The patient burden of opioid-induced constipation: new insights from a large, multinational survey in 5 European countries

Background: Despite its high prevalence, opioid-induced constipation (OIC) remains under-recognised and undertreated, and its true impact on patients’ wellbeing and quality of life (QoL) may be underestimated. Methods: A quantitative, questionnaire-based international survey was conducted. Results: Weak-opioid users appear to be as bothered by constipation as strong-opioid users, despite it causing less-severe physical symptoms and impact on QoL. Strong-opioid users meeting the new Rome IV criteria for OIC appear to experience greater symptomatic and biopsychosocial burden from constipation than those who did not satisfy these criteria. A substantial proportion of respondents are dissatisfied with their current constipation treatment and find balancing the need for adequate pain relief with constipation side effects challenging. Consequently, many fail to adhere to their prescribed treatment regimens, or resort to using suboptimal strategies, e.g. reducing their opioid intake, to relieve constipation. Many healthcare professionals do not adequately counsel their patients about constipation as a common side effect of opioid use. Conclusions: Findings suggest that both weak- and strong-opioid users suffer comparable bother and decreased QoL, Rome IV criteria can identify patients with more-severe OIC, but may underdiagnose patients showing fewer symptoms, and increased education is needed to manage patients’ expectations and enable improved OIC self-management.

Journal: United European Gastroenterology Journal

Manuscript ID: Draft

Manuscript Type: Original Article

Date Submitted by the Author: n/a

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Keywords: Opioid-induced constipation, Rome IV criteria, Patient survey, Biopsychosocial burden, Adherence, Management and counselling

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Disclosures

V Andresen has received speaker and/or consulting fees from Allergan, AstraZeneca, Boehringer Ingelheim, Falk, Ferring, KyowaKirin, Nordmark and Shionogi. V Banerji and G Hall are Insight Dojo employees. A Lass was contracted to Shionogi Limited at the time of the survey. AV Emmanuel has received honoraria for consultancy activities from Allergan, Almirall, AstraZeneca, Coloplast, Danone, GSK, Janssen, Medtronic, Mundipharma/Napp Pharmaceuticals, Norgine, Takeda and Wellspect; for advisory board participation from Allergan, Almirall, Coloplast, Danone, Ferring, Mundipharma/Napp Pharmaceuticals, Reckitt-Benckiser, Shire, Shionogi, Takeda and Wellspect; and has received research contracts from Coloplast, Ferring, GSK and Shire.
Abstract

Background: Despite its high prevalence, opioid-induced constipation (OIC) remains under-recognised and undertreated, and its true impact on patients’ wellbeing and quality of life (QoL) may be underestimated.

Methods: A quantitative, questionnaire-based international survey was conducted. Results: Weak-opioid users appear to be as bothered by constipation as strong-opioid users, despite it causing less-severe physical symptoms and impact on QoL. Strong-opioid users meeting the new Rome IV criteria for OIC appear to experience greater symptomatic and biopsychosocial burden from constipation than those who did not satisfy these criteria. A substantial proportion of respondents are dissatisfied with their current constipation treatment and find balancing the need for adequate pain relief with constipation side effects challenging. Consequently, many fail to adhere to their prescribed treatment regimens, or resort to using suboptimal strategies, e.g. reducing their opioid intake, to relieve constipation. Many healthcare professionals do not adequately counsel their patients about constipation as a common side effect of opioid use. Conclusions: Findings suggest that both weak- and strong-opioid users suffer comparable bother and decreased QoL, Rome IV criteria can identify patients with more-severe OIC, but may underdiagnose patients showing fewer symptoms, and increased education is needed to manage patients’ expectations and enable improved OIC self-management.
Key summary

1. Summarise the established knowledge on this subject

- Although constipation is a common side effect of opioid use, even with the concomitant use of laxatives, opioid-induced constipation (OIC) remains under-recognised and undertreated.

- There is evidence to suggest that the impact of OIC on patients’ overall wellbeing and quality of life may be underestimated by healthcare professionals.

- The recently published Rome IV diagnostic criteria for OIC provide a valuable tool for use in clinical practice; however, data are awaited on the value of these new criteria in the assessment of patients with OIC in the real-life setting.

- A better understanding of the unmet needs of patients with OIC would be valuable to improve the recognition and management of this condition.

2. What are the significant and/or new findings of this study?

- Both weak- and strong-opioid users experience a considerable biopsychosocial burden caused by constipation, and the impact of OIC on users of weak opioids should not be underestimated.

- Findings from this survey suggest that the new Rome IV criteria can identify patients with more severe OIC, but may underdiagnose patients with fewer/milder symptoms.

- A substantial proportion of opioid users are not satisfied with their current constipation treatment and find balancing the need for adequate pain relief with constipation side effects challenging. This can lead to poor adherence with prescribed treatment regimens, or the use of suboptimal strategies to relieve constipation.

- This survey highlighted a need for improved counselling for strong-opioid users, particulars regarding constipation as a potential side effect of opioid use.
Introduction

In recent years, the worldwide use of opioids has increased significantly.\textsuperscript{1} Constipation is a common side effect of opioid use, and can affect up to 81% of patients, even with the concomitant use of laxatives.\textsuperscript{2} Despite this, opioid-induced constipation (OIC) remains under-recognised and undertreated.\textsuperscript{3} Recently published Rome IV diagnostic guidance for functional gastrointestinal disorders now includes diagnostic criteria for OIC.\textsuperscript{4} While this is a much-needed step towards improving recognition of this condition, data are awaited on the value of these new criteria in the assessment of patients with OIC in real-life clinical practice.

OIC has a negative impact on patients’ wellbeing, affecting daily activities, work productivity and health-related quality of life,\textsuperscript{2} and is also associated with increased utilisation of healthcare resources.\textsuperscript{5} Available laxative therapies for OIC leave the patient with significant residual symptoms, which may lead them to adjust or stop their opioid intake in order to have a bowel movement, unless effectively counselled.\textsuperscript{3, 6} The management of OIC is often hampered by factors including a lack of understanding and recognition among healthcare professionals (HCPs) of the potential morbidity associated with this condition. It is not clear whether there is any difference in the biopsychosocial disease burden of constipation in patients using either strong or weak opioids. There may also be a perception that strong-opioid use is associated with more severe side effects, and that these also occur at a higher frequency, compared with weak-opioid use, highlighting a need to further our understanding of the burden of OIC in users of strong or weak opioids.

Poor communication between HCPs and patients may be a further potential barrier to the effective management of OIC. Current guidance recommends that in addition to laxative use, first-line therapy should include non-pharmacological approaches, such as lifestyle modification and consumption of fibre-rich food. Therefore, good communication between the patient and HCP is key,\textsuperscript{7-9} to encourage uptake and adherence to these measures. Studies in a variety of chronic disease conditions have demonstrated a link between effective patient engagement, management of functional symptoms and positive health outcomes.\textsuperscript{10} For example, an individualised self-care education programme, with and without peak flow monitoring, improved lung function in patients with asthma;\textsuperscript{11} patients on a group-based self-management programme for multiple sclerosis reported improvements in health-related quality of life;\textsuperscript{12} and disease-specific self-help
groups were associated with improvements in self-reported general health status in patients with arthritis.\(^\text{13}\)

It would be valuable to gain a better understanding of the information-seeking behaviour of patients with OIC, in order to determine the optimal approach to education and timely communication of appropriate information.

In an attempt to address some of the unmet needs in the management of OIC, this international survey was conducted to investigate whether long-term users of strong opioids (e.g. buprenorphine, fentanyl) with Rome IV-positive OIC differ in biopsychosocial disease burden versus those with constipation who do not satisfy the Rome IV criteria, and assess the impact of strong or weak (e.g. codeine, dihydrocodeine) opioids in patients with chronic pain who have constipation. The use of counselling resources, information seeking and sources of support in patients with constipation caused by the use of strong opioids was also explored.

**Methodology**

Two separate quantitative, questionnaire based, online surveys were conducted by Insight Dojo, Guildford, UK. One survey took place in France, Germany, Italy, Spain and the UK in respondents aged ≥40 years who were using strong opioids. A second survey was conducted in Germany, Spain and the UK in respondents aged ≥18 years who were using weak opioids.

Respondents were recruited using two different types of online panel: (1) a large panel representative of the population in each market, and (2) targeted chronic pain panels e.g. a ‘rheumatoid arthritis’ panel.

Respondents had largely non-cancer-related chronic pain that was being managed with opioids, and OIC (defined as having ≤2 bowel movements per week, and expressing bother from constipation or dissatisfaction with current treatments for constipation). All individuals who joined the panels consented to participate in the online survey. The International Chamber of Commerce/European Society for Opinion and Marketing Research (ICC/ESOMAR) International Code on Market, Opinion and Social Research and Data Analytics,\(^\text{14}\) and all local country codes of conduct for market research, were adhered to when conducting the survey. All respondents received a very small incentive for taking part in the survey, which ranged from €1.00–1.50 in France, Germany, Italy and Spain, and £0.75–1.00 in the UK. The survey questionnaires were
developed by Insight Dojo in collaboration with Shionogi and assessed past medical history, opioid use, treatment and treatment-seeking behaviour, symptoms, burden of disease, and effects of constipation on quality of life (see Appendices 1 and 2). The survey did not capture any self-reports of severity; rather, the analyses used objective measures of severity which were applied to self-reported symptoms and experiences.

To satisfy the Rome IV criteria for OIC, respondents who were users of strong opioids must have had new or worsening symptoms of constipation when initiating, changing or increasing opioid therapy plus 2 or more of the following symptoms defining functional constipation, with a frequency cut-off of 25%: straining, lumpy or hard stools, sensation of incomplete evacuation, sensation of anorectal blockage, use of manual manipulation to facilitate defaecation or <3 spontaneous bowel movements per week.15

To ensure comparability, only respondents aged ≥40 years from Germany, Spain and the UK were included in the analyses of strong- versus weak-opioid users. Analyses conducted to investigate approaches to the management of OIC, perceptions of treatment and counselling/information-seeking behaviour were conducted in the overall population of strong-opioid users.

Descriptive data were presented as proportions (%) of total subgroup populations, and Z-tests were performed to establish significance between subgroups. A p value <0.05 was defined as statistically significant.

Results

Analysis of Rome IV versus non-Rome IV subgroups of strong-opioid users

A total of 18,995 respondents from a nationally representative panel entered the survey from France, Germany, Italy, Spain and the UK, with 2016 eligible (i.e. overall strong-opioid population). Of these, 951 (47%) met the Rome IV diagnostic criteria for OIC.

Baseline demographics and characteristics of the Rome IV OIC and non-Rome IV subgroups are shown in Table 1. Compared with non-Rome IV respondents, significantly more respondents who satisfied the
Rome IV criteria reported physical effects of OIC, with the main symptoms being ‘straining to pass stools’, ‘abdominal bloating’ and ‘sensation of blockage/bowel obstruction’ (Figure 1A). A significantly greater proportion of Rome IV respondents felt emotional and psychological symptoms caused by OIC than did non-Rome IV respondents, with feelings of frustration, dependence and anxiety/worry being key (Figure 2A). While all respondents reported an impact of OIC on daily life/relationships, this was significantly greater in the Rome IV group who cited ‘excessive time spent in bathroom’, ‘difficulty following normal routine’ and ‘difficulty being intimate with others’ as key factors impacting on their wellbeing (Figure 3A).

Overall, significantly more Rome IV than non-Rome IV respondents experienced quite a lot/a great deal of bother from their OIC symptoms (42% vs 31%; p<0.0001).

Analysis of strong- versus weak-opioid users

For the strong-opioid population, a total of 13,641 respondents from a nationally representative panel entered the survey from Germany, Spain and the UK, with 545 eligible (equating to a response rate of 4.0%). The remaining 665 respondents for the strong-opioid analysis were sourced from a target panel. For the weak-opioid population, 3,856 respondents from a nationally representative panel entered the survey from Germany, Spain and the UK, with 663 included in the final analyses (for a response rate of 17.2%).

