Persistent Dentoalveolar Pain: The Patient's Experience

Justin Durham, BDS, MFDS, RCS (Ed), FDS RCS (OS), FHEA

Senior Lecturer in Oral Surgery and Orofacial Pain; Honorary Consultant Oral Surgeon Institute for Health and Society and Centre for Oral Health Research Newcastle University Newcastle-Upon-Tyne United Kingdom Visiting Lasby Fellow School of Dentistry University of Minnesota Minneapolis, Minnesota, USA

Catherine Exley, BSc, MA, PhD

Senior Lecturer in Medical Sociology Institute for Health and Society and Centre for Oral Health Research Newcastle University Newcastle-Upon-Tyne United Kingdom

Mike T. John, DMD, MPH, PhD

Associate Professor Division of TMD and Orofacial Pain School of Dentistry Adjunct Associate Professor Division of Epidemiology School of Public Health University of Minnesota Minneapolis, Minnesota, USA

Donald R. Nixdorf, DDS, MS

Associate Professor Division of TMD and Orofacial Pain School of Dentistry Adjunct Assistant Professor Department of Neurology Medical School University of Minnesota Research Investigator HealthPartners Research Foundation Minneapolis, Minnesota, USA

Corresponding author:

Dr Justin Durham Room 5.008, Level 5 School of Dental Sciences Framlington Place Newcastle University Newcastle-Upon-Tyne, NE2 4BW United Kingdom Fax: +44 (0)191 222 8191 Email: Justin.Durham@ncl.ac.uk Aims: To build an understanding of the patient's experience and from this identify recurring themes that could form part of an item pool for further testing of persistent dentoalveolar pain disorder (PDAP). Methods: Proven cases of PDAP were identified from a clinical database, and a purposive maximum variation sample was drawn. Semi-structured interviews were conducted with the sample by a single trained interviewer. Interviews were digitally recorded and transcribed verbatim. Data collection and analysis occurred until data saturation (n = 20), with no new themes emerging. Analysis of the data was an iterative and inductive process broadly following the principles of the constant comparative method. Results: Recurrent themes emerging from the data were: difficulty in responding to history taking; duration and magnitude of pain; complex and confounding descriptors; common exacerbating factor; well-localized pain; deep pain; pressurized or pressure feeling. Conclusion: Several common experiences that can be considered items were identified in the data. These items will add to the limited pre-existing item pool in the literature and allow testing of this item pool to determine those items best suited to form an adjunctive self-report diagnostic instrument for PDAP. J OROFAC PAIN 2013;27:6–13. doi: 10.11607/jop.1022

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Persistent dentoalveolar pain disorder (PDAP) is described as pain that persists in the dentoalveolar region despite any evidence of local disease.¹ It is known by several pseudonyms: atypical odontalgia, phantom tooth pain, persistent idiopathic facial pain.²⁻⁸

It is unclear how currently existing descriptive reports of the varying clinical presentations of persistent pain without local disease relate to each other. This has led to an international effort to reclassify the presentation of persistent pain without local disease as PDAP in order to develop diagnostic criteria.¹ The next step is to develop the means to reproducibly identify PDAP in its early stages. Early identification of PDAP is imperative to reduce the ineffective surgical interventions that are often employed to address local pathology assumed to be present.⁹ These interventions may directly exacerbate any neural sensitization that is occurring. Indirectly, they may reinforce the belief that the pain is emanating from a tooth or region of a formerly existing tooth.^{10–12}

Given the current absence of biomarkers, there are two possible approaches for identification of PDAP. One is to rely solely on

