inadequate pain management on the one hand and inadequate access to opioid substitution therapy on the other. We can apply a clinical differential diagnostic approach to that. We can combine the first two groups where people will be prescribed opioids for management of their pain and differentiate them from those people who use it problematically or illicitly. We might call that broadly unsanctioned use as opposed to sanctioned use. To complete the picture we have what you might call appropriate and inappropriate prescription. No one would want to deny a person with cancer pain from having adequate pain relief. So the prescription then would be appropriate. But in other cases, often of chronic non-cancer pain, the drugs may have been prescribed with good intent, but as it turns out inappropriately – an inappropriate prescription.

The problem with which pain physicians are wrestling, is what is the appropriate role of opioids for people with chronic non-cancer pain. Not only is there difficulty in determining their effectiveness, because the trials in this population are very difficult to do, but also we are dealing with a population whose problem is not only pain, but other co-morbidities as well. In my view this has come about because there has been a significant and unfortunate delay in education, especially of medical people.

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The old paradigm of medicine was that pain is a symptom of a disease: you find the disease, you treat the disease, the pain goes away. This is the biomedical paradigm. It means that the pain is reliably associated with a disease process and can be determined anatomically. This is why people come into my office laden down with scans- we are always trying to find where is the "broken part".

I can tell you the paradigm has changed. Instead of biomedical, we now think bio-psycho-social or as I prefer to say, socio-psycho-biological. That is, there is much more to the experience of chronic pain than what is happening to your body. The single biggest change in knowledge is the shift away from worrying about what is the anatomical cause or the source of the pain to what is happening to function of the nervous system, and in particular to that part of the nervous system involved in the appreciation of the perception of this thing we call pain.

A further change has been to get away from body and mind dualism; which means if I cannot find the cause of the pain in the body you must be making it up. This is to appreciate that what happens in the brain has a fundamental effect on the experience of pain. I can capture this diagrammatically. Embedded in your body is your brain and nervous system. Our bodies with their embedded nervous systems live in an environment that is physical, social and economic as we are reminded all the time. I suggest to you that interaction between this body with its embedded brain and nervous system and the environment is what we call the person. It follows that when looking with clinical eyes at the experience of pain, we have to look at all three things.

In many situations chronic pain arising from what is happening in your body can be readily treated. For example, people with symptomatic osteo-arthritis of the knee can have a knee replacement procedure and after months if not years of pain become symptom free. We are not particularly talking about such persons tonight, because the majority of people, especially those with back pain, do not have a broken part that can be fixed. The problem is the change in functioning of their nervous system.

Accordingly we look at what is happening to you as a person. What has happened to your mood, your relationships and your belief system? Then we look at what is happening in your life, which includes everything from influence by a social welfare system or workers' compensation system to natural disasters. These things together, in ways we do not understand, lead to the read- out of the experience of pain. It comes back to the definition of pain - an unpleasant sensory and emotional experience - rather than a symptom of a disease.

We can use that paradigm in the broadest terms to talk about how one might treat from a medical point of view. When it comes to the body we do not throw out the biomedical approach. We will still adopt the usual line of determining whether there is something present that is amenable to direct treatment even though in the vast majority of cases of chronic non-cancer pain, something will

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not be found. Then we might use medications and in some cases people might undergo procedures. People do have operations, usually with poor outcomes and they do have needles stuck in them, usually with poor outcomes. These things are done because they can be done and they are quick.

We look at what is happening at the psychological level, or if you prefer, the whole person level. We now use a more cognitive approach, trying to change, through explanation and other techniques, the way people understand their experience of pain. We might again use drugs to modify the brain, which is what opioids do. Opioids are brain-active drugs and sometimes we can modify mechanisms. That is also relatively easy. When it comes to cognitive approaches, and behavioural approaches, let alone systems approaches such as increasing the level of health literacy in the community so that people can understand that chronic pain is not due to a broken part, it is more difficult and much more expensive.

There are of course some ethical considerations in this opioid debate, because the so-called opioid epidemic really is: what is the right place for opioid analgesics in the epidemic of chronic non-cancer pain?

There is a human rights argument, well promoted in the Declaration of Montreal in 2010, that people have a right to access the best pain relief possible. We cannot tell, as clinicians, whether somebody with pain will respond or not to opioids. Hence the idea of opioids as a trial, and if the trial does not work, you do not continue. There was a belief that opioid side effects were not a problem. We know now that is not true, and also that unsanctioned use, especially diversion is a problem.

On the other hand, there is the usual suspicion of somebody in chronic pain which you cannot see as to what is going on. Remember to have pain is to have certainty, to see pain is to have doubt. The clinical suspicion of someone complaining of ongoing pain is that it is a code for another sort of distress and inherently uncertain. Many prescribers are worried about the red tape. So people say I am not allowed to treat you, I will not treat you because I am fearful that I am going to get into trouble, thereby denying the people access to appropriate therapy in many cases. Now, of course, we have a more realistic view of effectiveness, especially of adverse effects.

As prescribers we have a dilemma. On the one hand we are ethically bound to do the best things for our patients. We like to give them optimal drug therapy. We do not have magic drugs for chronic non-cancer pain. If we did, I would have retired years ago. But we must, at the same time, make sure that the drugs are prescribed appropriately; that is the right drug for the right person under the right sort of supervision. It has to be said, that has not occurred. On the other hand, the prescriber also has a responsibility to minimise unsanctioned use, for the protection of individuals and of society. This tension between inappropriate prescription on the one hand and unsanctioned use on the other, is the major dichotomy underlying this particular problem.

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To come back to the topic: the opioid epidemic - a doctor caused crisis? What is the crisis? I suspect that the crisis probably is inappropriate prescription of opioids to people in chronic non-cancer pain. This is at least partly due to the structure of our health system, which rewards speed and simple remedies and does not reward the comprehensive assessment required in these situations. I suggest that is the crisis. The problem, however, underlying both epidemics, is an outdated paradigm for the clinical situation.

If those figures I gave you earlier are correct, 20 per cent of the people in this room have chronic pain. Yet, when you go and present as a patient you are likely still to be processed through a biomedical paradigm. Then if the "broken part" cannot be found, everyone stands back and says you must be imagining it or it is all in your mind, and that only increases the suffering. This outdated paradigm unfortunately is still prevalent. Those of us in the pain community have been preaching a new paradigm for almost two decades. It just goes to show you how slowly cultural change, medical cultural change, does occur. It follows there will be a cultural lag in medical education.

Conclusion

By again addressing the question posed, I would say that the epidemic is that of chronic non-cancer pain. The crisis is our outdated way of looking at it and one of the consequences of that has unfortunately been the inappropriate, although well-meaning, use of opioids, treating only a part of the problem, ignoring the fact that a much more complex paradigm is required not only to help people who are suffering, but also to limit the downside, the tail that wags the dog, of unsanctioned use.

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