Baseline demographics and characteristics of the populations of strong- (n=1210) and weak- (n=663) opioid users aged ≥40 years are shown in Table 1. Compared with the weak-opioid population, more respondents in the strong-opioid population were male (48% vs 37%, respectively) and younger (81% vs 71% aged <60 years, respectively). The majority of strong-opioid users were taking opioids for chronic back pain, while weak-opioid users had a variety of reasons for requiring pain relief. In general, strong-opioid users had started taking opioids more recently than weak-opioid users, with 40% of the latter group receiving their first opioid prescription ≥5 years ago (vs 24% of strong-opioid users).

A comparable degree of bother from constipation symptoms was felt by both weak- and strong-opioid users, with 38% and 40% of respondents, respectively, stating that constipation bothered them quite a lot/a great deal.
deal (between-group comparison, p=0.40). This pattern was reflected in the main psychological symptoms experienced due to constipation (i.e. frustration, dependence, anxiety) (Figure 2B).

The incidence of more-common physical symptoms (i.e. straining to pass stools, abdominal bloating, sensation of bowel blockage/obstruction) was similar in the strong- and weak-opioid groups. However, weak-opioid users experienced significantly fewer less-common physical symptoms of constipation compared with strong-opioid users, including stomach cramps, rectal burning and haemorrhoids (all p<0.02) (Figure 1B). Moreover, the impact of constipation on quality of life/social symptoms was felt significantly less by weak-opioid users compared with users of strong opioids (Figure 3B).

Approaches to the management of OIC and perceptions of treatment in strong-opioid users

Around one-third of respondents found it difficult to combine management of pain relief with constipation symptoms and disliked having to balance between them (32%) (Figure 4A). While 23% of respondents were neither satisfied nor dissatisfied and 46% were very or somewhat satisfied with the effectiveness of their current constipation treatment, nearly one-fifth (18%) were very or somewhat dissatisfied (data missing for 13% of respondents), and only 42% strictly adhered to prescribed treatment regimens, with 30% researching other treatment options (Figure 4A). A significant proportion of respondents (44%) admitted that their constipation becomes so bothersome that they have to combine different methods to relieve it, and 40% often cut down their opioid medication (Figure 4B) or even skip it entirely (9%) to relieve constipation (Figure 5A). This is despite more than half (57%) stating they would prefer not to reduce their opioid medication, if possible (Figure 4B). To manage their constipation, respondents regularly used a variety of approaches, including dietary measures (48%), exercise (23%) and single (32%) or multiple (15%) laxative treatments (Figure 5B).

Counselling and information-seeking behaviour among strong-opioid users

Only 41% of respondents reported that their HCPs had warned them about constipation as a potential side effect of opioid use (Figure 6). Almost two-thirds of respondents (64%) reported that their HCP was the main information source on OIC. Other common sources of information were online search engines (45%), health
forums (28%), blogs (12%) and other online resources (8%), as well as leaflets in their HCP’s workplace (21%),
television (20%) and newspapers/magazines (19%). Respondents also sometimes received advice from their
partners, friends and family members (cited by 16%, 16% and 14% of respondents, respectively). Although
49% of respondents stated that they would have liked their HCP to provide more information about OIC, 48%
prefered to deal with constipation on their own, rather than discuss it with their HCP (Figure 4B).

Discussion and conclusions

Despite its high prevalence among opioid users, OIC remains under-recognised and undertreated, and its
ture impact on patients’ overall wellbeing and quality of life may be underestimated. This survey found that
users of both weak and strong opioids experience a considerable biopsychosocial burden caused by
constipation. Subjectively, weak-opioid users appear to be as bothered by their constipation as strong-opioid
users, despite it causing less-severe physical symptoms and a less-drastic impact on quality of life. This may
reflect strong-opioid users having more serious underlying pain conditions and/or requiring other
concomitant therapies, which may cause debilitating side effects of greater concern than constipation,
compared with weak-opioid users.

To our knowledge, the present analysis is the first time that the Rome IV criteria for OIC have been evaluated
in a real-world setting. Findings showed that compared with strong-opioid users who did not satisfy the
Rome IV criteria, those who did meet Rome IV criteria appeared to experience greater symptomatic and
biopsychosocial burden from their constipation. This suggests that Rome IV criteria can identify patients with
more severe OIC, but may underdiagnose patients with constipation who do not demonstrate the full scale
of symptoms. Further investigation of these preliminary findings is needed.

Overall, 18% of strong-opioid users who participated in this survey are not satisfied with their current
constipation treatment and 32% report that they find it challenging to balance the need for adequate pain
relief with constipation side effects. Consequently, many fail to adhere to their prescribed treatment
regimens, or resort to using suboptimal strategies, such as reducing their opioid intake, to relieve
constipation. Similarly, patients with cancer pain using opioids frequently experience burdensome
constipation. Poor adherence with opioid analgesic regimens has been reported in 49–70% of patients, with some stating that they would rather endure pain than experience the constipation associated with their opioid treatment.

Opioids are prescribed for the management of pain by different types of clinicians across both primary and secondary care, and approaches to counselling and follow-up of patients may be very different. Research shows that patients who understand more about their disease often have improved health outcomes and use fewer healthcare resources. These benefits are even greater when patients are empowered and feel responsible for self-managing their condition. The initial contact with an HCP provides an opportunity for patients to ask questions, while also allowing the HCP to identify the patient’s individual needs in terms of education. This may be influenced by the patient’s perceptions, expectations and concerns, as well as factors affecting adherence with the prescribed treatment. This survey highlighted that patients’ expectations with regard to the provision of information are not being met, with almost half stating that they would have liked their HCP to provide more information about OIC. Advice and information should be tailored appropriately for patients initiating opioids versus those already established on treatment, and should address all biopsychosocial aspects of the burden of OIC.

While most respondents would like more support from their HCP, a substantial proportion prefer to deal with constipation on their own, perhaps due to embarrassment or resignation to the symptoms of OIC. Previous research has found that over one-third of patients do not raise the subject of OIC with their HCP, and one-fifth feel uncomfortable talking about their condition with an HCP, most often due to embarrassment. Therefore, HCPs should proactively raise the topic of OIC rather than wait for patients to initiate discussions, and should be attentive to how patients express the physical, psychological and practical impact of OIC.

A recent observational study showed that drug safety is a major focus of patients who are prescribed new medicines for the long-term treatment of chronic conditions. This is particularly important, given that a substantial proportion of patients cite safety issues as a reason for discontinuing treatment. The present survey found that many HCPs are not counselling patients adequately about constipation as a common
potential side effect of opioid use, highlighting the need for increased education to manage patients’
expectations and enable improved self-management of their condition. The presentation of repeat-opioid
users at pharmacies may provide a valuable opportunity for patient engagement, reinforcing information
provided by the physician, and for counselling patients who are non-adherent with optimal treatment
regimens.  23

Digital technologies are increasingly being used to support patient care in the management of chronic
diseases such as asthma, chronic obstructive pulmonary disorder, diabetes, heart failure and hypertension.
They can provide education to improve self-management, enable monitoring, and facilitate contact with
HCPs (e.g. via telephone support and follow-up).  24 In this survey, patients reported using online search
engines and online health forums as common sources of information, suggesting this group may be an
appropriate target for digital educational interventions.

This survey had several limitations. The information provided by participants was self-reported and was not
verified from medical records or by their HCP. As such, it may have been subject to recall bias. There is also a
possibility that patients unhappy with their OIC treatment may have been more motivated to participate in
the survey than those who were satisfied. Any potential impact of the strong- and weak-opioid users being
recruited via two different surveys is not known. Panel respondents were offered a financial incentive to
participate in the survey; however, given the small monetary amount, it is not expected that this would be
associated with any significant bias.

In conclusion, the increasing use of opioids globally means that a growing number of patients will experience
OIC, driving the need for improved recognition and management of this condition. HCPs should not
underestimate the morbidity associated with OIC, in particular the degree of bother caused by constipation
in users of weak opioids, which is comparable to that of strong-opioid users. Approaches to counselling
should be tailored to the individual patient’s needs and preferences, and should include education on
constipation as a common potential side effect of opioid use and how this can be effectively managed, as
well as addressing the biopsychosocial aspects of the burden of constipation. The recently published Rome IV
diagnostic criteria provide a valuable tool for use in clinical practice. However, findings from this survey
suggest that these criteria may be more effective in diagnosing patients with severe OIC, compared with those showing fewer symptoms.

**Acknowledgements**

This survey was funded by Shionogi. Editorial support in the development of this manuscript was provided by James Reed PhD of Blue Heeler Ltd, and funded by Shionogi in accordance with Good Publication Practice (GPP3) guidelines (http://www.ismpp.org/gpp3).
References


**Figure legends**

Figure 1. Physical symptoms of constipation experienced by patients using opioids, stratified by Rome IV with OIC vs non-Rome IV with constipation (A) and weak- vs strong-opioid use (B) subgroups

*p<0.05 versus non-Rome IV with constipation subgroup; **p<0.02 versus weak-opioid users

OIC, opioid-induced constipation

Figure 2. Emotional and psychological symptoms of constipation experienced by patients using opioids, stratified by Rome IV with OIC vs non-Rome IV with constipation (A) and weak- vs strong-opioid use (B) subgroups

*p<0.05 versus non-Rome IV with constipation subgroup; **p<0.05 versus weak-opioid users

OIC, opioid-induced constipation

Figure 3. Impact of constipation on quality of life and social interactions experienced by patients using opioids, stratified by Rome IV with OIC vs non-Rome IV with constipation (A) and weak- vs strong-opioid use (B) subgroups

*p<0.05 versus non-Rome IV with constipation subgroup; **p<0.05 versus weak-opioid users

OIC, opioid-induced constipation

Figure 4. Respondents’ approaches to the management of constipation and perceptions of treatment (strong-opioid users; N=2016)

HCP, healthcare professional

Figure 5. Analgesia-related (A) and other (B) approaches used regularly by respondents to manage their constipation (strong-opioid users; N=2016)

Figure 6. Counselling provided by HCPs when prescribing an opioid to respondents (strong-opioid users; N=2016)