Table 1 Characteristics of Purposive Sample		
Criteria	Sample details*	Description and rationale
Age (y)		
Range Mean (SD)	41–72 56 (9)	Within the typical range of age presentation for AO, a broad sample was taken in order to capture the differing perspectives that age may bring ^{5,26}
Sex (n)		
Male Female	5 15	Attempt to replicate at least the female-to-male presentation ratio (approxi- mated as 3:1 from Graff-Radford and Solberg data ⁵) to ensure that both sex's experiences are captured within the data
Location (n)		
Maxilla Mandible Both jaws Molar Premolar Incisor/canine More than one tooth affected Bilateral	16 7 3 13 4 2 5 1	Attempt to include a variety of tooth and jaw locations, including present- ations in both jaws, accepting that maxillary presentations will be more frequent than mandibular presentations ²⁶
Duration (y)		
Range Mean (SD)	1–11 5 (4)	Greater than 4 months of persistent pain consistent with both Graff-Radford and Solberg's definition of AO^5 and the International Association for the Study of Pain's definition of chronic pain
Tooth status (n)		
Tooth in situ Tooth removed	11 11	Attempt to include those who have the tooth in situ and those who have had it removed

*Numbers may not total 20 due to bilateral cases, two-jaw cases, and cases where more than one tooth was involved

AO = atypical otontalgia; SD = standard deviation.

clinical examination and associated diagnostic testing, which results in a diagnosis by exclusion. This is difficult to standardize and risks a missed or misdiagnosis. A complementary approach might be to employ an adjunctive self-report subjective measure to identify aspects of a patient's experience of pain that indicate PDAP, ie, use patients' words to distinguish the potential origin of their pain.^{13–16}

Such an approach has been used to create the majority of self-report neuropathic diagnostic instruments,¹⁷ but a PDAP-specific instrument is not currently available. To create an instrument with sufficient sensitivity and specificity requires, as a first step, testing a pool of items on the condition's presenting characteristics to determine those that are best suited to form the final instrument.¹⁸⁻²⁰ This item pool can be derived from the literature,^{2,5,21,22} which in PDAP is poor in quality; from expert opinion, which in PDAP can be divided²; or as others have suggested, using qualitative interviews with the patients themselves, resulting in patient-centered items phrased in the patients' own words.18-20,23 The aim of this qualitative study was, therefore, to build an understanding of the patients' experience of PDAP and from this identify recurring themes that could form part of an item pool for further testing.

Materials and Methods

Institutional review board approval was sought and given prior to commencement of this study. This qualitative study aimed to explore individuals' experiences of PDAP with a sample of wellcharacterized PDAP patients. One or more experts in orofacial pain at the University of Minnesota's TMD and Orofacial Pain Clinic had examined each patient included in the sample. The process that each participant underwent to arrive at the diagnosis of PDAP was dictated by his or her clinical care needs. Each individual in the sample had extensive multidisciplinary clinical (ie, psychology, physical therapy, neurology, orofacial pain, endodontic, oral surgery, otolaryngology) and imaging (ie, periapical radiographs, facial computed tomography, brain magnetic resonance imaging, bone scan) investigations to rule out local and distant disorders that could have contributed to their report of persistent pain in the dentoalveolar region of the mouth. If any of the managing clinicians, all diplomates of the American Board of Orofacial Pain, had reservations related to the diagnosis of PDAP, the patient was not approached as a potential participant. Patients with related pain disorders, such as neuropathic (ie, trigeminal neuralgia), neurovascular (ie, hemicrania continua), or musculoskeletal (ie, temporomandibular disorders) pain, were excluded following published diagnostic criteria.^{24,25}

The diagnostic criteria used in this study are consistent with those published for PDAP,¹ atypical odontalgia,^{26,27} and persistent idiopathic facial pain,²⁴ as well as with other criteria used in recent studies.^{2,28} Putative participants for the study were identified from a database of clinically active patients suffering with PDAP. A purposive maximum variation sample (n = 22) was taken of the entire database (n = 37) to obtain a depth and breadth of patient experiences using the criteria shown in Table 1. Of 22 individuals approached for interview, only 1 declined in absentia from two scheduled appointments for interview.

