

Supplementary File 2. Semi-structured interviews

Interview participants

Interviews were conducted with six consenting participants including three with LDQ scores above or close to the 20-point cut-off and three with much lower scores (see Table S2.1).

Table S2.1. Interview participants

Pseudonym	Age	Gender	Occupational sector	Analgesics used	LDQ score
Angela	52	Female	Healthcare	Gabapentin, pregabalin, ibuprofen, paracetamol, paroxetine	20
Janet	54	Female	Healthcare	Naproxen, gabapentin, paracetamol, omeprazole, ibuprofen gel	21
John	72	Male	Engineering (retired)	Codeine, paracetamol	18
Brenda	72	Female	Retired	Naproxen, co-codamol	7
Glyn	46	Male	Engineering	Gabapentin, Paracetamol, ibuprofen, codeine, oxycodone, tramadol	9
Audrey	45	Female	Education	Morphine, codeine, naproxen	7

Note: some personal details have been changed to protect participants' anonymity.

Analysis of interview data

The thematic analysis resulted in two key themes: 1) reasons for pain medication and 2) concerns about pain medication. These are presented briefly below. A fuller set of the relevant interview responses is given in Table S2.2 below.

The first theme concerned participants' reasons for using pain medication. These included wanting to be more active and mobile, to reduce anxiety or depression, or to follow medical advice, but the most central, common and important reason was pain:

"I just wanted to get rid of the pain, that's all I wanted" (Angela)

"As soon as the pain comes then I'm taking naproxen, they've given me a stronger one, so I just take that. And if not, then codeine" (Audrey)

The second theme captured participants' concerns about pain medication. This included concerns about opioids, reactions to overdoses, and preferences for alternative methods of pain control:

"They mentioned the opioid ones, and I really don't want to start taking them if I can help it, not yet anyway" (Brenda)

"I took the whole packet of ibuprofen and paracetamol to be honest. And then since that day I haven't touched ibuprofen or paracetamol ... that was when it really got to me, and I thought I can't take this anymore" (Audrey)

"I was using gabapentin 1500mg a day and now I'm down to 5 since the acupuncture" (Janet)

One participant described an addiction to pain medication, and that person had recognised the signs of addiction and taken action to change his use of pain medication:

"It would get to three and a half hours [after taking the last dose of pain medication] and I'd start sweating ... when it got to the four hours, if I didn't take it on the four hours I'd really, really sweat. The pain would come back, I'd start shaking, it felt like my blood sugar had gone low if you know what I mean. And then I'd take one, and it made me feel alright, and that's sort of what made me realise 'hang on a minute, there's something going on here" (Glyn)

"... the oxycodone was a brilliant drug for blocking the pain, but it was very addictive... Within about two months of me being on it I was addicted so, I mean I knew the symptoms of addiction so I went to the doctor and he weaned me off them and got me on something else. That's when I went on the gabapentin" (Glyn)

Discussion of interview data

Three of the interviewees had LDQ scores above or close to the cut-off for severe dependence but the description of pain medication addiction was given by a person with an LDQ score indicating only mild dependence. This may be because most people taking prescribed pain medication tend not to perceive or describe their use of pain medication in terms of addiction, and because addictive patterns of medication use change over time as people monitor their use and make changes in response to patterns that cause concern. The full description of addiction given by 'Glyn' could potentially be translated into useful patient education material to promote greater recognition of symptoms of addiction to pain medication and greater recognition of the value of taking prompt action in response.

Table S2.2. Participants' descriptions of experiences of analgesic use (pseudonyms are used and some personal details have been changed to protect interview participants' anonymity).