HCP, healthcare professional
Table

Table 1. Survey respondents’ baseline demographics and characteristics

<table>
<thead>
<tr>
<th>Parameter, n (%)</th>
<th>Overall strong-opioid population (5 countries) (N=2016)</th>
<th>Strong-opioid population (3 countries) (n=1210)</th>
<th>Weak-opioid population (3 countries) (n=663)</th>
<th>Rome IV OIC subgroup (strong-opioid users) (n=951)</th>
<th>Non-Rome IV with constipation subgroup (strong-opioid users) (n=1065)</th>
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<tr>
<td>Age group, years</td>
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<td>391 (32)</td>
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<td>----------------------------------</td>
<td>------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;3 months but &lt;1 year</td>
<td>167 (8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to &lt;3 years</td>
<td>455 (23)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 to &lt;5 years</td>
<td>450 (22)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 to &lt;10 years</td>
<td>480 (24)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥10 years</td>
<td>464 (23)</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current opioid use (multiple responses possible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine</td>
</tr>
<tr>
<td>Fentanyl</td>
</tr>
<tr>
<td>Oxycodone</td>
</tr>
<tr>
<td>Oxycodone + naloxone</td>
</tr>
<tr>
<td>Buprenorphine</td>
</tr>
<tr>
<td>Tapentadol</td>
</tr>
<tr>
<td>Methadone</td>
</tr>
<tr>
<td>Meperidine</td>
</tr>
<tr>
<td>Hydromorphone</td>
</tr>
<tr>
<td>Diamorphine</td>
</tr>
<tr>
<td>Opium + acetaminophen</td>
</tr>
<tr>
<td>Piritramide</td>
</tr>
<tr>
<td>Levomethadone</td>
</tr>
<tr>
<td>Co-codamol</td>
</tr>
<tr>
<td>Tramadol</td>
</tr>
<tr>
<td>Tildine</td>
</tr>
<tr>
<td>Tramadol + acetaminophen</td>
</tr>
<tr>
<td>Dihydrocodeine</td>
</tr>
<tr>
<td>Codeine</td>
</tr>
<tr>
<td>Ketamine</td>
</tr>
<tr>
<td>Current laxative use (multiple responses possible)</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Stimulant laxative</td>
</tr>
<tr>
<td>Osmotic agent</td>
</tr>
<tr>
<td>Saline laxative</td>
</tr>
<tr>
<td>Bulk-forming laxative</td>
</tr>
<tr>
<td>Other (potentially non-laxative)</td>
</tr>
<tr>
<td>Emollient laxative</td>
</tr>
<tr>
<td>Lubricant laxative</td>
</tr>
<tr>
<td>Combination of laxatives</td>
</tr>
<tr>
<td>Guanylate cyclase 2C agonist</td>
</tr>
<tr>
<td>Serotonin agonist</td>
</tr>
<tr>
<td>None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time of first opioid prescription</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>In the last ≤3 months</td>
<td>204 (10)</td>
<td>8 (8)</td>
<td>27 (4)</td>
</tr>
<tr>
<td>&gt;3 months but &lt;1 year</td>
<td>432 (21)</td>
<td>228 (19)</td>
<td>61 (10)</td>
</tr>
<tr>
<td>1 to &lt;3 years</td>
<td>632 (31)</td>
<td>364 (30)</td>
<td>150 (25)</td>
</tr>
<tr>
<td>3 to &lt;5 years</td>
<td>359 (18)</td>
<td>234 (19)</td>
<td>125 (21)</td>
</tr>
<tr>
<td>≥5 years</td>
<td>389 (19)</td>
<td>292 (24)</td>
<td>242 (40)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Constipation prior to opioid use</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Much/slightly better</td>
<td>1158 (57)</td>
<td>654 (54)</td>
<td>348 (58)</td>
</tr>
<tr>
<td>The same</td>
<td>515 (26)</td>
<td>322 (27)</td>
<td>213 (35)</td>
</tr>
<tr>
<td>Much/slightly worse</td>
<td>343 (17)</td>
<td>234 (19)</td>
<td>44 (7)</td>
</tr>
</tbody>
</table>

Total percentages for each parameter may not equal 100 due to rounding.
Figure 1. Physical symptoms of constipation experienced by patients using opioids, stratified by Rome IV with OIC vs non-Rome IV with constipation (A) and weak- vs strong-opioid use (B) subgroups

*p<0.05 versus non-Rome IV with constipation subgroup; **p<0.02 versus weak-opioid users

OIC, opioid-induced constipation

163x312mm (300 x 300 DPI)
Figure 2. Emotional and psychological symptoms of constipation experienced by patients using opioids, stratified by Rome IV with OIC vs non-Rome IV with constipation (A) and weak- vs strong-opioid use (B) subgroups

*p<0.05 versus non-Rome IV with constipation subgroup; **p<0.05 versus weak-opioid users

OIC, opioid-induced constipation

115x156mm (300 x 300 DPI)
Figure 3. Impact of constipation on quality of life and social interactions experienced by patients using opioids, stratified by Rome IV with OIC vs non-Rome IV with constipation (A) and weak- vs strong-opioid use (B) subgroups

*p<0.05 versus non-Rome IV with constipation subgroup; **p<0.05 versus weak-opioid users

OIC, opioid-induced constipation

115x156mm (300 x 300 DPI)
Figure 4. Respondents' approaches to the management of constipation and perceptions of treatment (strong-opioid users; N=2016)

HCP, healthcare professional

112x153mm (300 x 300 DPI)
Figure 5. Analgesia-related (A) and other (B) approaches used regularly by respondents to manage their constipation (strong-opioid users; N=2016)
Figure 6. Counselling provided by HCPs when prescribing an opioid to respondents (strong-opioid users; N=2016)

HCP, healthcare professional

67x63mm (300 x 300 DPI)
Strong-opioid use questionnaire

Country

☐ UK
☐ France
☐ Italy
☐ Germany
☐ Spain

This section includes a number of basic questions about your health and medication. This section will take approximately 5 minutes to complete, but all questions must be filled in in order to progress.

Q1
Do you, or any members of your immediate family, work for any of the following industries?

☐ Advertising
☐ Market research
☐ PR or marketing industry
☐ Healthcare or medical industry
☐ Manufacture or sale of pharmaceutical products
☐ None of these

Q2
How old are you?

☐

Q3
Which, if any, of the following conditions do you suffer from?
Select all that apply

☐ Chronic back pain
☐ Rheumatoid Arthritis
☐ Osteoarthritis
☐ Psoriatic Arthritis
☐ Joint pain
☐ Fibromyalgia
☐ Neuropathic pain relating to diabetes
☐ Neuropathic pain not relating to diabetes
☐ Post herpetic neuralgia
☐ Non herpetic neuralgia
☐ Migraine
☐ Headache
☐ Pain relating to cancer (excluding prostate cancer)
☐ Shoulder pain / stiffness
☐ Neck pain
☐ Hip / pelvic pain
☐ Carpal tunnel syndrome
☐ Dental pain
☐ Tendonitis
☐ Pain from broken bones
☐ Menstrual pain
☐ Plantar fasciitis
☐ Sprains or strains
☐ Other pain condition (please specify) ____________
☐ Prefer not to say
☐ None of these
Q3a
Which of the following types of cancer do you have? Select all that apply

- Anal
- Bladder
- Bone
- Bowel/Colon/Colorectal
- Brain
- Breast
- Cervical
- Esophageal
- Hodgkin Lymphoma
- Kidney (incl renal cell)
- Leukemia
- Liver
- Lung
- Melanoma
- Mouth
- Multiple Myeloma
- Non Hodgkin Lymphoma
- Ocular (eye)
- Ovarian
- Pancreatic
- Penile
- Prostate
- Skin (Non-Melanoma)
- Squamous cell cancer (head or neck)
- Stomach
- Testicular
- Thyroid
- Uterine
- Other type of cancer
- Prefer not to say

Q4
Which of these chronic pain conditions causes you the most severe pain i.e., the one for which you need the strongest pain treatment?

Note that this list might not include all of the conditions that you indicated in the previous questions.

- Chronic back pain
- Rheumatoid Arthritis
- Osteoarthritis
- Joint pain
- Neuropathic pain relating to diabetes
- Post herpetic neuralgia
- Migraine
- Fibromyalgia
- Pain relating to cancer (excluding prostate cancer)
- Shoulder pain/ stiffness
- Neck pain

Q5
When did you first begin to experience ___________________?

- In the last 3 months
- More than 3 months, but less than one year ago
- 1 year or more, but less than 3 years
- 3 years or more, but less than 5 years
- 5 years or more, but less than 10 years
- 10 years or more
Q6a
Given below is a list of opioid drugs that people take for pain relief.

Part 1 - Could you please select the ones that you are currently taking

Part 2 - Could you please select the ones that you have tried before, but are not currently taking

☐ Physeptone ☐ Tephine ☐ Pecfent
☐ Methadone ☐ Reltebon ☐ Transte
☐ Oramorph ☐ Pethidine ☐ Fentanilo
☐ MST continus ☐ Oxylan ☐ Oxynorm
☐ Zomorph ☐ Diamorphine ☐ Effentora
☐ Oxynorm ☐ Fencino ☐ Jurnista
☐ Oxycontin ☐ Transtec ☐ Feliben
☐ Morphine Sulphate ☐ Actiq ☐ Metasedin
☐ Longtec ☐ Palladone ☐ Instanyl
☐ Sevredol ☐ Abstral ☐ Fendivia
☐ Morphgesic ☐ Abstral ☐ Oramorph
☐ Butrans ☐ Paxilas ☐ Oxidodona sandoz
☐ Palexia ☐ Oxynorm ☐ Cloruro morfina
☐ Shortec ☐ Yantil ☐ Zomorph
☐ Temgesic ☐ Durogesic ☐ Breakyl
☐ Lynlor ☐ Oxcontin ☐ Matrifien
☐ Targinact ☐ Abstral ☐ Fentanilo
☐ Matrifien ☐ Actiq ☐ Morfina clorhide
☐ Durogesic Dtrans ☐ Sevredol ☐ Dolantina

☐ I am not currently taking, and nor have I ever tried, any of these drugs

Q6b
Which if these drugs do you rely on the most for pain relief (i.e. select the one you use most routinely to help manage your pain)? Select one drug from the list

In the rest of the survey, when we mention opioid drugs we would like you to think of only the ones on this list and not any others.

Q7
Now I would like to ask you a few questions about your digestive health e.g., pain or discomfort related to your stomach or bowels. Let us start with your bowel movements.

Over the past ONE week, on how many days did you have bowel movements?

☐ Every day ☐ 1 day over the past 7 days
☐ Almost every day (5-6 days) ☐ I did not move my bowels at all over the past 7 days
☐ Every other day (3-4 days)
☐ 2 days over the past 7 days
Q8
To what extent is moving your bowels bothersome for you e.g. because you cannot use the toilet as often as you would like, or because you experience pain, discomfort, or difficulties with daily activities?

☐ Not at all
☐ A little
☐ A moderate amount
☐ Quite a lot
☐ A great deal

Q9a
Given below is a list of treatments that people typically take to help with their bowel movements.

Could you please select the ones that you are currently taking

☐ I do not take any treatments to help with my bowel movements
☐ Bisacodyl
☐ Capsuvac
☐ Celevac
☐ Co-Danthramer
☐ Co-Danthrusate
☐ Constella
☐ Dioctyl
☐ Docusol
☐ Duclcolax Perles
☐ Dulcolax
☐ Dulphalan
☐ Galulose
☐ Lactuflave
☐ Lactugal
☐ Lactulose
☐ Laevolac
☐ Lecicarbon A
☐ Lecicarbon C
☐ Manevac
☐ Micolette
☐ Movicol
☐ Movicol-half
☐ Norgalax
☐ Norgalax Micro-enema
☐ Phospho-Soda
☐ Regulose
☐ Resolor
☐ Senna
☐ Senokot
☐ Sodium Picosulfate
☐ Strong Co-Danthramer
☐ Adulax
☐ Belmalax
☐ Constella
☐ Dulcolax
☐ Dulcolax
☐ EvacuolEnema Casen
☐ Fave de fucaEvacuol
☐ GutaralxFave de fuca
☐ LactulosaGutaralx

Q9b
Which of these treatments do you rely on the most to help with your bowel movements (i.e. select the one you use most routinely to help with bowel movements)? Select one drug from the list

Q10
How dissatisfied or satisfied are you with ___________________ in terms of how much it helps you to improve your bowel movements (e.g., increasing regularity, relieving pain or discomfort) ?

☐ Very dissatisfied
☐ Somewhat dissatisfied
☐ Neither dissatisfied or satisfied
☐ Somewhat satisfied
☐ Very satisfied
Q11

How dissatisfied or satisfied are you with ___________________ in terms of how convenient it is to use (e.g. it was easy to prepare, it had no inconvenient side effects)?

- Very dissatisfied
- Somewhat dissatisfied
- Neither dissatisfied or satisfied
- Somewhat satisfied
- Very satisfied

Thank you very much for taking the time to look at this short survey about chronic pain and your health in general. The aim of the study is to learn about your health, and not to advertise or promote any particular treatments or services. The survey is being conducted by Insight Dojo, an independent research company based in the UK, and is being sponsored by a pharmaceutical company. Because the questions relate to your health, some of them are of a sensitive nature. The research is entirely confidential, meaning that no individual data will be passed on to the pharmaceutical company that is sponsoring the study. The company will see only the combined results across all respondents (or large groups of respondents).

By entering the survey, you consent to the collection of your data for research purposes. All data will be processed in adherence to the Market Research Society's Code of Conduct and the Data Protection Act 1998.

Now we will ask you further details about your chronic pain, opioid drugs and digestive health. Often, we will use the term constipation to describe difficulties in bowel movements such as irregular movements, discomfort or pain.

