The Standardised Data Collection Project

Standardised data collection within osteopathic practice in the UK: development and first use of a tool to profile osteopathic care in 2009

Authors:

Figures

Acknowledgements

We are grateful to the General Osteopathic Council for funding the National Council for Osteopathic Research to undertake this project.

We are grateful to the many osteopaths who gave their time to participate in the development of the standardised data collection tool and the collection of data for this project, and to the NCOR members who have fed into this proposal at various stages of its development. We are grateful to them for their time and comments. We are indebted to the members of the Steering Group including Michael Watson, Bryan McIlwraith, Jorge Esteves and Kelston Chorley for their time and expertise in ensuring the project was valid and fit for purpose.

Finally, we are grateful to those patients who agreed to their anonymised data being collected for this project.

A three stage testing process was undertaken. This involved:

- Two separate content validity testing stages involving members of the research hubs. This was to identify any omissions or superfluous criteria or topic areas.
- A third pilot involving non-hub members to identify any regional differences
- Obtaining feedback to address the practical issues associated with data collection in practice

The final version of the tool prepared for a national pilot was comprised of 5 sections. These included:

- A patient-completed section
- The initial presentation of symptoms
- The management of the patient at their first appointment
- Management of the patient at their second and subsequent treatment(s)
- Final outcome(s) of care

iii. Piloting the SDC tool

Recruitment for the national pilot was voluntary and undertaken though advertisement in print journals and via the email networks of the professional association and regulator. A total of 342 practitioners (9.4% of the UK profession) participated, contributing 1630 completed patient datasets.

Limitations of the project and pilot data

The primary aim of the project was to create and test a standardised data collection tool for osteopathy. A small number of issues were highlighted during the project

- Analysis of the data collected from the national pilot exercise highlighted areas where the tool performed well, but identified others where questions used in the tool need refinement to improve clarity and reduce the potential for ambiguity.
- Participants in the national pilot were volunteers. It would be preferable, in the future, to generate a dataset through random sampling of the osteopathic profession.
- The use of a validated and nationally recognised outcome measure (depending on the physical or clinical area being assessed) to accompany the SDC would be beneficial.
- In the future, outcome data must be patient completed, and a mechanism to allow this to be undertaken away from osteopathic practices would ensure that the risk of bias is minimised. The practicalities of achieving this and the associated costs will need careful consideration.

KEY FINDINGS FROM THE NATIONAL PILOT

Notwithstanding the limitations outlined above, piloting the SDC in practice produced a set of pilot data that could represent a useful first step to developing a profile of UK osteopathic practice.

Key findings about the SDC tool included:

- The SDC tool developed with and by the profession performed extremely well.

Symptom profiles

Space was provided to record up to three symptom areas.

- Lumbar symptoms were the most common (36%), followed by cervical spine (15%), sacroiliac/pelvic/groin (7.9%), head/facial area (7%), shoulder (6.8%), and thoracic spine (6%)
- Additional symptoms were recorded in 2.9% of patients
- Symptom duration for the current episode was categorised and included acute (<6 weeks) in 51%; subacute (7-12 weeks) in 15%, and chronic (13 weeks or more) in 32%. A total of 2% of patients did not respond
- A total of 797 patients reported the presence of comorbidities, as diagnosed by their medical practitioner. The most common of these was hypertension (11.7%), followed by asthma (6.6%), and arthritis (5.7%)

Osteopathic patient management

- Practitioners recorded that 97% of patients were suitable for osteopathic treatment
- Treatments given to patients were varied and complex. Soft tissue treatment was the most common (78%), followed by articulation (72.7%), and HVLA thrust/manipulation techniques (37.7%). These were followed in frequency by cranial osteopathy (25.8%), muscle energy (18.3%), and functional technique (13.7%)
- Additional interventions in patient management included education (35.8%), and exercise (22.6%). A variety of self-management strategies were discussed with 88% of patients

Outcomes of treatment

- Simple patient-reported outcomes were recorded on the data collection sheet. These were drawn from the literature but are not validated measures and their findings should be treated with caution.
- After the first appointment, the majority of patients (59.4%) reported no complications of treatment. The most common complications within the first 24-48 hours after treatment were increased stiffness (18%), increased pain (14%), and fatigue (6.6%). After the second and subsequent appointments, 77.3% of patients reported no complications of treatment.
- Only a small number of patients (10.4%) were off work at first presentation; of these 5.3% were able to return to work after one treatment, and 3.1% after two treatments.
- In cases where patients underwent onward referral, 88% were to their GP for further investigation, and 13% were to a hospital consultant.

Further use and development of the standardised data collection tool

- The development of an electronic format for use by individual practitioners in their practices to enhance their own data collection.
- Use of the tool for research purposes to ensure that data is being collected in a standardised format.
- Use of the tool for periodic snapshot surveys with a larger randomly sampled group to

1. INTRODUCTION

Very little has been recorded from a national perspective of the day-to-day practice of osteopaths in the private sector, the profile of patients who consult osteopaths or the outcomes of their care.

1.1 Aims of the project

- The overall aim of this project was to GHYHORS DQG SLORW D standardised 'DWD &ROOHFWL tool (SDC) for the collection of patient-based data within osteopathic private practice in the UK. The primary aim of the project was to generate g osteopathic private p4rsTBT4 The of quality of care[3]; and the NHS which is interested in efficient use of resources particularly in the treatment of back pain[4,5,6,7,8,9,10]

- the government which is interested in safety, regulation, quality and integrative care[11].

1.3 Project phases

The project had three distinct phases:

Phase 1: Building Research capacity in regional hubs

- Initiation and development of the practitioner research hubs and hub activities
- Search of literature for existing data collection tools
- Development of draft SDC tools in all

2. BACKGROUND TO THE PROJECT

The general public, NHS and government have been documented as showing increas demands of clinical governance including osteopathy with the osteopathic teaching, learning and patient care. A number of strategies were identified to achieve this mission, the two foremost being:

(i) to establish and develop a comprehensive information resource for osteopathic research in order to promote a mutual research dialogue within the osteopathic profession and with other related professions

(ii) to create a forum that would develop and nurture a pan-professional osteopathic research

3.

evidence based practice. In order to initiate a cultural shift within the osteopathic profession towards service delivery which is evidence-based, high quality and safe, and to promote a culture which stimulates practitioners to undertake research and to implement research evidence in daily practice, practitioners needed more involvement in and experience of basic research skills such as developing research questions and systematic collection of data.