1. Factors that influence use of pain medication
1.1 Pain
When asked about the factors that influenced their use of pain medication, participants all referred to their pain as the main or only factor: <p style="padding-left: 40px;"><i>"I just wanted to get rid of the pain, that's all I wanted. All I wanted to be able to do was things normally that anybody else can do, without either dropping things or being in pain. And it's, because it does burn and get excruciating at times but it</i></p>

<p>constantly aches, I mean it makes you, it gets you down in the end doesn't it [...] I just want someone to take the pain away." (Angela)</p> <p>"As soon as the pain comes then I'm taking naproxen, they've given me a stronger one, so I just take that. And if not, then codeine." (Audrey)</p> <p>This included participants' descriptions of their reasons for increases or decreases in their analgesic use:</p> <p>"But that [taking pregabalin] started on just 75mg at night and it got to a stage where it didn't touch it [the pain]. And I just, I didn't know what to do with myself, so GP then said try increasing it morning and night, and said I could go up to three a day but I tried not to because I feel like having that one just in case things get any worse means I have something to rely on." (Angela)</p>
<p>1.2 Physical activity/mobility</p> <p>"At the moment I've increased the paracetamol and naproxen whilst I was on holiday because I wanted to walk more." (Janet)</p> <p>"Yeah. I carried on, and like I said that was probably the best painkiller I was on because I could carry on working." (Glyn)</p>
<p>1.3 Anxiety and distress</p> <p>Several participants described taking medication for psychological symptoms other than pain:</p> <p>"I take sertraline for anxiety and depression, I haven't had any symptoms really for the last year but I feel better taking it and I don't want to risk stopping." (Janet)</p> <p>Several participants described ways that pain and psychological symptoms like depression and anxiety influenced one another:</p> <p>"Yes, it makes me more worried about things that are in themselves slightly anxiety-related. You know what I mean? If I'm in pain it's harder to deal with the anxiety." (Janet)</p>
<p>1.4 Decision making about pain medication</p> <p>Others described how they valued being able to have their pain and medication needs reassessed:</p> <p>"I suppose as I said if the time came for me to go onto something a lot stronger and have the whole thing reassessed, but currently I don't feel as if I need to see anyone to get that checked and sorted." (Brenda)</p> <p>"What the doctor agreed to do as I was coming off the oxy-codeine if they built up the gabapentin, if I was on a lower dose of gabapentin and reducing the dose of the oxy-codeine at the same time, then as the oxy-codeine went lower the gabapentin went up." (Glyn)</p> <p>"The doctor/GP was very good, knew the situation, and obviously being self-employed I was still working, so he knew that I had to have some pain relief. I couldn't just go cold-turkey and then wait again. And seeing the scan of the disc, which was quite badly trapping the spinal cord at that time." (Glyn)</p>

2. Concerns about pain medication
2.1 Avoiding opioids
<p>Several participants described reasons for reducing or stopping pain medication:</p> <p>“I don’t look for them, and I did stop taking the naproxen of my own choice for a while, because I thought I’ve been taking these for so long and I left them for maybe two months, three months, about two years ago [...] they said if you felt alright that’s your decision but they said we are looking at a stage where we might have to up the painkillers. And they mentioned the opioid ones, and I really don’t want to start taking them if I can help it, not yet anyway. And I don’t need them at the minute.” (Brenda)</p>
2.2 Health
<p>“I did stop taking the naproxen of my own choice for a while, because I thought I’ve been taking these for so long and I left them for maybe two months, three months, about two years ago. So I dropped it down and then left them off completely. For a while I just thought maybe my stomach needed a breather from me taking them.” (Brenda)</p> <p>“Well sometimes I get sick and tired of them, you know ... because I’m on anti-depressants as well so sometimes it’s just annoying, it makes me fed up and I just don’t take anything at all. I just cope with the pain. And then obviously when I need it, I just take it.” (Audrey)</p>
2.3 Reactions to overdoses
<p>The reasons participants gave for reducing or stopping pain medication included a reaction to taking an overdose of pain medication:</p> <p>“Well it’s been about... three years, and that’s when I suffered from a really bad back problem and I did take an overdose of it. Ibuprofen and paracetamol, that was when it really got to me, and I thought I can’t take this anymore.” (Audrey)</p> <p>“Yeah, I took the whole packet of ibuprofen and paracetamol to be honest. And then since that day I haven’t touched ibuprofen or paracetamol. And I used to carry them around with me all the time, but now I don’t. I have naproxen and codeine and all that in my handbag, and when I need it, I just take it but I don’t have paracetamol or ibuprofen in my handbag anymore. My daughter’s taken it out.” (Audrey)</p>
2.4 Fear of being without painkillers
<p>Participants also described feelings of anxiety about having their pain medication reduced or withdrawn:</p> <p>“That was a big concern yes, that they could just easily reduce the painkillers and I could have gone, maybe a couple of weeks without painkillers. I don’t think I’d have got through that.” (Glyn)</p> <p>“I read up about them and found that if you stopped relatively quick you could have a heart attack. So, I was worried about that, worried about weaning it off fast and also worried about the pain, because at that stage when I was on oxy-codeine I couldn’t bear not having any painkillers sort of every four hours.” (Glyn)</p>