Q12a

The table below lists the different preparations (e.g. tablets, oral liquids, injections) that are available for the opioid drugs that you are currently taking. Please indicate which preparation of the drug(s) you currently take.

- Diamorphine INJECTION
- Diamorphine TABLETS/ CAPSULES
- Diamorphine POWDER
- Morphine sulphate ORAL LIQUID
- Morphine sulphate INJECTION
- MST continus TABLETS/ CAPSULES
- MST continus POWDER
- Oxycodone TABLETS/ CAPSULES
- Oxycodone ORAL LIQUID
- Oxynorm TABLETS/ CAPSULES
- Oxynorm ORAL LIQUID
- Oxynorm INJECTION
- Palexia TABLETS/ CAPSULES Palexia SR prolonged-release tablets
- Palexia TABLETS/ CAPSULES Not prolonged release
- Palladone TABLETS/ CAPSULES Palladone SR prolonged-release capsules
- Palladone TABLETS/ CAPSULES Capsules
- Physeptone ORAL LIQUID
- Physeptone INJECTION
- Physeptone TABLETS/ CAPSULES
- Oxynorm COMPRIMIDOS/CÁPSULAS
- Oxynorm LÍQUIDO ORAL
Q12b

The table below lists the different strengths that are available for your current opioid drugs. Please think about the most recent day when you had opioid drugs to relieve pain. Which of these drugs did you have? How many of each of the listed items did you take that day?

- Abstral TABLETS/ CAPSULES Sublingual tablets 100 micrograms
- Abstral TABLETS/ CAPSULES Sublingual tablets 200 micrograms
- Abstral TABLETS/ CAPSULES Sublingual tablets 300 micrograms
- Abstral TABLETS/ CAPSULES Sublingual tablets 400 micrograms
- Abstral TABLETS/ CAPSULES Sublingual tablets 600 micrograms
- Abstral TABLETS/ CAPSULES Sublingual tablets 800 micrograms
- Actiq OTHER Lozenges 200 micrograms
- Actiq OTHER Lozenges 400 micrograms
- Actiq OTHER Lozenges 600 micrograms
- Actiq OTHER Lozenges 800 micrograms
- Actiq OTHER Lozenges 1200 micrograms
- Actiq OTHER Lozenges 1600 micrograms
- Butrans TRANSDERMAL (SKIN) PATCH 5 micrograms/hour
- Butrans TRANSDERMAL (SKIN) PATCH 10 micrograms/hour
- Butrans TRANSDERMAL (SKIN) PATCH 15 micrograms/hour
- Butrans TRANSDERMAL (SKIN) PATCH 20 micrograms/hour
Note: if you currently take an oral liquid, or use a nasal spray, we will ask about these separately.

Q12c

Roughly how many sprays did you take on that day for each of the nasal sprays you took?

Pecfent OTRO FORMATO Aerosol nasal 100 microgramos/ dose
Pecfent OTRO FORMATO Aerosol nasal 400 microgramos/ dose
Instanyl OTRO FORMATO Aerosol nasal 50 microgramos/dose
Instanyl OTRO FORMATO Aerosol nasal 100 microgramos/dose
Instanyl OTRO FORMATO Aerosol nasal 200 microgramos/dose
Instanyl AUTRE Spray nasal 50 microgrammes/dose
Instanyl AUTRE Spray nasal 100 microgrammes/dose
Instanyl AUTRE Spray nasal 200 microgrammes/dose
Pecfent AUTRE Spray nasal 100microgrammes/ dose
Pecfent AUTRE Spray nasal 400microgrammes/ dose
Pecfent ALTRO Spray nasale 100 microgrammi/ dose
Pecfent ALTRO Spray nasale 400 microgrammi/ dose
Instanyl ALTRO Spray nasale 50 microgrammi/dose
Instanyl ALTRO Spray nasale 100 microgrammi/dose
Instanyl ALTRO Spray nasale 200 microgrammi/dose
Instanyl NASAL SPRAY 50 Mikrogramms/dose
Instanyl NASAL SPRAY 100 Mikrogramms/dose
Instanyl NASAL SPRAY 200 Mikrogramms/dose
Pecfent NASAL SPRAY 100 Mikrogramm/ dose
Pecfent NASAL SPRAY 400 Mikrogramm/ dose
Q12d

Roughly how many millilitres did you take on that day for each of the oral liquids you took?

Please write your answer in millilitres (ml)

Methadone ORAL LIQUID 1mg/1ml
Methadone ORAL LIQUID 10mg/1ml
Methadone ORAL LIQUID 20mg/1ml
Morphine sulphate ORAL LIQUID 10mg/5ml
Morphine sulphate ORAL LIQUID 20mg/ml
Oramorph ORAL LIQUID 10mg/5ml
Oramorph ORAL LIQUID 20mg/1ml
Oxycodone ORAL LIQUID 10mg/ml
Oxycodone ORAL LIQUID 5mg/5ml
Oxynorm ORAL LIQUID 10mg/ml
Oxynorm ORAL LIQUID 5mg/5ml
Physeptone ORAL LIQUID 1mg/1ml
Oxynorm LIQUIDO ORAL Botella de líquido 10mg/ml
Oxynorm LIQUIDO ORAL Botella de líquido 5mg/5ml
Oramorph LIQUIDO ORAL Botella de líquido 2mg/ml
Oramorph LIQUIDO ORAL Botella de líquido 6mg/ml
Oramorph LIQUIDO ORAL Botella de líquido 20mg/ml
Methadone AP HP LIQUIDE ORAL Pré-mesurée flacon, ampoule ou un pot de liquide 5mg/3.75ml
Methadone AP HP LIQUIDE ORAL Pré-mesurée flacon, ampoule ou un pot de liquide 1.33mg/ml
Oramorph LIQUIDE ORAL drops oral 20mg/1ml

Q12e

So, your total dose of each drug was ________________

☐ Yes, the doses are correct (continue to the next question)
☐ No, one or more of the doses are incorrect (re-enter the correct amount)

Q12f

You indicated that the dose for one or more of your medications was incorrect. Please enter the correct dose, together with the unit of measurement (milligrams, micrograms, millilitres), if you know it, in the box next to the relevant drug.

Note, if all of the doses are, in fact, correct, select ‘Next’

Q13

Now, I would like you to think back to when you were first prescribed opioid drugs. When I say opioid drugs, I mean the drugs we have shown you before.

Click here for a reminder.

Roughly, how long ago were you first prescribed opioid drugs?

Please choose one option only

☐ In the last 3 months
☐ More than 3 months, but less than one year ago
☐ 1 year or more, but less than 3 years
☐ 3 years or more, but less than 5 years
☐ 5 years or more, but less than 10 years
☐ 10 years or more
Q14a
Thinking back to the time before you started taking opioid medications:

How was your experience of constipation then?

Please choose one option only

- It was much better
- It was slightly better
- It was the same
- It was slightly worse
- It was much worse

Q14b
Could you roughly tell us how many days in a week did you have bowel movements before you started taking opioid medications?

- Every day
- Almost every day (5-6 days)
- Every other day (3-4 days)
- 2 days per week
- 1 day per week or less

Q15
Thinking about the first time you were prescribed an opioid drug, which of the following medical professionals first prescribed an opioid drug to you?

Please choose one option only

- GP
- Anaesthetist
- Neurologist
- Rheumatologist
- Psychiatrist
- Orthopaedist
- Oncologist
- Nurse specialist
- Pain specialist doctor
- Pharmacist
- Internist
- Other

Q16
Now I would like you to think back to the conversation that you had with the doctor. Which, if any, of the following did your doctor (or other medical professional) do when prescribing the opioid drug to you for the first time?

Select all that apply

- Warned me about drowsiness as a potential side effect of the opioid drug
- Warned me about nausea and/or vomiting as a potential side effect of the opioid drug
- Warned me about constipation as a potential side effect of the opioid drug
- Suggested that I change my diet or lifestyle (e.g. by eating more fibre or exercising more often) to avoid constipation
- Prescribed me a laxative drug to avoid constipation
- Did none of these
- I don’t remember
Q17
Which of the following medical professionals is primarily responsible for repeat prescription of your opioid medications?

Please select one option only

- GP
- Anaesthetist
- Neurologist
- Rheumatologist
- Psychiatrist
- Orthopaedist
- Oncologist
- Nurse specialist
- Pain specialist doctor
- Pharmacist
- Internist
- Other

Q18
Whom do you look to for help with managing constipation?

Select all that apply

- GP
- Anaesthetist
- Neurologist
- Rheumatologist
- Psychiatrist
- Orthopaedist
- Oncologist
- Nurse specialist
- Pain specialist doctor
- Pharmacists
- Internist
- Members of my family
- My friends
- Other constipation sufferers
- I do not look for help, I manage constipation myself
- Other

Q19a
Thinking about your opioid drug usage over the years:

How has your opioid drug usage changed, if at all?

- It has increased a lot
- It has increased slightly
- It has been the same
- It has decreased slightly
- It has decreased a lot

Q19b
Thinking back to the last time when there was an increase in your total dosage of opioid drugs, what was the effect on your constipation?

- My constipation became much better
- My constipation became slightly better
- My constipation remained the same
- My constipation became slightly worse
- My constipation became much worse

Q20
Thinking about the future, how do you expect your opioid drug usage to change?

- I expect it to increase a lot
- I expect it to increase slightly
- I expect it to be the same as now
- I expect it to decrease slightly
- I expect it to decrease a lot
Q21a
Thinking about your opioid drug usage over the years:
Has there been a change in the specific opioid drug you were taking?

- Yes
- No

Q21b
The last time there was a change in the specific opioid drug(s) that you were taking, what was the effect on constipation?

- My constipation became much better
- My constipation became slightly better
- My constipation remained the same
- My constipation became slightly worse
- My constipation became much worse

This section asks about your experience of constipation, and measures that you have taken to help with this.

Q22
How much do you disagree or agree that the following caused you discomfort over the past TWO weeks?

<table>
<thead>
<tr>
<th>Item</th>
<th>Disagree strongly</th>
<th>Disagree quite a lot</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree quite a lot</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incomplete bowel movement, like you didn’t “empty” yourself</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Passing of stools that were too hard or lumpy</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Straining to try to pass stools</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Sensation of a blockage or obstruction in your bowel movements</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Bloating in your abdomen</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Stomach cramps</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>Rectal burning (during or after a bowel movement)</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>Hemorrhoids (also known as ‘piles’)</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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</tr>
<tr>
<td>Other (non-hemorrhoidal) rectal bleeding</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Nausea</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Vomiting</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Q23
Over the past TWO weeks, to what extent did your constipation symptoms cause you to feel each of the following:

<table>
<thead>
<tr>
<th></th>
<th>1 Not at all</th>
<th>2</th>
<th>3</th>
<th>4 A moderate amount</th>
<th>5</th>
<th>6</th>
<th>7 A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disgusted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frustrated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helpless</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Depressed</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Dependant and “not free”</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Obsessed i.e. not being able to get it out of your mind</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Anxious or worried</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q24

<table>
<thead>
<tr>
<th></th>
<th>1 Not at all</th>
<th>2</th>
<th>3</th>
<th>4 A moderate amount</th>
<th>5</th>
<th>6</th>
<th>7 A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spend excessive time in the bathroom</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have difficulty socialising</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have difficulty working (including both paid work and household chores)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have difficulty pursuing hobbies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have difficulty being intimate with others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have difficulty following your normal routine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have difficulty taking your opioid drugs as normal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q25a

Given below are a number of approaches that people use to relieve constipation.

Which of these approaches do you use on a regular basis, if any? There are no right or wrong answers.