Written informed consent was obtained before data collection, and semi-structured interviews were conducted with the entire sample by one trained and experienced interviewer (JD). All interviews were audio-recorded in digital format, professionally transcribed verbatim, and then checked for accuracy against the original recordings. A flexible, evolving list of topics was used to guide the interview rather than having it rigidly structured; therefore, emergent issues were dealt with naturally in the order they arose during the interview. The list of topics covered is available in the online appendix in the electronic version of this article (found at www.quintpub.com). All interviews were conducted away from the clinical environment in comfortable settings, either face-to-face in a nonclinical room or over the telephone to avoid long travel distances for some participants. The interviewer was not involved in the care of any of the participants and had no prior interaction with them.

Data analysis was conducted in an iterative, inductive manner and broadly followed the principles of the constant comparative method,²⁹ where interviews continue until data saturation and no new themes or ideas are expressed by subsequent interviews. Data saturation occurred at 20 interviews in this study. Analysis of the transcripts utilized a line-by-line approach to coding, and frameworks³⁰ were used to organize the data both on a case-by-case and themeby-theme basis. One researcher (JD) developed the coding and subsequent frameworks, while another independent experienced qualitative researcher (CE) reviewed the data and the characteristics of the pain experience derived from it to ensure validity.

Results

In the following presentation of the results, representative quotations from participants are used to help illustrate conclusions drawn from the data. Further representative quotations can be found in the online appendix.

Participants implicitly and explicitly referred to the difficulty they experienced in responding to the sometimes-formulaic nature of history taking by clinicians. Despite the open nature of the interview, these difficulties were also sometimes apparent when, during the interview, individuals changed their explanation mid-sentence: "Burning. Not burning. No hot, but the intensity of getting branded or there, ya know." [patient 2]

When the meaning of a participant's statements was unclear, the interviewer probed using openended, nonleading prompts to encourage the individual to explain further. Those interviewed were generally aware that verbalizing their pain experience to clinicians was difficult. This reportedly made them concerned that their responses to key questions were inappropriate or incorrect, and that this might delay or prevent a correct diagnosis and or management: "They asked me a number of questions, and I wasn't able to give them the answers that they wanted. Meaning that my answers... When they would say, 'Well, does hot bother it?' And I said, 'no.' 'Does cold bother it?' And I'd said, 'no.' So, the things they were looking for, apparently checking to see if I needed a root canal, it wasn't any instant answer that they could definitely say, 'Okay, this is what it is, that's what we do.' " [patient 11]

Despite their expressed difficulty, all participants managed to describe their pain well if given sufficient time to do so. Some of the words and phrases that individuals used to describe their pain (experience) could be considered somewhat complex and idiosyncratic: "I'll tell you how it [the pain] felt. It felt like there were little people in there with shovels digging in." [patient 18]

Despite the complex and idiosyncratic words/ phrases sometimes used, all participants were able to clarify their description further if asked to do so. A common descriptor that arose was an itchy or tingly feeling: "But it got worst…ya know, ya know, it didn't take that long. Ya know, I started feeling the buzzing kind of feeling, and then, ya know, it got a lot worse." [patient 9] "It was like a tingling, itchy feeling." [patient 9]

The words participants used to describe their pain may relate specific meanings or diagnostic connotations to health professionals, but to those interviewed these words were simply the best adjectives or metaphors to convey their experience. Because these words did not convey the expected medical meaning, they could be considered confounding descriptors to making a correct diagnosis: "Once in a

while I will get needle-type shoots, where I will feel like, ya know, somebody is sticking pins and needles in that area." [patient 1]

For many participants, the first onset of pain began with an acute pain complaint of high intensity whose description mirrored classic descriptions of pain of dental pulp or periodontal origin and which were managed with treatment that involved deafferentation injuries. Participants often went on to explain, however, that the onset of their current complaint (PDAP) differed from this acute pain complaint and tended to have a more insidious onset following the initial treatment of the acute complaint. Some of the sample described this as "different to toothache" [patient 14], whereas others did not.