A network of nine osteopathic research hubs were created across the country, based on a model used by other comparable professions in the UK, USA and Australia[51,52,53,54]. The regional research hubs were intended to be practitioner-driven. They were created at the request of the profession, where a critical mass of research-interested osteopaths existed. Hubs were established in London, Sussex (Haywards Heath), West Yorkshire (Leeds), Oxfordshire (Oxford), Devon (Exeter), Avon (Bristol), South Wales (Cardiff), Perthshire (Perth) and Glasgow.

The regional research hubs comprised both experienced and less experienced researchers. Most members of the profession who trained prior to 1990 had little research training. Hub meetings were facilitated by the NCOR research officer, who provided expertise, education on research resources, and support for developing the hub and the SDC project. The hubs were not self ± facilitating at the start of the project and required considerable support. This network required further development in order to capitalise on its potential and to fulfil the aims and objectives of the SDC plan and capacity building for the profession.

3.2 Hub research activities 2007-2009

The hubs were initiated by asking for expressions of interest concerned with being involved in the collection of data and involvement in a research hub, issued at the General Osteopathic Council series of regional conferences held between March, and July, 2005 in a variety of locations throughout the UK and the Republic of Ireland. A series of introductory workshops were then organised to explain the objectives of a research hub and how it could be run, and those of a standardised data collection tool and its potential benefits for osteopaths and osteopathy. The working model of a hub was also discussed during the workshops to allow bottom-up development and allow the hub to meet the needs of practitioners. Workshops were held between May and July, 2006.

A range of activities were offered by the NCOR facilitator or requested by hub participants, which supported the research capacity building aims. In addition to considering what clinical questions needed to be answered for the SDC project, activities included critical appraisal of published papers, literature searching, clinical audit, and specific research projects undertaken in each hub which varied according to the interests of the hub members.

Public, or user, involvement is increasingly promoted by government policy; there is no widely accepted method for doing this although groups like INVOLVE produce guidance for both

The hub members produced considerable numbers of questions initially, based frequently on ³ZKDW LW ZRXOG EH QLFH WR NQRZ´ ,QLWLDO QXPEHUV 73. Two rounds of discussion took place before a draft version of the tool was created for each hub. The hub members became more focussed progressively on priority information and its useful application to individual practices and practitioners in addition to how the profession en masse could use the information. Attention was paid specifi

Marketing information for practitioners was included which concerned why patients chose osteopathy and how they heard about a particular practice.

The need to collect accurate data from patients, by completion of their own section of the data collection tool was a key consideration when deciding whether to make the data collection form paper-based or electronic, or a version of both. The practicalities of asking patients of varying ages to complete an electronic system was seen as unrealisable in most practices.

6.2 Practitioner-completed section

Part 2 of the form was for practitioner completion only. This section was sub-divided into three sections which recorded initial presenting symptoms; the management and treatment applied at the first appointment, and the management and treatment applied at second and subsequent treatments.

The intention of collecting a wide range of information was to document the different aspects of osteopathic care commonly employed in day-to-day practice. Osteopaths are increasingly being placed in the role of first contact health practitioners and the importance of being able to recognise when patients are suitable for treatment and when they need to be referred for different investigation(s) or management is implicit in all competent healthcare practitioners, in addition to being part of the GOsC Code of Practice.

Information was collected about symptom areas, the nature of onset of symptoms, and the full extent of investigations that had taken place for the presenting set of symptoms. Presenting symptoms were chosen in place of diagnostic categories. This caused some discussion amongst practitioners who felt that categories similar to those used by groups like Health Response could be used and it would be an objective way of documenting those particular pathological states could be legitimately used in practice promotion[141]. The lack of objectivity about diagnosis and an inability to capture information concerning the clinical reasoning processes inherent in arriving at that diagnosis made recording of symptom areas a more reliable choice of data item.
The range of co-morbidities, as diagnosed by a medical practitioner, was recorded to try and document the general health status of patients attending osteopathic practice. The range of

spinal manipulation in the management of a variety of symptoms, most notably, back pain. The range of techniques used by osteopaths in managing patients of varying age groups is often overlooked and it is with some frustration that the profession is labelled frequently by one technique. The use of a range of osteopathic techniques has been described in the literature and osteopathic care contains over 100 different techniques or procedures[142,143,144,145,146]. The most commonly used structural approaches are broadly grouped into seven major types:

- High velocity low amplitude (also called thrust or manipulation techniques). This involves a quick movement within a joint ¶ normal range of movement and does not exceed the anatomical barrier of the joint. Movement can be targeted to specific spinal segments and, with appropriate positioning of the patient, requires very little force. The goal of the technique is to restore joint play[147,148]. The technique is frequently characterised by a clicking sound whose source has been investigated by a number of

Information concerning the gathering of informed consent was recorded. The issue of consent has vexed the profession considerably and it was felt that this information should be documented to try and identify in what manner most osteopaths are gaining consent information. Additionally, some summary information was collected about selected outcomes of care, including the number of treatments, referral, and risk- E H Q H I L W L Q I R U P D W L R Q V X F K D V ³ U H D F W L