- Used a single laxative treatment on its own
- Combined multiple laxative treatments
- Rotated among different opioid drug treatments
- Decreased the dose or frequency of your opioid drug treatment(s)
- Skipped a dose of your opioid drug treatment(s)
- Skipped several doses of your opioid drug treatment(s)
- Used an alternative (non opioid) painkiller
- Used manual methods (e.g. using your fingers) to support evacuation
- Drank more water, juice, or other fluids
- Eaten less, or been careful about what you ate
- Obtained additional fibre through your diet (e.g. by eating more fruit, vegetables, or cereal)
- Taken a fibre supplement product (e.g. Fybogel, or a psyllium or methylcellulose product)
- Exercised more often
- Had colonic hydrotherapy (also known as ‘irrigation’)
- Used a suppository or enema (a solid or liquid preparation inserted into the rectum)
- Used relaxation techniques (e.g. deep breathing, meditation)
- An approach I devised myself to deal with constipation
**Q25b**

Now think back to the last time you experienced severe constipation. Which of the following approaches did you use to manage your constipation then?

- Used a single laxative treatment on its own
- Combined multiple laxative treatments
- Rotated among different opioid drug treatments
- Decreased the dose or frequency of your opioid drug treatment(s)
- Skipped a dose of your opioid drug treatment(s)
- Skipped several doses of your opioid drug treatment(s)
- Used an alternative (non opioid) painkiller
- Used manual methods (e.g. using your fingers) to support evacuation
- Drank more water, juice, or other fluids
- Eaten less, or been careful about what you ate
- Obtained additional fibre through your diet (e.g. by eating more fruit, vegetables, or cereal)?
- Taken a fibre supplement product (e.g. Fybogel, or a psyllium or methylcellulose product)
- Exercised more often
- Had colonic hydrotherapy (also known as 'irrigation')
- Used a suppository or enema (a solid or liquid preparation inserted into the rectum)
- Used relaxation techniques (e.g. deep breathing, meditation)
- An approach I devised myself to deal with constipation

This section asks for further information about the constipation treatments (laxative drugs) that you currently use most often.

**Q26**

To what extent do you disagree or agree with the following statements regarding the laxative drug

<table>
<thead>
<tr>
<th></th>
<th>Disagree strongly</th>
<th>Disagree quite a lot</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree quite a lot</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking everything into consideration, I am very satisfied with the laxative drug</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>It allows me to move my bowels more easily</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>It relieves any pain I experience in moving my bowels</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>It has no inconvenient or problematic side effects</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>It is easy to prepare and administer</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>It is discreet and easy to carry around</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>It works rapidly to control my constipation</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
</tbody>
</table>
This section asks about your attitudes on a variety of issues relating to opioid drugs, constipation, and your health in general.

Q27a

Given below are a number of statements related to your attitudes and beliefs about pain and opioids. There are no right or wrong answers. We are interested only in your opinions.

To what extent do you disagree or agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree strongly</th>
<th>Disagree quite a lot</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree quite a lot</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel really overwhelmed by my pain</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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</tr>
<tr>
<td>I am the type of person who likes to get on with my life despite my pain</td>
<td>[ ]</td>
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<td>[ ]</td>
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</tr>
<tr>
<td>I would rather suffer a little from pain rather than take pain medications</td>
<td>[ ]</td>
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<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>My opioid drugs have allowed me to live a fuller life</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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</tr>
<tr>
<td>I find it difficult to cope without my opioid drugs</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I don’t like my opioid drugs and have them only if it is absolutely necessary</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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</tr>
<tr>
<td>I believe my health will improve and I will be able to discontinue my opioid drugs in the future</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I often feel guilty when I take opioid drugs</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I think doctors must be more careful than they are while prescribing opioid drugs</td>
<td>[ ]</td>
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<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>I feel that pharmaceutical companies that manufacture</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>Statement</td>
<td>Disagree strongly</td>
<td>Disagree quite a lot</td>
<td>Disagree a little</td>
<td>Neither agree nor disagree</td>
<td>Agree a little</td>
<td>Agree quite a lot</td>
<td>Agree strongly</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-------------------</td>
<td>----------------------</td>
<td>------------------</td>
<td>---------------------------</td>
<td>---------------</td>
<td>------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Opioid drugs are really improving the lives of patients</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>My experience of pain has helped me realise what is truly important</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Because of my pain I no longer take people or things for granted</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>My experience of pain has helped me appreciate the value of living everyday to the full</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>My experience of pain has made me question who I am as a person</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I wish I could keep using my opioid pain medication without having the constipation side effects</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>While opioid drugs relieve pain, the side effects make it difficult to do daily activities</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I hate having to balance getting pain relief with constipation side effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am unable to control my pain properly because of the constipation side effects</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I have a group of supportive people who make it easier to cope with pain</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>People suffering from pain and other health conditions frequently reach out to me for support</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Q28

Given below are a number of statements related to your attitudes and beliefs about constipation, stomach health, and its impact on your life. There are no right or wrong answers. We are interested only in your opinions.

To what extent do you disagree or agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree strongly</th>
<th>Disagree quite a lot</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree quite a lot</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel upset if I cannot move my bowels every day</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>My constipation is awful and overwhelms me</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>At the back of my mind, I’m always thinking of constipation</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>After pain, constipation is one of my most bothersome problems</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I often cut down my opioid medication to relieve my constipation</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I would prefer not to reduce my opioid medication to relieve my constipation</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I often worry that my bowels will lose their ability to function normally</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Constipation prevents me from doing things that I really want</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I take extreme measures to get relief from constipation that might not be good for me in other ways</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Often constipation gets so bad, that I have to combine many different treatments</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>It bothers me that I spend so much time in the bathroom because of my constipation</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Often I am afraid that I will fall in the bathroom and injure myself</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Q29a

Given below are a number of statements related to your attitudes and beliefs about treatments that you use for constipation. There are no right or wrong answers. We are interested only in your opinions.

To what extent do you disagree or agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree strongly</th>
<th>Disagree quite a lot</th>
<th>Disagree quite a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree quite a lot</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would much prefer to take natural (non pharmaceutical) treatments for my constipation</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>I would much prefer to change my diet, or some other aspect of my lifestyle, rather than taking pharmaceutical treatments for constipation</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>I would much rather take a constipation treatment as and when the need arises rather than take it continuously</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>I would much prefer a constipation treatment that I could use continuously, over the long term, as opposed to one that could only be taken when required</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>For me, it is very important that a constipation treatment works fast</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>For me, it is very important that a constipation treatment works predictably and not at random</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>For me, it is very important that a constipation treatment can be taken at any time of the day</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>For me, it is very important that I can take my constipation treatment with or without food</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>For me, it is very important that my constipation treatment does not affect the pain relief that I get from my opioid drugs</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>For me, it is very important that my constipation treatment does not affect the way that I take my opioid drugs (e.g. the timing, the dosage of my opioids)</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>For me, it is very important that a constipation treatment has no bad side effects</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
<tr>
<td>If I were to try a new treatment</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
<td>☐ ☐ ☐ ☐</td>
</tr>
</tbody>
</table>
For Peer Review

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree strongly</th>
<th>Disagree quite a lot</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree quite a lot</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>For constipation, I would rather not have to immediately give up using laxative drugs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having to prepare laxatives is not inconvenient for me</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td></td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
</tr>
<tr>
<td>I would much prefer to take an oral pill rather than a liquid treatment to help manage my constipation</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I am constantly on the look out for new treatments for constipation</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Q30**

Given below are a number of statements related to your attitudes and beliefs about the way you manage your health. There are no right or wrong answers. We are interested only in your opinions. To what extent do you disagree or agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Disagree strongly</th>
<th>Disagree quite a lot</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree quite a lot</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>I consider myself more knowledgeable than most about my health conditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do my own research regarding my health condition(s) and treatments</td>
<td></td>
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<td></td>
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<tr>
<td>I strictly follow the regimens that my doctor(s) prescribe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I think it is very important to adapt one’s medication regime oneself rather than follow the doctor’s instruction</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>I would have appreciated additional help from my doctor or medical professional regarding constipation</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I like to deal with constipation on my own rather than speak to the doctor about it</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I wish my doctor would spend more time speaking to me about my constipation problems</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>I would rather not discuss my constipation with my doctors</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
This section asks about your personal characteristics and circumstances, and your health.

Q34
Are you male or female?

☐ Male
☐ Female

Q35
Please indicate your employment status:

☐ Working full-time
☐ Working part-time
☐ Self-employed
☐ Unemployed
☐ Student or in full-time training
☐ Retired
☐ Semi retired

Q36
To what extent does your work require extensive physical activity (e.g. extensive walking, travelling)?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td></td>
<td></td>
<td></td>
<td>A moderate amount</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q36b
How long, on average, does your regular commute to work take?

☐ Less than 15 minutes
☐ 15 minutes but less than 30 minutes
☐ 30 minutes or more but less than one hour
☐ One hour or more but less than 90 minutes
☐ 90 minutes or more but less than two hours
☐ Two hours or more

Q37
What is your total household income (£)? Your household income includes the total income of all of the people who you live with.

☐ 0-9,999
☐ 10,000-24,999
☐ 25,000-39,999
☐ 40,000-54,999
☐ 55,000-69,999
☐ 70,000-84,999
☐ 85,000-99,999
☐ 100,000 or more
☐ Prefer not to say

Q38
Which of the following best represents your relationship status?

☐ Single (i.e. not currently in a relationship rather than legal status)
☐ Separated
☐ In a relationship
☐ Divorced
☐ Civil Partnership
☐ Widowed
☐ Married
☐ Prefer not to say

Q39
Do you have any children?

☐ Yes
☐ No
Q40
Are your children still at home or independent?

- Under 18 and still at home
- Adult children still at home
- Mix of independent and still at home
- Independent

Q41
In a typical week, how many hours per day do you spend reading/listening/watching the following...?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not at all</th>
<th>Less than an hour</th>
<th>1-2 hours</th>
<th>3-5 hours</th>
<th>6-10 hours</th>
<th>More than 10 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Magazines</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Newspapers</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q41a
At what time of day do you typically watch TV?

Select all that apply
- Morning
- Afternoon
- Evening/night

Q41b
How do you typically watch TV?

Select all that apply
- Live (as it happens)
- Catch-up (via a set top Box)
- Online via TV channel website

Q41c
What technology do you typically use to watch TV?

Select all that apply
- A regular TV set
- A laptop computer
- An ipad or tablet
- A desktop computer
- A smartphone
Q41d

Which of the following newspapers do you read on a regular basis (e.g. at least once per week)?

Select all that apply.

☐ The Guardian  ☐ The Daily Express
☐ The Times  ☐ The Sun
☐ The Daily Telegraph  ☐ The Daily Mirror
☐ The Financial Times  ☐ The Daily Star
☐ The i (concise newspaper)  ☐ The Daily Record
☐ Metro  ☐ Evening Standard
☐ The Daily Mail  ☐ Other (please specify)____________

Q42

Which of the following social networking platforms and sites do you use on a regular basis?

Select all that apply

☐ Facebook  ☐ Instagram
☐ Copains d’Avant  ☐ WhatsApp
☐ Tuenti  ☐ Google+
☐ LinkedIn  ☐ Snapchat
☐ Viadeo  ☐ Other (please specify)____________
☐ XING  ☐ None of these
☐ Twitter

Q43

Where do you get information and advice regarding health issues/concerns?

Select all that apply

☐ Healthcare professionals (including doctors and nurses)
☐ Your partner
☐ Other family member(s)
☐ My friend(s)
☐ Leaflets in my doctor’s surgery
☐ Television
☐ Library / books / literature
☐ Radio
☐ Online search engines like Google
☐ Online health forums
☐ Newspaper/ Magazines
☐ Online blogs
☐ Other online sources
☐ None of the these

Q44

Please indicate which, if any, of the following conditions you have?