Participants had experienced PDAP for differing lengths of time (Table 1), but all participants identified the duration and magnitude of the continuous pain as a constant low-level aching pain in the affected site that was different than the initial acute complaint they had sought help with years ago: "*It's [the pain] bothering me all the time, and sometimes, ya know, it wears on ya, and wears ya down. It's not a sharp pain, it's a dull pain, ya know.*" [patient 6]

For some, however, there could be exacerbation of the pain of increased intensity. The exacerbation had few reproducible descriptors other than the feeling of intense heat in the area/tooth affected: "*It felt like there was a forest fire in there.*" [patient 18]

Other confounding descriptors were used for the exacerbation of pain: electrical shocks, throbbing, shooting or stabbing pains in the local area (of the tooth). The exacerbation of pain did not, however, radiate or refer in a dermatome or an accepted neuroanatomical distribution. The common features of the exacerbation reported by patients were no obvious refractory period and a highly variable duration that tended to be longer than that described for trigeminal neuralgia. There could, in fact, be long periods of time when the pain intensity increased from a low-level continual ache to a more intense continual pain:

"It would go to a 10. Because...10 is where your tears fall out. It wasn't a throbbing pain, it was just like you've got a branding iron of something in there." [patient 2]

"There's times where it [is at its] worst. Ah and sometimes, ya know, it's just there, it's tolerable, ya know? Um, ya know, it's there, it's always there." [patient 6]

"And maybe 2 [to] 3 weeks per month, sometimes 2 months, then it would let up ya know, where I'd, I'd, still have the facial pain, but I didn't have that

disabling type of pain. Ya know, I could still, I could function, ya know." [patient 10]

The most common exacerbating factor identified in the data was change in barometric pressure. In the sample, the exacerbation was reported as being caused by air travel or weather changes: "An airplane would, ya know, kind of get it [the pain] going." [patient 15] Therefore, by deduction, this predominately referred to a decrease in barometric pressure. Other triggers, such as touch, light wind, and thermal changes, were reported to have a negligible effect on the continuous pain.

Dental interventions aimed at the presumed pathology causing the continual pain tended to produce a short-term acute pain that fit a classic inflammatory description and that was articulated as different than the nature of the continual pain. A minority of participants did, however, explain that following these types of dental interventions they experienced a significant exacerbation of their continuous pain, which lasted for a variable time period:

"It's been the same [pain], but intensified [by dental treatments]. It just feels like it grows [after each treatment]...[Treatments] put a new arm on it." [patient 2]

"It, it [the pain] became worse...probably a couple of months after...a little bit after the crown was applied." [patient 3]

Some of the participants who had undergone extractions for their pain subsequently had implants placed into the painful area. All of those in this group reported the initial acute inflammatory pain of implant surgery. After this acute inflammatory pain had subsided, they reported two different longterm outcomes: some had an increased level of continuous pain "*I had less pain without the implant*" [patient 9]; others had no discernable exacerbation or change of the continuous pain in the area.

The continuous long-term pain affected sleep; the majority reported more difficulty getting to sleep (increased sleep latency) as opposed to having their sleep disturbed by the pain: "It didn't really wake me up, the pain. Um, it was more so just probably getting to sleep. Getting comfortable to get to sleep." [patient 19]. Some also reported a desire to sleep more, which was related to the knowledge they would be free of pain or to the exhausting nature of the continuous pain. Other self-directed strategies to relieve the pain included ice, heat, acupuncture, and chewing gum.

Despite difficulties in describing the pain, patients were confident in their ability to locate the pain: "*I*

- 1. This pain never stops; it seems to always be there.
- 2. This pain is generally a dull ache.
- 3. There can be times when the pain intensity increases (pain attack) and then it returns to its usual level.
- 4. This pain gets worse with changes of atmospheric pressure, for example during bad weather, scuba diving, airplane travel.
- 5. I feel I am able to locate the pain accurately, for example to a particular tooth or small area in my mouth.
- 6. This pain feels like it is deep within the tooth or jawbone.
- 7. This pain feels like a pressure within the tooth or jawbone.
- 8. This pain is difficult for me to describe to others.
- 9. Some words that might help describe my pain include peculiar itchy, tingling, or prickling feelings.
- 10. This pain feels different than the toothache I had previously.