<p>“You just – it’s hard to explain, because the pain was so intense at that stage, it was, the feeling in your head is that if you go to the doctors and they say they have to stop your painkillers, then what am I going to do, how am I going to live through the next day, live through the next night?” (Glyn)</p>
<p>2.5 Experience of addiction</p>
<p>Only one participant described being addicted to pain medication:</p> <p>“I was addicted to oxycodone so they brought me off that and put me up on, I think it was gabapentin, 300mg, at the same time. Because I was getting really bad shakes and sweats, once they started tailing off, so I was sweating to the extreme, I was sick and shaking. Yeah, the oxycodone was a brilliant drug for blocking the pain, but it was very addictive... Within about two months of me being on it I was addicted so, I mean I knew the symptoms of addiction so I went to the doctor and he weaned me off them and got me on something else. That’s when I went on the gabapentin.” (Glyn)</p> <p>“I was getting serious withdrawal symptoms within that time period. I mean, I was taking a heavy, heavy dose – the maximum dose – but you know the pain levels started to get to the point where I could feel the pain coming back on, but the sweats were just... the night sweats, in bed, the wife had to change the bed in the middle of the night it was that bad. But they were relatively good at blocking the pain.” (Glyn)</p> <p>“it would get to three and a half hours [after taking the last does of pain medication] and I’d start sweating and I’d start ... I’d start sweating, and when it got to the four hours, if I didn’t take it on the four hours I’d really, really sweat. The pain would come back, I’d start shaking, it felt like my blood sugar had gone low if you know what I mean. And then I’d take one, and it made me feel alright, and that’s sort of what made me realise ‘hang on a minute, there’s something going on here’.” (Glyn)</p>
<p>2.6 Alternatives to pain medication</p>
<p>Asked about how they saw the future for their spinal pain, or what they would like to change about their pain control, several participants referred to the possibility of a decisive intervention to reduce or remove their pain ...</p> <p>“I’m thinking perhaps they [the pain clinic] will do something that will take the pain away. I mean that’s all we’re waiting for, somebody to give me something to get rid of the pain so I can go back to work and do normal things and be normal.” (Angela)</p> <p>One participant described the impact that surgery had made to his pain:</p> <p>“Oh yeah surgery’s made a massive difference. I mean, I’ve still got back pain and I’ve lost some nerves in my legs and that but, you know, I can walk now – let’s put it that way. I couldn’t walk before.” (Glyn)</p> <p>Several participants described positive experiences with non-pharmacological pain control:</p> <p>“I’ve got one more session of a six-session course of acupuncture, and that has helped a lot with pain though not with function. So, for example, before I was</p>

using gabapentin 1500mg a day and now I'm down to 5 since the acupuncture." (Janet)

"I need to use the sort of CBT-type reframing 'I have this but I'm going to react in this way, this takes me to this place' rather than 'I'm going to wallow in self-pity' or 'I'm going to allow myself to catastrophise' or, you know whatever. So, say those techniques help and I use those more than I use the painkillers." (Janet)