Select as many as apply

☐ Diabetes  ☐ Heart Disease
☐ Diverticulosis  ☐ Osteoporosis
☐ Thyroid disturbance  ☐ Arthritis/ Rheumatism
☐ Stroke  ☐ Respiratory diseases (e.g. asthma, COPD, emphysema, chronic bronchitis)
☐ Multiple Sclerosis  ☐ Cancer
☐ Spinal injury  ☐ None of the above
☐ Anxiety  ☐ Prefer not to say
☐ Depression
Q45
Do you have a full-time carer?
☐ Yes ☐ No

Q46
To what extent does your carer help you to manage your constipation?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td></td>
<td></td>
<td>A moderate amount</td>
<td></td>
<td></td>
<td>A great deal</td>
</tr>
</tbody>
</table>

Q47
To what extent do you see yourself as:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraverted, enthusiastic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical, quarrelsome</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dependable, self-disciplined</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxious, easily upset</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open to new experiences, complex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reserved, quiet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sympathetic, warm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disorganized, careless</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calm, emotionally stable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conventional, uncreative</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q48
Which of the following options best describes the effect of your chronic pain on your daily life?

Select one option only.

☐ I am fully active just like I was before the onset of chronic pain
☐ I’m restricted in physically strenuous activity but can walk around, and able to carry out work of a light or sedentary nature, e.g., light house work, office work
☐ I can walk around, and am capable of taking care of myself. I am unable to carry out any work activities, and be up and about more than 50% of waking hours
☐ I am completely disabled. I cannot look after myself and I am confined to a bed or chair all of the time.

Q49
Which of the following activities do you do to help distract you from your pain, or to cope better with it?

Select all that apply.

☐ Watching TV programmes
☐ Meeting friends and family socially
☐ Connecting with friends on social networks (e.g., Whatsapp, Facebook)
☐ Connecting with other people who are suffering from similar health conditions either in person or through social networks
☐ Practising an art (e.g., drawing, photography, singing, playing and instrument)
☐ Playing a sport (football, tennis, etc.)
☐ Playing an indoor game
☐ Watching movies
☐ Watching sports events
☐ Do research and learn new things (e.g., learn a new language, take an online course)
☐ Doing cardiovascular exercises (running, aerobics, etc.)
☐ Doing mind-body exercises (e.g., Yoga, Tai-Chi, Alexander Technique)
☐ Physiotherapy
☐ Going for walks
☐ Spending time with nature
☐ Going to watch music events
☐ Going to the museum
☐ Doing shopping
☐ Writing about my experience (e.g., writing a blog or a diary)
☐ Meeting a counsellor, a mentor or a coach
☐ None of these
Weak-opioid use questionnaire

Are you …

1. Male
2. Female

How old are you?

Age

1. 16 – 24
2. 25 – 34
3. 35 – 44
4. 45 – 54
5. 55 – 64
6. 65+

In which region do you live?

IF Country=1 (UK)

1. North East
2. North West
3. Yorkshire & the Humberside
4. East Midlands
5. West Midlands
6. East of England
7. London – inside M25
8. South East
9. South West
10. Wales
11. Scotland
12. Northern Ireland
13. Channel Islands

IF Country=5 (GERMANY)

1. Baden-Württemberg
2. Bayern
3. Berlin
4. Brandenburg
5. Bremen
6. Hamburg
7. Hessen
8. Mecklenburg-Vorpommern
9. Niedersachsen
10. Nordrhein-Westfalen
11. Rheinland-Pfalz
12. Saarland
13. Sachsen
14. Sachsen-Anhalt
15. Schleswig-Holstein
16. Thüringen

IF Country=6 (SPAIN)

1. Navarra
2. Aragón
3. Cataluña
4. Baleares, Islas
5. Com. Valenciana
6. Reg.Murcia
7. Andalucía
8. Canarias, Islas
9. Melilla
10. Extemadura
11. Ceuta
12. Com. Madrid
13. Cantabria
14. Asturias
15. Rioja, La
16. Euskadi
17. Galicia
18. Castilla La Mancha
19. Castilla y León

Q1

Do you, or any members of your immediate family, work for any of the following industries?

1= Advertising
2 = Market research
3= PR or marketing industry
4= Healthcare or medical industry
5= Manufacture or sale of pharmaceutical products
99= None of these
For the next question we’d like to understand a bit about your general health.

Q3a
Which, if any, of these do you ever suffer from?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Any type of pain (please consider all pains from something mild, like a headache, to something more chronic, such as pain caused by arthritis or cancer)</td>
</tr>
<tr>
<td>2</td>
<td>Insomnia</td>
</tr>
<tr>
<td>3</td>
<td>Problems with your sight</td>
</tr>
<tr>
<td>4</td>
<td>Vertigo/dizziness</td>
</tr>
<tr>
<td>5</td>
<td>Problems with your digestive system, such as IBS</td>
</tr>
<tr>
<td>99</td>
<td>None of these</td>
</tr>
</tbody>
</table>

Q3
Which, if any, of the following chronic pain conditions do you suffer from?

1=Chronic back pain
2=Rheumatoid Arthritis
3=Osteoarthritis
4=Psoriatic Arthritis
5=Joint pain
6=Fibromyalgia
7=Neuropathic pain relating to diabetes
8=Neuropathic pain not relating to diabetes
9=Post herpetic neuralgia
10=Non Herpetic neuralgia
11=Migraine
12=Headache
13=Pain relating to cancer
14=Shoulder pain/ stiffness
15=Neck pain
16=Hip/ pelvic pain
17=Carpal tunnel syndrome
18=Dental pain
19=Tendonitis
20=Broken bones
21=Menstrual pain
22=Plantar fasciitis
23=Sprains or strains
98=Other pain condition
96=Prefer not to say
99=None of these

Q4
Which of these pain conditions cause you the most severe pain i.e., the one for which you need the strongest pain treatment?

Q5
When did you first begin to experience chronic pain relating to _________?

1=In the last 3 months
2=More than 3 months, but less than one year ago
3=1 year or more, but less than 3 years
4=3 years or more, but less than 5 years
5=5 years or more, but less than 10 years
6=10 years or more

Thanks for your response so far. We would now like to understand a bit more about the pain that you experience and the treatments that you use.

Given below is a list of opioid drugs that people take for pain relief.

Could you please select the ones that you are currently taking

Q6a2
Could you please select the ones that you have tried before, but are not currently taking
Q6b
Which of these drugs do you rely on the most for pain relief (i.e. select the one you use most routinely to help manage your pain)? Select one drug from the list

You mentioned above that you are currently taking _________ for pain relief. Drugs like these are part of the opioid family - that is, they are medications derived from opium that help relieve pain. For the rest of the study when we refer to ‘opiods’ we would like you to think only about these specific types of medication (ie drugs like _________), rather than other treatments you might take.

Q7a
Taking opioids drugs can have various side-effects. Which of the following, if at all, have you ever suffered from?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nausea</td>
</tr>
<tr>
<td>2</td>
<td>Dizziness</td>
</tr>
<tr>
<td>3</td>
<td>Vomiting</td>
</tr>
<tr>
<td>4</td>
<td>Constipation (infrequent bowel movements causing pain/discomfort in your bowels)</td>
</tr>
<tr>
<td>5</td>
<td>Sedation</td>
</tr>
<tr>
<td>6</td>
<td>Physical dependence</td>
</tr>
<tr>
<td>7</td>
<td>Tolerance</td>
</tr>
<tr>
<td>8</td>
<td>Respiratory depression</td>
</tr>
<tr>
<td>99</td>
<td>None of these</td>
</tr>
</tbody>
</table>

Q7
Now I would like to ask you a few questions about your digestive health e.g., pain or discomfort related to your stomach or bowels. Let us start with your bowel movements.

Over the past ONE week, on how many days did you have bowel movements?

1=Every day
2=Almost every day (5-6 days)
3=Every other day (3-4 days)
4=2 days over the past 7 days
5=1 day over the past 7 days
6= I did not move my bowels at all over the past 7 days

Q8
To what extent is moving your bowels bothersome for you e.g. because you cannot use the toilet as often as you would like, or because you experience pain, discomfort, or difficulties with daily activities?

1=Not at all
2=A little
3=A moderate amount
4=Quite a lot
5=A great deal

Q8b
Which of these have you ever done to help with infrequent/painful/difficult bowel movements?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Taken laxatives</td>
</tr>
<tr>
<td>2</td>
<td>Made changes to your diet (eg introducing more fibre)</td>
</tr>
<tr>
<td>3</td>
<td>Increased the amount of caffeine you drink</td>
</tr>
<tr>
<td>4</td>
<td>Made other changes to your lifestyle, such as increasing the amount of exercise you do</td>
</tr>
<tr>
<td>5</td>
<td>Used a suppository or enema (a solid or liquid preparation inserted into the rectum)</td>
</tr>
<tr>
<td>98</td>
<td>Other (specify)</td>
</tr>
<tr>
<td>99</td>
<td>None of the above (either have not experienced an issue with bowel movement or haven’t taken any of the above courses of action)</td>
</tr>
</tbody>
</table>
Q9c
Are you currently taking laxatives?

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</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>No</td>
</tr>
</tbody>
</table>

Q10
How dissatisfied or satisfied are you with the laxatives you are currently taking in terms of how much it helps you to improve your bowel movements (e.g., increasing regularity, relieving pain or discomfort)?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very dissatisfied</td>
</tr>
<tr>
<td>2</td>
<td>Somewhat dissatisfied</td>
</tr>
<tr>
<td>3</td>
<td>Neither dissatisfied or satisfied</td>
</tr>
<tr>
<td>4</td>
<td>Somewhat satisfied</td>
</tr>
<tr>
<td>5</td>
<td>Very satisfied</td>
</tr>
</tbody>
</table>

Thank you very much for taking the time to look at this short survey about chronic pain and your health in general. The aim of the study is to learn about your health, and not to advertise or promote any particular treatments or services. The survey is being conducted by Insight Dojo, an independent research company based in the UK, and is being sponsored by a pharmaceutical company.

The research is entirely confidential, meaning that no individual data will be passed on to the pharmaceutical company that is sponsoring the study.

Please be completely honest in your responses. Based on our knowledge of likely patterns within the data, it will be easy to detect any dishonest or misleading responses.

Now we will ask you further details about your chronic pain, opioid drugs and digestive health.

Often, we will use the term of constipation to describe difficulties in bowel movements such as irregular movements, discomfort or pain.

Q12g
You mentioned earlier that the treatment you take most often to help with your pain is _________. Which form do you currently take this in?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A tablet/capsule/caplet (not effervescent or soluable)</td>
</tr>
<tr>
<td>2</td>
<td>An effervescent or soluable tablet/capsule/caplet</td>
</tr>
<tr>
<td>3</td>
<td>A liquid</td>
</tr>
<tr>
<td>4</td>
<td>An injection</td>
</tr>
<tr>
<td>5</td>
<td>A patch</td>
</tr>
<tr>
<td>6</td>
<td>A powder</td>
</tr>
<tr>
<td>98</td>
<td>Other (specify)</td>
</tr>
</tbody>
</table>

Q12h
How often do you take this treatment?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>More than once a day</td>
</tr>
<tr>
<td>2</td>
<td>Every day (but only once)</td>
</tr>
<tr>
<td>3</td>
<td>Almost every day</td>
</tr>
<tr>
<td>4</td>
<td>About 3 or 4 times a week</td>
</tr>
<tr>
<td>5</td>
<td>About 1 or 2 times a week</td>
</tr>
<tr>
<td>6</td>
<td>Less than once a week but more than once a month</td>
</tr>
<tr>
<td>7</td>
<td>About once a month</td>
</tr>
<tr>
<td>8</td>
<td>Less often</td>
</tr>
</tbody>
</table>
Q13
Now, I would like you to think back to when you were first prescribed opioid drugs. When I say opioid drugs, I mean the drugs we have shown you before. Click here for a reminder.

Roughly, how long ago were you first prescribed opioid drugs? Please choose one option only.

1=In the last 3 months
2=More than 3 months, but less than one year ago
3=1 year or more, but less than 3 years
4=3 years or more, but less than 5 years
5=5 years or more, but less than 10 years
6=10 years or more

Q14a
Thinking back to the time before you started taking opioid medications:

How was your experience of constipation then?