Fig 1 Items derived from qualitative data that may help screen for PDAP.

was sure I know [sic] the tooth" [patient 4] and it appeared well-localized to the dentoalveolar region. All participants attributed their pain to a particular tooth, teeth, or space where a tooth/teeth previously had been. The other common feature of the location of the pain was that it was a deep pain. This "deepness" was either communicated explicitly by the use of the word "deep," or implicitly by the phrase used to describe the pain's location. The pain was commonly attributed to being "in the bone" [patient 8] irrespective of whether or not the tooth was in situ. Patients described the character of the deep pain as a pressurized or pressure feeling in the affected area: "It feels like...like kind of, kind of like pressure, like you put a glove too small over a hand, ya know. It was just always [there] and it was constant, it never went away. It was constant. All I knew was like right, right where [it was]...right in that area [points to tooth area]...it felt deep. It felt like underneath." [patient 18]

In summary, the key recurrent characteristics of the pain experience of PDAP that will contribute to an item pool for testing to create a self-report diagnostic instrument for PDAP are: continual nature; dull level of intensity; barometric changes; deep, pressure-like character; specific location of pain; complex feelings associated with pain. These areas have been formed into a series of items phrased in words used by the cohort examined (Fig 1). The new items will be added to an item pool derived from the current quantitative PDAP literature and current generic neuropathic and orofacial pain instruments to identify those items that will have the necessary sensitivity and specificity to create a selfreport PDAP diagnostic instrument.

Discussion

Patients with PDAP can find it difficult to describe their pain. Confronted with the standard clinical history questions about the nature of their pain, they may try to explain in depth, using metaphors or similes, just how the pain experienced with PDAP feels. Their explanations may be so complex that clinicians may sift through the description to find words that they can easily associate with medical meanings and then incorrectly institute treatments based on these words. There is a real danger within this "sifting" process that clinicians may pick up any words the patient uses that may indicate an inflammatory origin and therefore incorrectly institute invasive dental treatments. As the patient data demonstrate, the more complex the patient's description of the pain, the less likely it is that any adjectives associated with pain of inflammatory origin used within the description are a true indication of an odontogenic cause for the pain. When objective proof of pathology is absent, clinicians should seek expert advice prior to instituting any irreversible management based purely on the vocabulary the patient used.

It may be the richness and complexity of description provided by PDAP sufferers that has previously resulted in PDAP being wrongly labeled as a condition of psychogenic origin.³¹ One of the consistent features of PDAP in a history of well-localized prolonged pain may, therefore, be patients who find it difficult to describe their pain and who use complex phrases to describe it. The complexity of description found in this study concurs with Vickers et al,¹⁶ who showed that PDAP sufferers chose more words (adjectives) from the McGill pain questionnaire (MPQ) to describe their pain experience than other chronic orofacial pain sufferers. On the basis of the data presented in this study, the adjectives present in the MPQ do not fully encapsulate the pain experience of those suffering from PDAP. However, one of the putative items (item 1 - "...pain never stops...") is to be expected given the present study's sampling criteria, but is also one of the key features of PDAP. Interestingly, the variation in pain intensity that

some participants experienced is not always reported in other studies. The exacerbating factors for the variation in pain intensity are new to the literature, and it may be that the individuals reporting these features represent a specific subgroup within PDAP. Item 10 ("different to toothache...previously") within the putative set is present as a standalone item because of the subtle differences between some of the present study's cohort in the manner in which they related their current pain to their previous pain. It may be that, with further testing, item 10 is subsumed into item 9 given the bias of the sample discussed below.