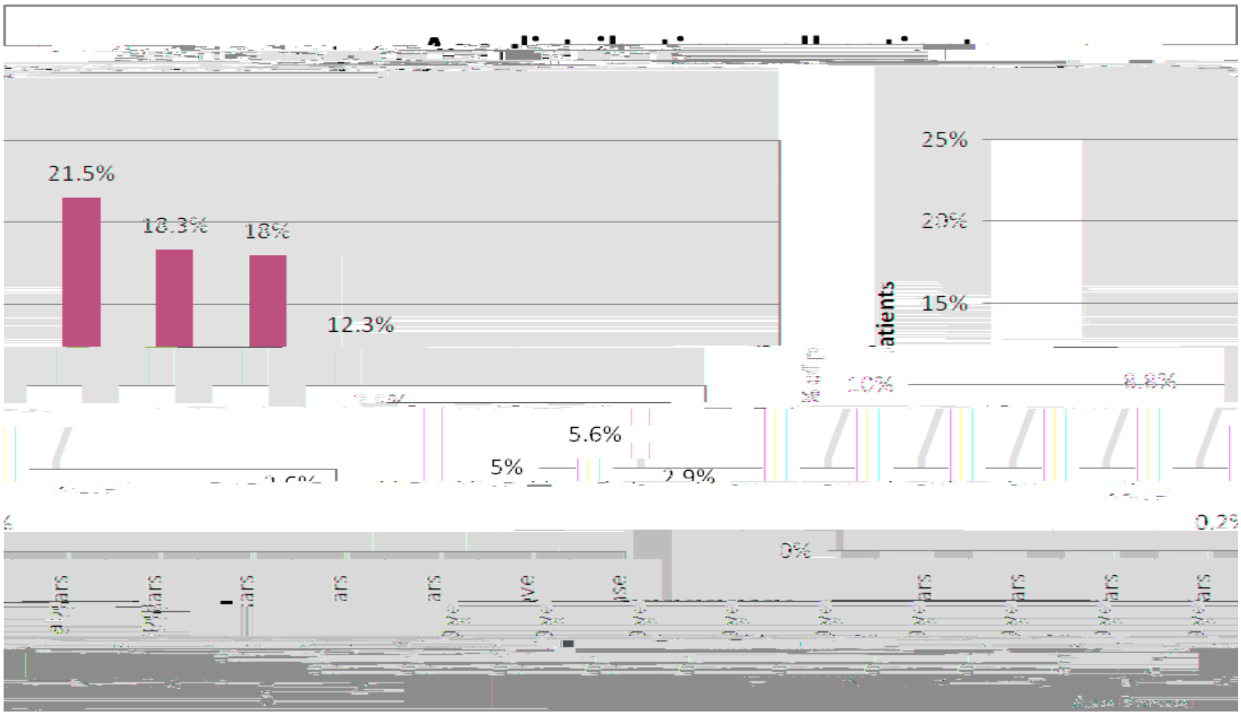
improvement of symptoms.

Figure 2.

* Descriptors used are based on those of the Office for National Statistics

1.3 Age of patients

Patients were asked for their age: this information was missing for quite a large number 2.6% of patients. Ages, where given, ranged from new-born (5 days old) to 93 years old (Figure 3). The majority of osteopathic patients were between 30 and 59 years of age; the average age was 44.76 (SD= +/- 19.08) years.



1.5 Patients ¶occupation

Data concerning occupations were described in free text and indicated a huge variety of working roles. Patients were also asked how physically demanding their occupation was, and answers were distributed across the whole range from sedentary to strenuous.

Table 3.

Physical Activities	Number	Percentage
Sedentary	322	**20**
Light	232	**14**
Moderate	374	**23**
Strenuous	227	**14**

1.6 Physical demands of leisure time activities

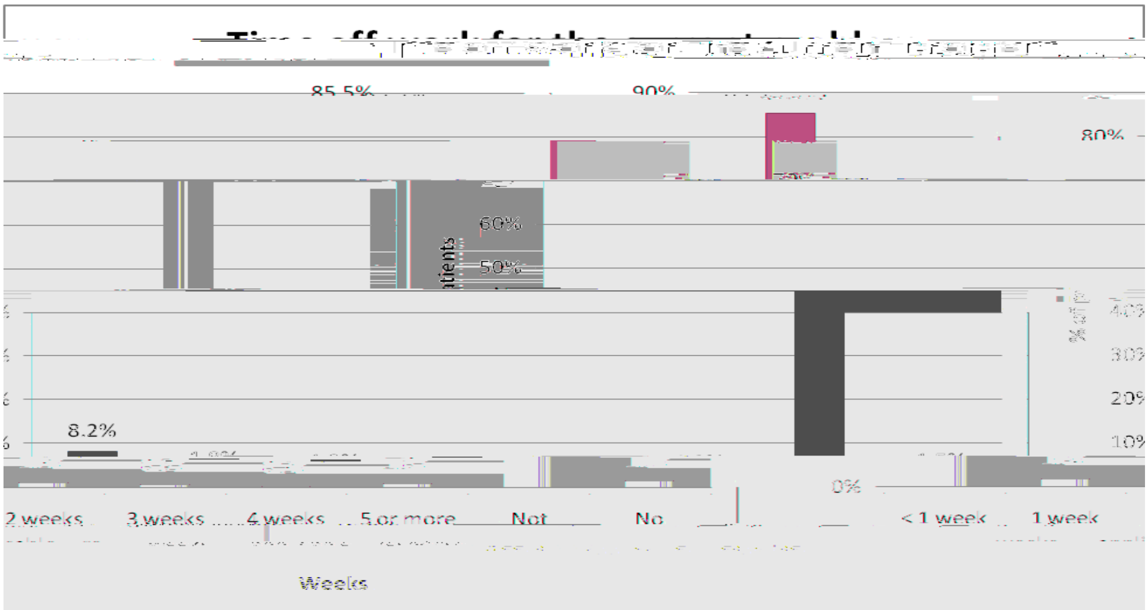
Similarly, the physical demands of SDWLHQWV¶ leisure activities were evenly distributed across the categories.

Table 4.

1.9 Sickness absence

The vast majority of patients were not off work with their current problem. Some 13% were off work at their first appointment, most for less than 1 week. Chronic sickness absence was rare in this sample of patients with only 1% on longer term sickness absence of 5 weeks or more.

Figure 7.