1=It was much better
2=It was slightly better
3. It was the same
4. It was slightly worse
5. It was much worse

Q14b
Could you roughly tell us how many days in a week did you have bowel movements before you started taking opioid medications?

1=Every day
2=Almost every day (5-6 days)
3=Every other day (3-4 days)
4=2 days per week
5=1 day per week or less

Q15
Thinking about the first time you were prescribed an opioid drug, which of the following medical professionals first prescribed an opioid drug to you? Please choose one option only

1=GP
2=Anaesthetist
3=Neurologist
4=Rheumatologist
5=Psychiatrist
6=Orthopaedist
7=Oncologist
8=Nurse specialist
9=Pain specialist doctor
10=Pharmacist
11=Internist
98=Other

Q16a
Now I would like you to think back to the conversation that you had with the doctor. Which, if any, of the following did your doctor (or other medical professional) do when prescribing the opioid drug to you for the first time?

Select all that apply

1. Warned me about drowsiness as a potential side effect of the opioid drug
2. Warned me about nausea and/or vomiting as a potential side effect of the opioid drug
3. Warned me about constipation as a potential side effect of the opioid drug
99. Did none of these
96. I don’t remember
Q16b
And once the doctor had warned you about constipation as a potential side effect, which of the following did your doctor suggest?
Select all that apply
1. Suggested that I change my diet or lifestyle (e.g. by eating more fibre or exercising more often) to avoid constipation
2. Prescribed me a laxative drug to avoid constipation
3. Recommended a specific treatment I could try - such as a laxative - but did not physically write a prescription
99. Neither of the above – they just warned me that it might be a side effect, but did not make any recommendations

Q16c
Have you had any subsequent conversations with your doctor (after the first time you were prescribed opioids) about constipation?
1. Yes – the doctor has brought it up /asked me about the symptoms on subsequent visits
2. Yes - I have brought up the topic on subsequent visits
3. No – we have not spoken about it since

Q16d
You mentioned that you have never spoken to your doctor about your constipation symptoms. Why is this?
Please select all that apply
1. I feel too embarrassed to bring the topic up with my doctor
2. I don’t feel my constipation symptoms are severe enough to warrant a discussion
3. I don’t want to distract my doctor from helping me with pain relief
4. I get the advice I need elsewhere (eg by browsing the internet, talking to friends etc)
5. I don’t think the doctor will be able to help me so I don’t bother bringing it up
6. I feel confident managing the condition myself
7. Other (please specify)

Q16e
Have you subsequently been prescribed a laxative for your opioid induced constipation symptoms?
1. Yes
2. No

Q17
Which of the following medical professionals is primarily responsible for repeat prescription of your opioid medications?
Please select one option only
1=GP
2=Anaesthetist
3=Neurologist
4=Rheumatologist
5=Psychiatrist
6=Orthopaedist
7=Oncologist
8=Nurse specialist
9=Pain specialist doctor
10=Pharmacist
11=Internist
98=Other
Q18
Whom do you look to for help with managing constipation?
Select all that apply

1=GP
2=Anaesthetist
3=Neurologist
4=Rheumatologist
5=Psychiatrist
6=Orthopaedist
7=Oncologist
8=Nurse specialist
9=Pain specialist doctor
10=Pharmacist
11=Internist
12=Members of my family
13=My friends
14=Other constipation sufferers
15=I do not look for help, I manage constipation myself
98=Other

Q19a
Thinking about your opioid drug usage over the years:
How has your opioid drug usage changed, if at all?

1=It has increased a lot
2=It has increased slightly
3=It has been the same
4=It has decreased slightly
5=It has decreased a lot

Q19b
Thinking back to the last time when there was an increase in your total dosage of opioid drugs, what was the effect on your constipation?

1=My constipation became much better
2=My constipation became slightly better
3=My constipation remained the same
4=My constipation became slightly worse
5=My constipation became much worse

Q20
Thinking about the future, how do you expect your opioid drug usage to change?

1=I expect it to increase a lot
2=I expect it to increase slightly
3=I expect it to be the same as now
4=I expect it to decrease slightly
5=I expect it to decrease a lot

Q21a
Thinking about your opioid drug usage over the years:
Has there been a change in the specific opioid drug you were taking?

1=Yes
2=No

Q21b
The last time there was a change in the opioids, what was the effect on constipation?

1=My constipation became much better
2=My constipation became slightly better
3=My constipation remained the same
4=My constipation became slightly worse
5=My constipation became much worse
This section asks about your experience of constipation, and measures that you have taken to help with this.

Q22
How much do you disagree or agree that the following caused you discomfort over the past TWO weeks?

RATING:

<table>
<thead>
<tr>
<th>Disagree strongly</th>
<th>Disagree quite a lot</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree quite a lot</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

STATEMENTS
1. Not being able to have bowel movements as often as I would like to
2. Incomplete bowel movement, like you didn’t “empty” yourself
3. Passing of stools that were too hard or lumpy
4. Straining to try to pass stools
5. Sensation of a blockage or obstruction in your bowel movements
6. Bloating in your abdomen
7. Stomach cramps
8. Rectal burning (during or after a bowel movement)
9. Hemorrhoids (also known as ‘piles’)
10. Other (non-Hemorrhoidal) rectal bleeding
11. Nausea
12. Vomiting

Q23
Over the past TWO weeks, to what extent did your constipation symptoms cause you to feel each of the following:

RATING:

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A moderate amount</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

STATEMENTS
1. Disgusted
2. Frustrated
3. Helpless
4. Depressed
5. Dependant and “not free”
6. Obsessed i.e. not being able to get it out of your mind
7. Anxious or worried

Q24
Over the past TWO weeks, to what extent did your constipation symptoms cause you to do each of the following:

RATING:

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A moderate amount</th>
<th>A great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

STATEMENTS
1. Spend excessive time in the bathroom
2. Have difficulty socialising
3. Have difficulty working (including both paid work, and household chores)
4. Have difficulty pursuing hobbies
5. Have difficulty being intimate with others
6. Have difficulty following your normal routine
7. Have difficulty taking your opioid drugs as normal
Q25a
Given below are a number of approaches that people use to relieve constipation.
Which of these approaches do you use on a regular basis, if any? There are no right or wrong answers.

<table>
<thead>
<tr>
<th></th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Used a single laxative treatment on its own</td>
</tr>
<tr>
<td>2</td>
<td>Combined multiple laxative treatments</td>
</tr>
<tr>
<td>3</td>
<td>Rotated among different opioid drug treatments</td>
</tr>
<tr>
<td>4</td>
<td>Decreased the dose or frequency of your opioid drug treatment(s)</td>
</tr>
<tr>
<td>5</td>
<td>Skipped a dose of your opioid drug treatment(s)</td>
</tr>
<tr>
<td>6</td>
<td>Skipped several doses of your opioid drug treatment(s)</td>
</tr>
<tr>
<td>7</td>
<td>Used an alternative (non opioid) painkiller</td>
</tr>
<tr>
<td>8</td>
<td>Used manual methods (e.g. using your fingers) to support evacuation</td>
</tr>
<tr>
<td>9</td>
<td>Drank more water, juice, or other fluids</td>
</tr>
<tr>
<td>10</td>
<td>Eaten less, or been careful about what you ate</td>
</tr>
<tr>
<td>11</td>
<td>Obtained additional fibre through your diet (e.g. by eating more fruit, vegetables, or cereal)?</td>
</tr>
<tr>
<td>12</td>
<td>Taken a fibre supplement product (e.g. Fybogel, or a psyllium or methylcellulose product)</td>
</tr>
<tr>
<td>13</td>
<td>Exercised more often</td>
</tr>
<tr>
<td>14</td>
<td>Had colonic hydrotherapy (also known as 'irrigation')</td>
</tr>
<tr>
<td>15</td>
<td>Used a suppository or enema (a solid or liquid preparation inserted into the rectum)</td>
</tr>
<tr>
<td>16</td>
<td>Used relaxation techniques (e.g. deep breathing, meditation)</td>
</tr>
<tr>
<td>17</td>
<td>An approach I devised myself to deal with constipation</td>
</tr>
</tbody>
</table>

Q25b
Now think back to the last time you experienced severe constipation. Which of the following approaches did you use to manage your constipation then?

<table>
<thead>
<tr>
<th></th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Used a single laxative treatment on its own</td>
</tr>
<tr>
<td>2</td>
<td>Combined multiple laxative treatments</td>
</tr>
<tr>
<td>3</td>
<td>Rotated among different opioid drug treatments</td>
</tr>
<tr>
<td>4</td>
<td>Decreased the dose or frequency of your opioid drug treatment(s)</td>
</tr>
<tr>
<td>5</td>
<td>Skipped a dose of your opioid drug treatment(s)</td>
</tr>
<tr>
<td>6</td>
<td>Skipped several doses of your opioid drug treatment(s)</td>
</tr>
<tr>
<td>7</td>
<td>Used an alternative (non opioid) painkiller</td>
</tr>
<tr>
<td>8</td>
<td>Used manual methods (e.g. using your fingers) to support evacuation</td>
</tr>
<tr>
<td>9</td>
<td>Drank more water, juice, or other fluids</td>
</tr>
<tr>
<td>10</td>
<td>Eaten less, or been careful about what you ate</td>
</tr>
<tr>
<td>11</td>
<td>Obtained additional fibre through your diet (e.g. by eating more fruit, vegetables, or cereal)?</td>
</tr>
<tr>
<td>12</td>
<td>Taken a fibre supplement product (e.g. Fybogel, or a psyllium or methylcellulose product)</td>
</tr>
<tr>
<td>13</td>
<td>Exercised more often</td>
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<tr>
<td>14</td>
<td>Had colonic hydrotherapy (also known as 'irrigation')</td>
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<tr>
<td>15</td>
<td>Used a suppository or enema (a solid or liquid preparation inserted into the rectum)</td>
</tr>
<tr>
<td>16</td>
<td>Used relaxation techniques (e.g. deep breathing, meditation)</td>
</tr>
<tr>
<td>17</td>
<td>An approach I devised myself to deal with constipation</td>
</tr>
</tbody>
</table>
This section asks for further information about the constipation treatments (laxative drugs) that you currently use most often.

Q9a
Given below is a list of treatments that people typically take to help with their bowel movements.

Could you please select the ones that you are currently taking?

☐ 99 I do not take any treatments to help with my bowel movements

INSERT LAXATIVE LIST

Q9b
Which of these treatments do you rely on the most to help with your bowel movements (i.e. select the one you use most routinely to help with bowel movements)? Select one drug from the list

INSERT LAXATIVE LIST

Q26
To what extent do you disagree or agree with the following statements regarding the laxative drug, ________?

RATING

<table>
<thead>
<tr>
<th>Disagree strongly</th>
<th>Disagree quite a lot</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree quite a lot</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

STATEMENTS
1. Taking everything into consideration, I am very satisfied with the laxative drug
2. It allows me to move my bowels more easily
3. It relieves any pain I experience in moving my bowels
4. It has no inconvenient or problematic side effects
5. It is easy to prepare and administer
6. It is discreet and easy to carry around
7. It works rapidly to control my constipation symptoms
8. It is affordable
9. It works predictably
10. It represents good value for money
11. It is available on the National Health Service – or the cost is reimbursed
This section asks about your attitudes on a variety of issues relating to opioid drugs, constipation, and your health in general.

Q27
Given below are a number of statements related to your attitudes and beliefs about pain and opioids. There are no right or wrong answers. We are interested only in your opinions.
To what extent do you disagree or agree with the following statements?