The current putative diagnostic criteria for PDAP (mainly atypical odontalgia)^{1,2,5,24,28,32-34} mean that PDAP is essentially a diagnosis by exclusion. As a pain of potentially neuropathic origin, it should, however, be possible at a minimum to screen for it based on the patient's history or self-completed diagnostic questionnaires and the words and descriptive phrases used.^{13,14,35} The use of a self-report questionnaire as an adjunctive diagnostic instrument to clinical history, examination, and special investigation (eg, radiography, pulp testing) is particularly attractive because of its ease of use and low cost related to implementation.²⁰ Previous attempts at such instruments have proven fruitful in orofacial pain diagnosis, but none has focused specifically on PDAP; these instruments may therefore contain items useful for the item pool to be tested but likely lack the sensitivity and specificity required for diagnosing PDAP specifically.^{18,36,37} The use of a self-report measure may also allow patients the time and space, similar to that provided in the interviews in this study, to consider their pain and what description best fits it. This is opposed to the clinician asking an initial open question about their problem and then a potential crescendo of very direct closed questions, which they may feel concerned about answering incorrectly, or feel unable to answer.

The creation of a self-report PDAP diagnostic instrument as an adjunct to clinical history, examination, and investigation might be possible through one of two approaches: (1) the careful modification of a pre-existent generic neuropathic measure or (2) the construction of a new putative self-complete instrument. Even with the understanding generated by this study, modifying a pre-existing generic instrument is likely to prove difficult due to the intraoral presentation of PDAP, the peculiarities that this highly sensate environment brings to the patient's subjective experience, and the fact that there is still some debate over whether PDAP is a purely neuropathic condition.²

Creating a new adjunctive PDAP-specific diagnostic instrument will require testing of an item pool derived from the following: this study; the retrospective quantitative data available in the literature^{2,5,21,22}; relevant items from other generic measures¹⁹; and other expert-derived items that exclude false positives for other chronic orofacial pain conditions with symptoms that overlap or are similar to those in PDAP. Any new instrument created from the item pool would then have to be tested against one of the pre-existing "gold standard" diagnostic instruments, using a heterogeneous sample of known differing chronic orofacial pain cases, to determine its psychometric properties and the threshold for a positive result with its use.

This study was limited by its sample. The sample was based on the best available, but still limited, diagnostic criteria currently available for PDAP and was drawn from an established university-based patient population. This may mean the patients in the sample were different from patients seeking care at other facilities, and newly occurring cases of PDAP may also present with slightly differing features, which are forgotten with time. These newly occurring cases (< 6 months experience) are, however, difficult to diagnose in the first instance and may have other comorbid facial pain; therefore, they may not be diagnosed expediently enough to be interviewed within the first 6 months of the pain's occurrence. The lack of "new" cases in the patient sample, and the fact that a majority had experienced dental interventions, will have led to bias in how they reported their pain, as they may have been at the more severe end of the spectrum of PDAP. However, the authors contend that, given the diagnostic uncertainty of PDAP, the sample was appropriate for the first step towards creating an adjunctive self-report diagnostic instrument as opposed to potentially including participants who have reasons other than PDAP for their dentoalveolar-located pain. The obvious next stage is to test the cross-cultural, chronological, and inter-institutional validity of the present findings in other samples, especially in "unproven" cases that have yet to have any interventions on the basis of their persisting pain.

There were also different data-collection techniques in view of the exigencies of distance involved for some of the participants; the interview format was consistent, but given that some interviews were conducted by telephone, some nonverbal communication may have been lost. This loss of nonverbal communication would not, however, have been part of the data analysis.

It is also important to highlight that efforts were made to find disconfirming evidence and this is why the authors employed an iterative and inductive approach such as the constant comparative method.²⁸ They actively sought to include a range and a depth of experiences in their purposive sample, including those from individuals with multiple areas affected, multiple jaws affected, and less-common sites affected. The strength of this study lies in the time and depth with which the interviewer explored each participant's experience and description of PDAP, meaning for the first time PDAP is truly characterized from the patient's perspective. For this reason, it is reassuring that many of the recurring themes gathered in this manner are consistent with what others have published from an expert-opinion approach.^{1,24,26,27} Like all observational studies, the data need to be replicated by others to ensure the findings are robust and, therefore, generalizable.