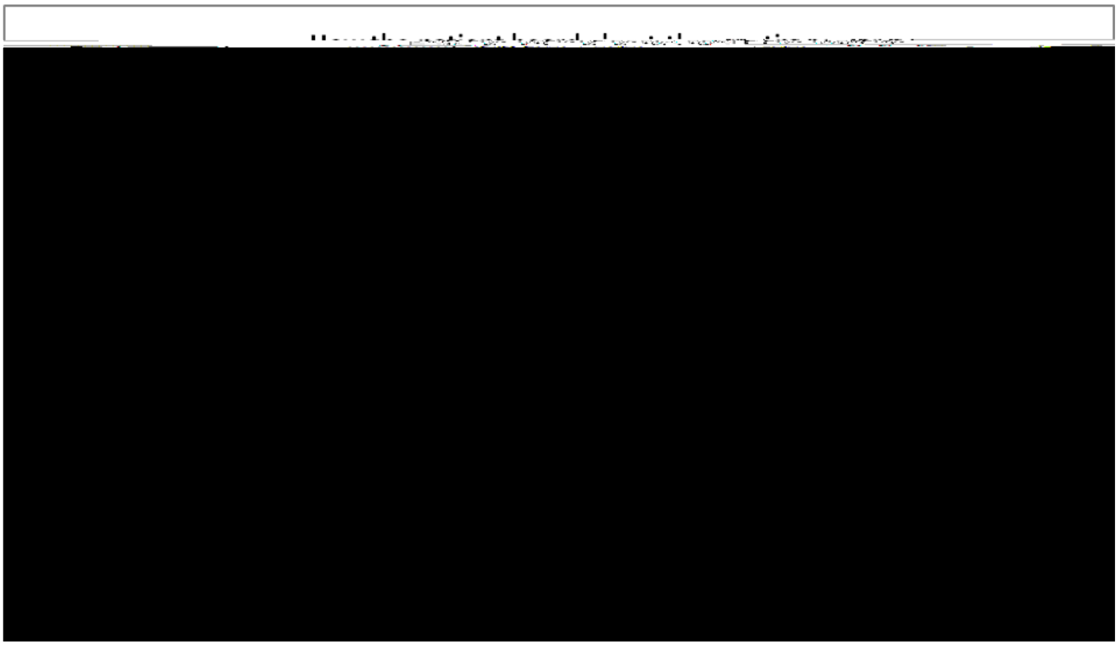


1.10 Source of referral to the practice

1.12 How the patient heard about the practice

Most patients heard about the practice by word of mouth. Advertising represents a relatively small source of patients.

Figure 9.



This question permitted multiple answers, but o

1.13 Reasons why patients chose to use osteopathy

Patients were asked why they decided to have osteopathic treatment. The question was multi-choice, permitting several factors to be ticked; 42% of patients reported several motivating factors. Table 9 shows that the most common reasons for choosing osteopathy were personal recommendation (65%) and previous experience of osteopathy (20%). The desire to have a drug-free (9.1%) or hands-on therapy (9.1%) together with desire to have osteopathy (9.6%) suggest a considerable proportion of patients actively choosing this type of touch therapy. Personal research and failure of other treatment(s) also feature as reasons.

Table 9.

Reasons for choosing osteopathy	Number	Percentage

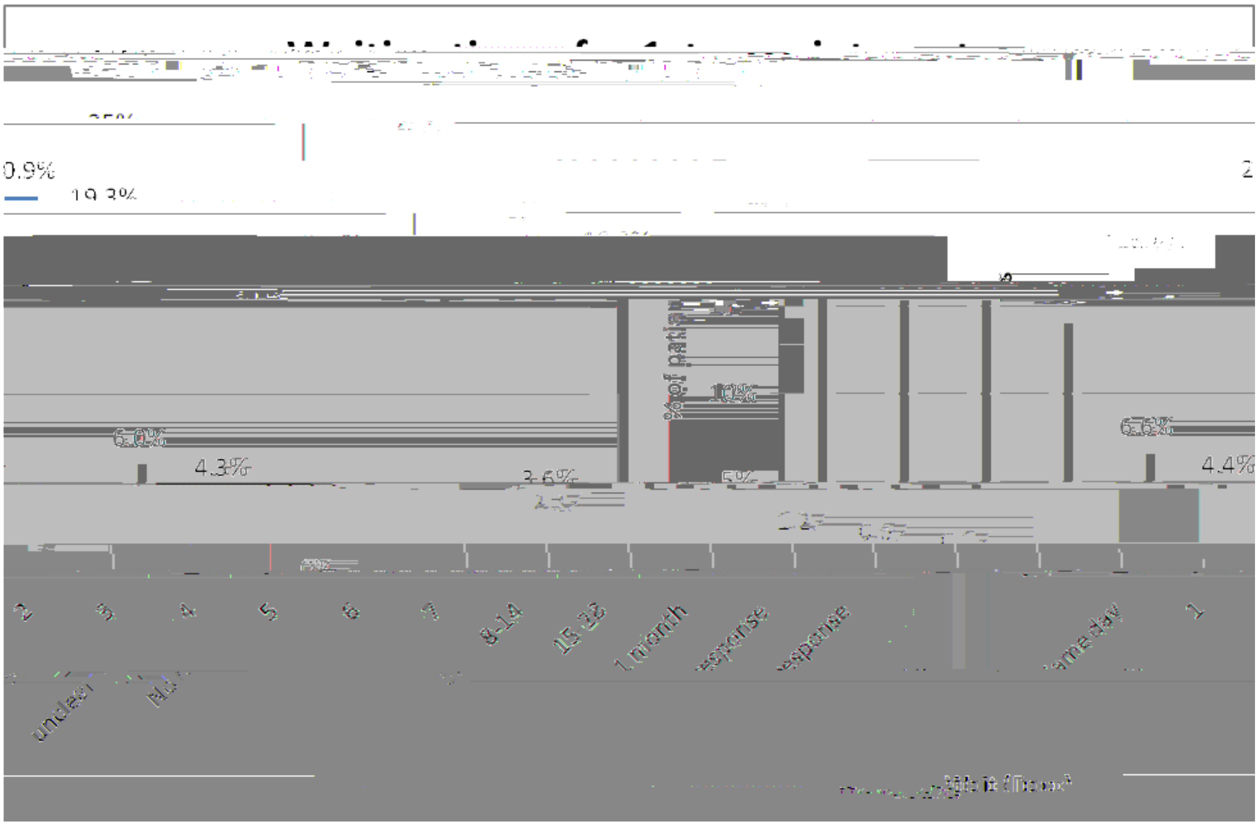
1.15 Waiting times for first appointment

Patients were asked how long they had to wait for the first appointment (for this condition) to be offered after contacting the practice.