RATING:

<table>
<thead>
<tr>
<th>Disagree strongly</th>
<th>Disagree quite a lot</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree quite a lot</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

STATEMENTS
1. I feel really overwhelmed by my pain
2. I am the type of person who likes to get on with my life despite my pain
3. I would rather suffer a little from pain rather than take pain medications
4. My opioid drugs have allowed me to live a fuller life
5. I find it difficult to cope without my opioid drugs
6. I don’t like my opioid drugs and have them only if it is absolutely necessary
7. I believe my health will improve and I will be able to discontinue my opioid drugs in the future
8. I often feel guilty when I take opioid drugs
9. I think doctors must be more careful than they are while prescribing opioid drugs
10. I feel that pharmaceutical companies that manufacture opioid drugs are really improving the lives of patients
11. My experience of pain has helped me realise what is truly important
12. Because of my pain I no longer take people or things for granted
13. My experience of pain has helped me appreciate the value of living everyday to the full
14. My experience of pain has made me question who I am as a person
15. I wish I could keep using my opioid pain medication without having the constipation side effects
16. While opioid drugs relieve pain, the side effects make it difficult to do daily activities
17. I hate having to balance getting pain relief with constipation side effects
18. I am unable to control my pain properly because of the constipation side effects
19. I have a group of supportive people who make it easier to cope with pain
20. People suffering from pain and other health conditions frequently reach out to me for support

Q28
Given below are a number of statements related to your attitudes and beliefs about constipation, stomach health, and its impact on your life. There are no right or wrong answers. We are interested only in your opinions.
To what extent do you disagree or agree with the following statements?

RATING:

<table>
<thead>
<tr>
<th>Disagree strongly</th>
<th>Disagree quite a lot</th>
<th>Disagree a little</th>
<th>Neither agree nor disagree</th>
<th>Agree a little</th>
<th>Agree quite a lot</th>
<th>Agree strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

STATEMENTS
1. I feel upset if I cannot move my bowels every day
2. My constipation is awful and overwhelms me
3. At the back of my mind, I’m always thinking of constipation
4. After pain, constipation is one of my most bothersome problems
5. I often cut down my opioid medication to relieve my constipation
6. I would prefer not to reduce my opioid medication to relieve my constipation
7. I often worry that my bowels will lose their ability to function normally
8. Constipation prevents me from doing things that I really want
9. I take extreme measures to get relief from constipation that might not be good for me in other ways
10. Often constipation gets so bad, that I have to combine many different treatments
11. It bothers me that I spend so much time in the bathroom because of my constipation
12. Often I am afraid that I will fall in the bathroom and injure myself

Q29
Given below are a number of statements related to your attitudes and beliefs about treatments that you use for constipation. There are no right or wrong answers. We are interested only in your opinions.
To what extent do you disagree or agree with the following statements?

<table>
<thead>
<tr>
<th>STATEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would much prefer to take natural (non pharmaceutical) treatments for my constipation</td>
</tr>
<tr>
<td>I would much prefer to change my diet, or some other aspect of my lifestyle, rather than taking pharmaceutical treatments for constipation</td>
</tr>
<tr>
<td>I would much rather take a constipation treatment as and when the need arises rather than take it continuously</td>
</tr>
<tr>
<td>I would much prefer a constipation treatment that I could use continuously, over the long term, as opposed to one that could only be taken when required</td>
</tr>
<tr>
<td>For me, it is very important that a constipation treatment works fast</td>
</tr>
<tr>
<td>For me, it is very important that a constipation treatment works predictably and not at random</td>
</tr>
<tr>
<td>For me, it is very important that a constipation treatment can be taken at any time of the day</td>
</tr>
<tr>
<td>For me, it is very important that I can take my constipation treatment with or without food</td>
</tr>
<tr>
<td>For me, it is very important that my constipation treatment does not affect the pain relief that I get from my opioid drugs</td>
</tr>
<tr>
<td>For me, it is very important that my constipation treatment does not affect the way that I take my opioid drugs (e.g. the timing, the dosage of my opioids)</td>
</tr>
<tr>
<td>For me, it is very important that a constipation treatment has no bad side effects</td>
</tr>
<tr>
<td>If I were to try a new treatment for constipation, I would rather not have to immediately give up using laxative drugs</td>
</tr>
<tr>
<td>Having to prepare laxatives is not inconvenient for me</td>
</tr>
<tr>
<td>I would much prefer to take an oral pill rather than a liquid treatment to help manage my constipation</td>
</tr>
<tr>
<td>I am constantly on the look out for new treatments for constipation</td>
</tr>
</tbody>
</table>

Q30
Given below are a number of statements related to your attitudes and beliefs about the way you manage your health. There are no right or wrong answers. We are interested only in your opinions. To what extent do you disagree or agree with the following statements?

<table>
<thead>
<tr>
<th>STATEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would much prefer to take natural (non pharmaceutical) treatments for my constipation</td>
</tr>
<tr>
<td>I would much prefer to change my diet, or some other aspect of my lifestyle, rather than taking pharmaceutical treatments for constipation</td>
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<td>I would much prefer a constipation treatment that I could use continuously, over the long term, as opposed to one that could only be taken when required</td>
</tr>
<tr>
<td>For me, it is very important that a constipation treatment works fast</td>
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<td>For me, it is very important that a constipation treatment works predictably and not at random</td>
</tr>
<tr>
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</tr>
<tr>
<td>I am constantly on the look out for new treatments for constipation</td>
</tr>
</tbody>
</table>
STATEMENTS

1. I consider myself more knowledgeable than most about my health conditions
2. I do my own research regarding my health condition(s) and treatments
3. I strictly follow the regimens that my doctor(s) prescribe
4. I think it is very important to adapt one's medication regime oneself rather than follow the doctor's instruction
5. I would have appreciated additional help from my doctor or medical professional regarding constipation
6. I like to deal with constipation on my own rather than speak to the doctor about it
7. I wish my doctor would spend more time speaking to me about my constipation problems
8. I would rather not discuss my constipation with my doctors

This section asks about your personal characteristics and circumstances, and your health.

Q35
Please indicate your employment status:
1=Working full-time
2=Working part-time
3=Self-employed
4=Unemployed
5=Student or in full-time training
6=Retired
7=Semi retired

Q36
To what extent does your work require extensive physical activity (e.g. extensive walking, travelling)?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A moderate amount</th>
<th>A great deal</th>
</tr>
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<tbody>
<tr>
<td>1</td>
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</tbody>
</table>

Q36b
How long, on average, does your regular commute to work take?
1=Less than 15 minutes
2=More than 15 minutes but less than 30 minutes
3=More than 30 minutes but less than one hour
4=More than one hour but less than 90 minutes
5=More than 90 minutes but less than two hours
6=More than two hours

Q37
What is your total household income (£)? Your household includes all of the people who you live with.
1=0-9,999
2=10,000-24,999
3=25,000-39,999
4=40,000-54,999
5=55,000-69,999
6=70,000-84,999
7=85,000-99,999
8=100,000 or more
9=96 – Prefer not to say

Q38
Which of the following best represents your relationship status?
1=Single (i.e. not currently in a relationship rather than legal status)
2=In a relationship
3=Civil Partnership
4=Married
5=Separated
6=Divorced
7=Widowed
9=96 – Prefer not to say

Q39
Do you have any children?
1=Yes
2=No
Q40
Are your children still at home or independent?
1=Under 18 and still at home 3=Mix of independent and still at home
2=Adult children still at home 4=Independent

Q41
In a typical week, how many hours per day do you spend reading/listening/watching the following...?

RATING
1=Not at all 4=3-5 hours
2=Less than an hour 5=6-10 hours
3=1-2 hours 6=More than 10 hours

STATEMENTS
1. TV
2. Radio
3. Magazines
4. Newspapers
5. Internet

Q41a
At what time of day do you typically watch TV? Select all that apply
1=Morning 3=Evening/ night
2=Afternoon

Q41b
How do you typically watch TV? Select all that apply
1=Live (as it happens) 3=Online via TV channel website
2=Catch-up (via a set top Box)

Q41c
What technology do you typically use to watch TV? Select all that apply
1=A regular TV set 4=A desktop computer
2=A laptop computer 5=A smartphone
3=An ipad or tablet

Q41d
Which of the following newspapers do you read on a regular basis (e.g. at least once per week)? Select all that apply.

COUNTRY SPECIFIC LIST e.g.
1=The Guardian 8=The Daily Express
2=The Times 9=The Sun
3=The Daily Telegraph 10=The Daily Mirror
4=The Financial Times 11=The Daily Star
5=The i (concise newspaper) 12=The Daily Record
6=Metro 13=Evening Standard
7=The Daily Mail 98=Other (please specify)

Q42
Which of the following social networking platforms and sites do you use on a regular basis? Select all that apply
1. Facebook
2. Copains d’Avant SHOW IN FRANCE ONLY
3. Tuenti SHOW IN SPAIN ONLY
4. LinkedIn
5. Viadeo SHOW IN FRANCE ONLY
6. XING SHOW IN GERMANY ONLY
7. Twitter
8. Instagram
9. WhatsApp
10. Google+
11. Snapchat
98 – other (please specify)
99 - None
Q43
Where do you get information and advice regarding health issues/concerns? Select all that apply
1. Healthcare professionals (including doctors and nurses)
2. Your partner
3. Other family member(s)
4. My friend(s)
5. Leaflets in my doctor’s surgery
6. Library / books / literature
7. Newspaper / Magazines
8. Television
9. Radio
10. Online search engines like Google
11. Online health forums
12. Online blogs
13. Other online sources
99. None of these

Q44
Please indicate which, if any, of the following conditions you have? Select as many as apply
1=Diabetes
2=Diverticulosis
3=Thyroid disturbance
4=Stroke
5=Multiple Sclerosis
6=Back pain or spinal injury
7=Anxiety
8=Depression
9=Heart Disease
10=Osteoporosis
11=Arthritis / Rheumatism
12=Respiratory diseases (e.g. asthma, COPD, emphysema, chronic bronchitis)
13=Cancer
96=Prefer not to say
99=None of the above

Q45
Do you have a full-time carer?
1=Yes
2=No

Q46
To what extent does your carer help you to manage your constipation?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>A moderate amount</th>
<th>A great deal</th>
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<td>1</td>
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Q47
To what extent do you see yourself as:

<table>
<thead>
<tr>
<th>RATING</th>
<th>Not at all</th>
<th>A moderate amount</th>
<th>A great deal</th>
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<table>
<thead>
<tr>
<th>STATEMENTS</th>
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<th>STATEMENTS</th>
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<tbody>
<tr>
<td>1. Extraverted, enthusiastic</td>
<td>6. Reserved, quiet</td>
<td></td>
</tr>
<tr>
<td>2. Critical, quarrelsome</td>
<td>7. Sympathetic, warm</td>
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<tr>
<td>3. Dependable, self-disciplined</td>
<td>8. Disorganized, careless</td>
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<tr>
<td>5. Open to new experiences, complex</td>
<td>10. Conventional, uncreative</td>
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Q48
Which of the following options best describes the effect of your chronic pain on your daily life? Select one option only.

1. I am fully active just like I was before the onset of chronic pain
2. I’m restricted in physically strenuous activity but can walk around, and able to carry out work of a light or sedentary nature, e.g., light house work, office work
3. I can walk around, and am capable of taking care of myself. I am unable to carry out any work activities, and be up and about more than 50% of waking hours
4. I am completely disabled. I cannot look after myself and I am confined to a bed or chair all of the time.

Q49
Which of the following activities do you do to help distract you from your pain, or to cope better with it? Select all that apply.

1. Watching TV programmes
2. Meeting friends and family socially
3. Connecting with friends on social networks (e.g., Whatsapp, Facebook)
4. Connecting with other people who are suffering from similar health conditions either in person or through social networks
5. Practising an art (e.g., drawing, photography, singing, playing and instrument)
6. Playing a sport (football, tennis, etc.)
7. Playing an indoor game
8. Watching movies
9. Watching sports events
10. Do research and learn new things (e.g., learn a new language, take an online course)
11. Doing cardiovascular exercises (running, aerobics, etc.)
12. Doing mind-body exercises (e.g., Yoga, Tai-Chi, Alexander Technique)
13. Physiotherapy
14. Going for walks
15. Spending time with nature
16. Going to watch music events
17. Going to the museum
18. Doing shopping
19. Writing about my experience (e.g., writing a blog or a diary)
20. Meeting a counsellor, a mentor or a coach
99. None of these