Conclusions

PDAP seems to be best characterized as a constant, well-localized, low-intensity, dull pain of a pressurized nature that may or may not be sensitive to barometric changes that produce exacerbation of the level of intensity of the pain. Some of these features overlap and are consistent with other chronic orofacial pain conditions. Therefore, the items generated from this study now need to be incorporated into the limited item pool already available for PDAP alongside expert-derived items to help exclude false positives, and then must undergo further testing.

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Appendix S1

Areas Covered by Topic Guide

The topic guide used a series of non-leading open questions to cover the following broad areas:

Please can you tell me where you first looked for help with your (tooth) problem? Specifically examining:

- Who
- Where
- When
- Secondary referrals and chronology
- What they recall was said by each person

Can you tell me about your pain please?

Specifically examining:

- Pain character
- Pain duration
- Pain site
- Effects on day-to-day living
- Anxiety caused by it
- Explanations given for it
- Pain affecting mood and how is it doing it: synergistic, environmental, etc.
- Need detailed information on starting point, progression, and worsening/cessation
- Tendency to test the pain?

[If not already covered above—Can you tell me if your condition/problem has affected your day-to-day living and functioning? Specifically examining:

- Eating habits
- Sleeping habits
- Work, not work, work patterns
- Mood, upset, anxiety and depression?
- Self-conscious?
- Effects on friends and family
- Effects on work
- Effects on socializing
- Effects on value of life]

Before you spoke to anyone, what did you think was the cause of your problem?

- Why did they think that
- Did that worry them or affect their day-to-day living

Who did you go to see first and can you remember what they told you?

- What information did they get from the healthcare profession and how did they view that
- What/who changed their mind and how did that happen

What do you [or did you] hope your treatment will achieve?

- Specifically examining:
- Definition of success
- Level of expectation
- Percentage acceptance
- Level to which they would go seeking a cure
- Concerns over legitimacy of problem and numbers of consultations.

How did you find out information on your problem?

Specifically examining:

- Do they perceive a lack of it and if so did these have any effects on them
- Did they get any
- Was it appropriate
- Did it facilitate self-management
- Were there any concerns raised by information-seeking behavior
- Internet?

What is the single most important thing we could do to help you get better?

Appendix S2

Representative Quotations from Each Theme

Difficulty in responding to history taking

Well then I went to the Facial Pain Center, and I seen Dr [clinician's name]. Well she tried novocaine, ya know, doing with the needle with the novocaine and saying well does the pain go away? And I said, well I can't tell everything is numb, ya know. I didn't know if it went away or it didn't go away. I really couldn't tell, I don't think...I don't think it really did, but maybe it did. (patient 6)

Ya know is...is...is ah...he...he asked me questions, and I said, "Ya, there's a little bit of pain there." And then...I...I say to myself, did I really interpret that right or...or is there a little bit of pain in there...Ya know...I mean, is there still something wrong with those teeth. (patient 10)

Listen to what the patient is saying, and be diligent about asking the right questions. Because, like I said, I was confused as to where everything [the pain] was coming from. And I think they [clinicians] were asking the questions that they knew the answers to, from what they were used to treating. But um, I was that small percentage of not fitting into their...their pinhole [categorization], or not fitting into the norm. (patient 11)

And then they're [the attending clinicians] like, "Well, can you describe kind of what it feels like." And I said, "Well it kind of feels like somebody took a wedge and drove it in between those teeth, and then pulled the one tooth out and then the wedge is still stuck in there. (patient 16)

Complex and confounding descriptors

It's like somebody took a hot poker, ya know, like it's in the fire...a really hot piece of metal and stuck it in your face, and just left it there. Nobody else can see it. (patient 8)

It feels loose. The tooth feels as if it could fall out. (patient 11)

If I chew on that side or accidently a piece of something, even if it's a soft piece of oatmeal gets over there, it instantly gives me a sharp, a sharp, well anywhere between a throbbing ache to a sharp pain, depending on what it is that I just bit down on. But I always feel it. (patient 11)