Osteopathic care was available to patients very promptly; the waiting time for the first appointment was less than a week for 84.3%, and 16% of patients were seen on the same day as their request for an appointment.

A small number of patients (0.6%) waited for longer than one month, with 2 patients waiting 60 days. No information is available concerning the reasons for the longer waiting times.

Figure 10.



1.16 Patients waiting for NHS care

Only 101 patients (6%) in the sample were on an NHS waiting list for the same condition as they sought osteopathic treatment.

Table 12.

NHS Waiting List	Number	Percentage
No	1518	**93**
Yes	101	**6**
No response	11	**1**
Total	1630	**100**

1.17 Waiting time for NHS care

Patients were asked how long they had been waiting for NHS treatment for this condition. Among the 6% of patients on an NHS waiting list, 23% had been waiting more than 2 months.

Table 13.

NHS waiting time	Number	Percentage
Up to 4 weeks	40	**40**
5 to 8 weeks	19	**19**
9 to 12 weeks	9	**9**
13 to 24 weeks	11	**11**
More than a year	3	**3**
unclear response	2	**2**
Not applicable	17	**17**
Total	101	**100**

1.18 Prior NHS treatment or investigation for this episode

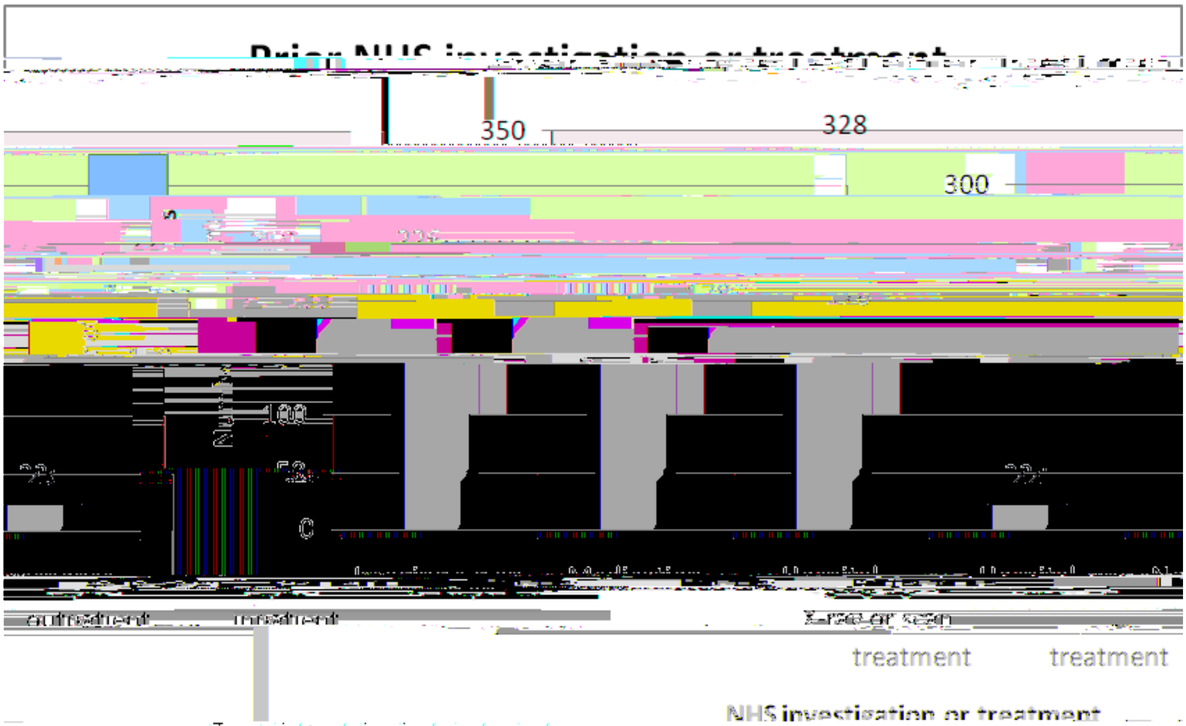
Almost one-third of patients (29%) had received NHS treatment or investigations prior to attending the osteopath for this episode.

Table 14.

Prior NHS treatment or investigation	Number	Percentage
Yes	479	29
No	1135	70
No response	16	1

The type of NHS treatment received usually was either imaging investigations or treatment in the form of medication or out-patient treatment. A small number (1.3%) had received hospital in-patient treatment prior to attending an osteopath.

Figure 11.

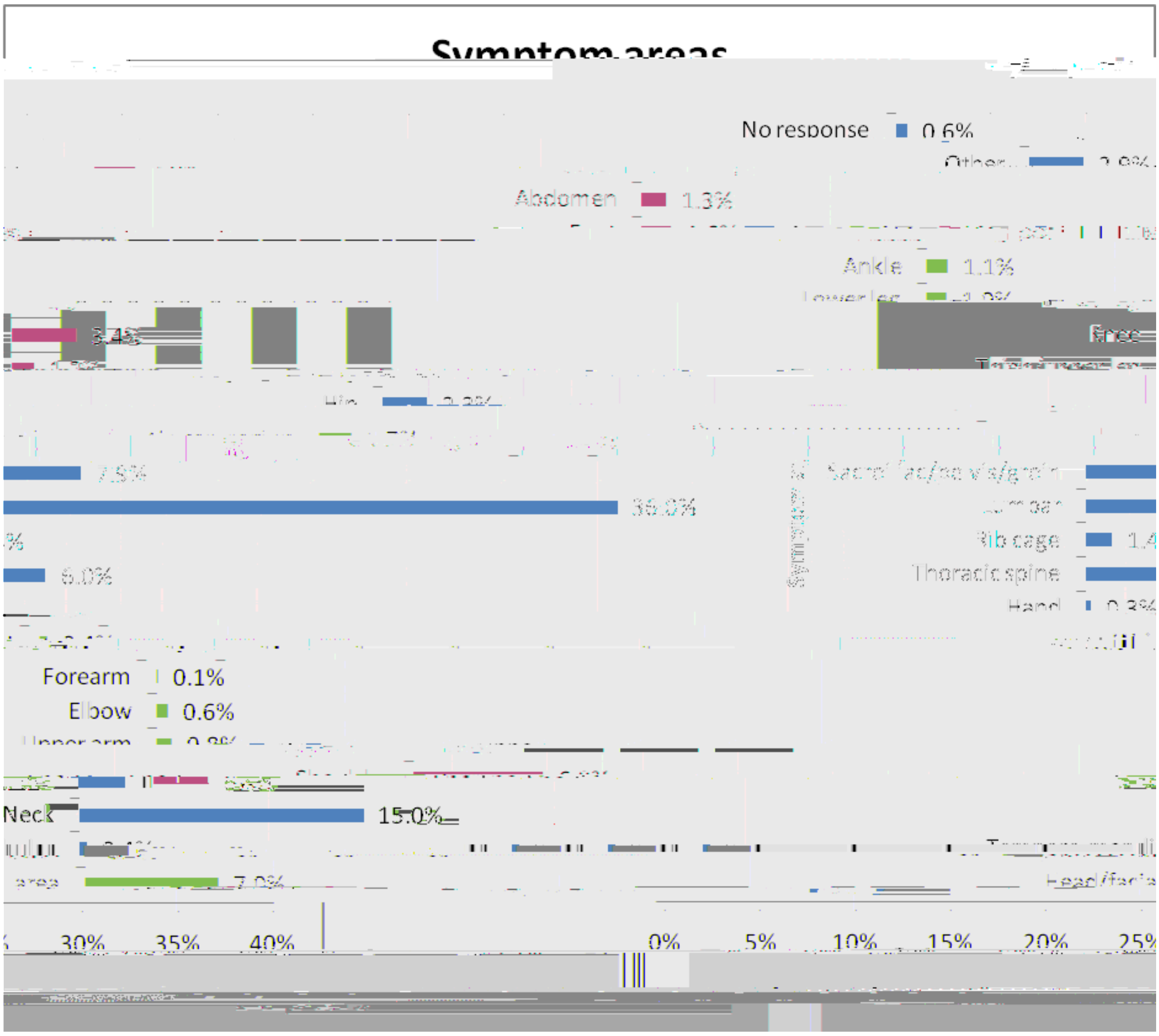


PART 2: PRESENTING SYMPTOMS

2.1 Symptom Areas

Space was provided on the standardised data collection form to record up to three symptom areas in total for each patient. This graph shows the distribution for the first symptom area. The most common first symptom was the lumbar spine (36%), followed by cervical spine (15%), sacro-iliac/pelvis, head/ face (7%), shoulder (6.8%), and thoracic spine (6%). Head pain is thought to comprise mainly headache symptoms.

Figure 12.



Symptom areas described in the category ³RWKHU´ LQFOXGH D ZLGH UDQJH RI reflecting the age of the patient. In children, these included feeding disorders, sleep disturbance, colic symptoms, and continuous crying. In adults, the range of symptoms included generalised muscle pain, dizziness, balance disorders, and ear, nose and throat conditions.

Table 15.

First symptom areas	Number	Percentage
Head/facial area	114	**7.0**
Temporo-mandibular	7	**0.4**
Neck	244	**15.0**
Shoulder	111	**6.8**
Upper arm	13	**0.8**
Elbow	10	**0.6**
Forearm	2	**0.1**
Wrist	7	**0.4**
Hand	5	**0.3**
Thoracic spine	98	**6.0**
Rib cage	23	**1.4**
Lumbar	587	**36.0**
Sacroiliac/pelvis/groin	128	**7.9**
Gluteal region		

In addition to profiling the symptom areas for the total sample of patients, the profile for babies (0-12 months) and for children (1-14 years) was extracted and analysed separately. This analysis is presented in Appendix 5.

2.2 Duration of current symptoms for this episode

The duration of symptoms

2.4 Number of previous episodes

Such investigations were fairly unusual, reported for 24.5% of patients in total. The use of X- Rays were the most common investigation, recorded for 16% of the sample; some patients had multiple investigations recorded.

Table 18.

2.6 Current co-existing conditions diagnosed by a medical practitioner

The osteopaths were asked to report co-morbidities, that is, co-existing conditions that had been diagnosed by a medical practitioner. The total number of co-morbid conditions recorded was)RU SDWLHQWV WKH SUDFWLWLRQHU UHFRUGHG ³Q patients the questions was unanswered, hence the status is uncertain. As this is important data, modification of the question is indicated.

[redacted]

PART 3: PATIENT MANAGEMENT AND TREATMENT

3.1 Patient suitability for osteopathic treatment

Practitioners recorded that 97 % of patients in the sample were suitable for osteopathic treatment and 2% of the patients were unsuitable for osteopathic treatment. A total of 99% of practitioners responded to this question. However the wording of this question appeared to confuse a few percent of practitioners who recorded treatments given to patients they had coded as unsuitable, or vice versa.

Table 19.

Figure 16.