Sometimes it was prickly. Sometimes it was just like, like it was gnawing on, ya know, kind of a dragging feeling. (patient 17)

So it was kind of a different...but inside my mouth the pain was more like, it felt like I had too many teeth in that area. Because it just felt like there wasn't enough room for, even though I was missing one tooth, it felt like I had more teeth than my mouth could accommodate. (patient 19)

Still feels like burning, kind of feels bubbly, ya know what I mean? (patient 20)

Duration and magnitude of pain

I use the word soreness more than pain because it, ya know it... Ya know, pain is like when I had to get a crown redone on a front tooth. (patient 5)

It's dull, it's not [pause] something that would affect you, or you'd stop what you're doing and sit down. (patient 7)

It wasn't sharp pain. It wasn't throbbing. It was just there all the time. (patient 10) $\,$

It doesn't seem like it's that bad. It's just achy. It doesn't feel anything too intense. (patient 12)

It's not a throbbing pain, ya know. So it's more of a persistent pressure um...persistent pressure that is painful and that it...it's not, ya know localized to one tooth, but it seems to be localized above that tooth in the...in the gum area. (patient 13)

Common exacerbating factor

So when we have changes in pressure, I will be in pain probably this evening because a low pressure front is coming through. Anytime I get low pressure coming through, it hurts, a lot! So, I have that added piece into it. (patient 1)

I didn't go on Lyrica until September. This was back in June. So the pain got worst on the flight with the air pressure thing again. And so I was really worried about the flight back. (patient 2)

Um, there are some evening though that I find that I'm, I have had more pain. I think sometimes, I think the weather bothers me...I think like when we get a um a big snowstorm, or if we have a big, ya know, thunderstorm coming, ya know, with the changes in the pressures. (patient 3)

When the change of weather is coming. I tell you, about a day or 24 hours before the weather's gonna change, my bone aches. (patient 18)

Well-localized pain

It's not a throbbing pain, ya know. So it's more of a persistent pressure um...persistent pressure that is painful and that it...it's not, ya know localized to one tooth, but it seems to be localized above that tooth in the...in the gum area. (patient 13)

I could always say [pause] tell where it [the pain] was...it was also very localized. (patient 14)

I can still tell that there's pressure in that area [where the tooth was extracted]. The pressure is there, but it's not as painful of pressure, but the pressure is still there. (patient 15)

Deep pain

In other places in my mouth there'll be like this soreness, but it's, it's deep. It's, it's inside, and I can easily tell that it's... "well that must be what this pain illness is." (patient 5)

It felt like it was in the bone. It was inside there. (patient 9) I feel like I just have a very, very dull ache around the area [of gum behind the implant]. And it feels very deep...It's kind of a dull throb. (patient 12)

The tooth will be gone, there will be an implant, and the pain is still there because it's up...it's up there where...where the bone is... (patient 14)

I think it's in the bone. I know it's the bone. There's no, no doubt. (patient 18)

I feel a real deep, throbbing, aching pain. (patient 20)

Pressurized or pressure feeling

The pain in the upper left is, can vary between a pressuretype pain where I feel like that whole area is going to explode. (patient 1

I described it, and this what it, it felt like there was a screw being, a large screw being turned in where my, where my tooth was, and constant, constant, constant pain...it was a pressure [pain]. (patient 3)

It was [still painful] last time when I went in [to have treatment and had local anesthetic]. They numbed it, and I still could feel...At that point, it was not...again, it wasn't the shooting pain or the throbbing pain, it's that I can feel pressure. (patient 11)

when I first noticed the pain, actually I was just eating popcorn, and um and felt that I had gotten a um...a shell or, ya know, a husk of the corn stuck between um 14 and 13, and um...just. Ya know, it was sort of more of a pressure feeling. (patient 13)

I do remember specifically that it felt like I had too many teeth like that pressure kind of feeling. (patient 19)