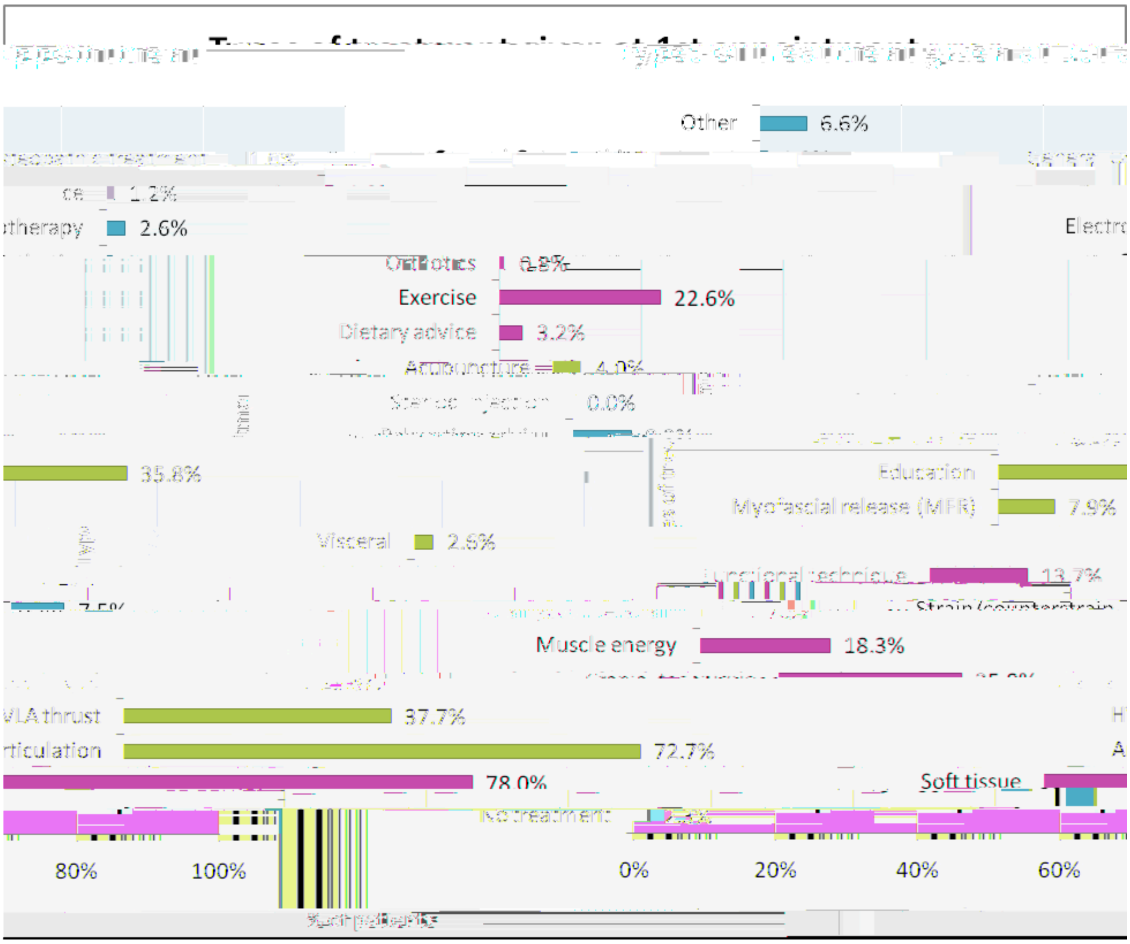
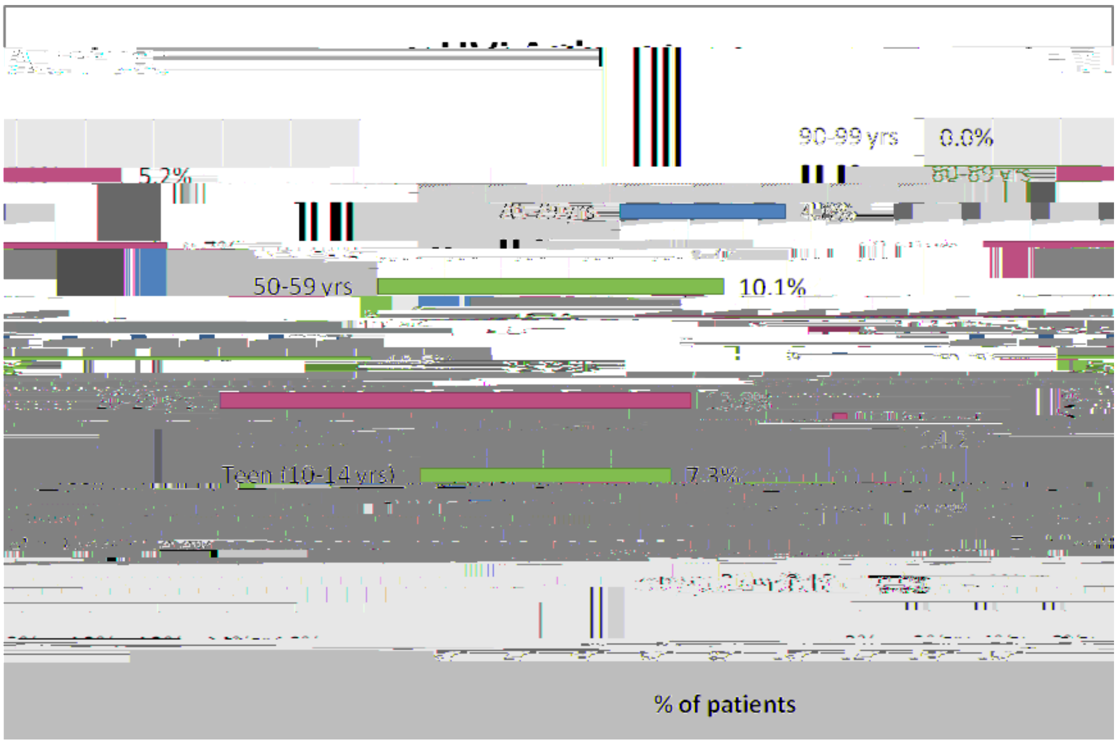


Figure 17.



3.3 Informed consent obtained for particular techniques

Informed consent was obtained from 57% of patients, and a wide variety of specific techniques were recorded by the practitioners.

Table 21.

Informed Consent	Number	Percentage
Yes	933	**57**
No	436	**27**
Not applicable	206	**13**
No response	55	**3**

3.4 Pre-consent information about examination and treatment

Pre-consent information usually was given orally (70.8%); written information was provided by 20.3% of practitioners, and 10.9% of practitioners used both forms of information. There was a high non- response rate of 19.2% to this question.

Table 22.

3.5 Informed consent for examination

Informed consent for examination usually was gained verbally or implied. A total of 20.3% of osteopaths used written consent for this part of the consultation, with most gaining verbal consent too. The non-response rate to this question was 9.1%.

Table 23.

Informed consent for examination	Number	Percentage
Implied consent	214	**13.1**
Written	126	**7.7**
Verbally	886	**54.4**
Written and Verbal	206	**12.6**
Not applicable	49	**3.0**
No response	149	**9.1**
Total	1630	**100**

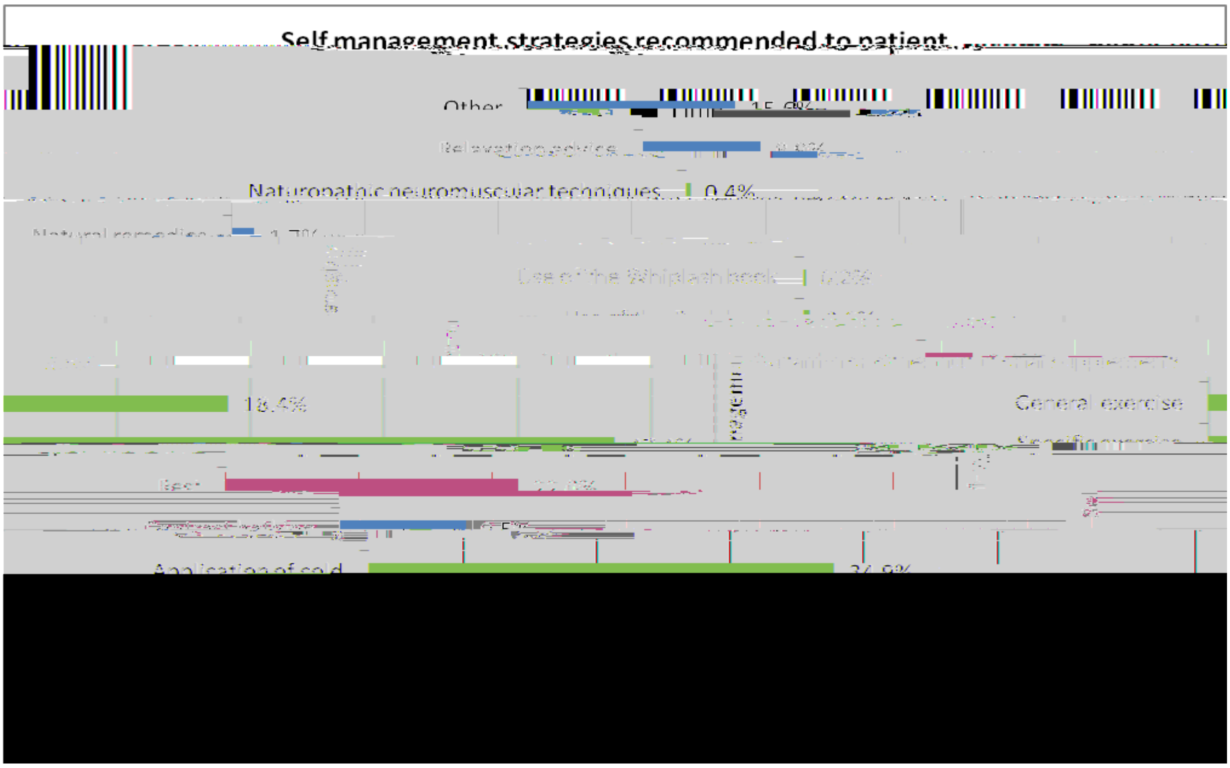
Figure 18.

3.6 Specific areas of education and advice to inform patients about their condition

The majority of patients received all of the following types of information described in Table 24, particularly anatomical information, advice concerning physical activity and anticipated response to treatment.

Table 24.

Education and advice given to patients	Numbers	Percentage
Anatomical information	1196	**73**
Possible risk factors associated with a recurrence		



As a multi-choice question, Table 25 shows that the mean number of strategies suggested to patients for self-management was 1.85.

A variety of self-management strategies were included also in the category R I ³RWKHU´ 7KHV included advice on posture; moving and handling; the use of complementary medication e.g. analgesia, non-steroidal anti-inflammatory drugs or topical applications; the need for orthotic assessment, the use of postural supports, and breathing exercises.

Table 25.

Self management strategies	Number	Percentage
None	201	**12.3**
Application of heat	151	**9.3**
Application of cold	569	**34.9**
Contrast bathing	155	**9.5**
Rest	358	**22.0**
Specific exercise	772	**47.4**
General exercise	300	**18.4**
Vitamin or other nutritional supplements	59	**3.6**
Use of the Back book	9	**0.6**
Use of the Whiplash book	4	**0.2**
Natural remedies	28	**1.7**
Naturopathic neuromuscular techniques	7	**0.4**
Relaxation advice	145	**8.9**
Other	254	**15.6**
Total	3012	

3.8 Discussion of the possible causes of the symptoms

A total of 97% of patients were included in discussions relating to the possible cause of their presenting symptoms.

Table 26.

3.11 Pending insurance claim or litigation

Only 2% of patients reported that they had an insurance case or litigation claim pending. A total of 95% did not have any insurance case or litigation claim pending.

3.12 Time allocated for first appointment

The duration of the first consultation ranged from 10 minutes to 90 minutes, but was not continuously distributed. The three most popular times were 30 minutes, 40-45minutes, or 60 minutes. A graph comparing the distributions for the lengths of the first and second consultations is presented in Figure 24.

3.13 Complications of treatment within 24 ±48 hours after 1st appointment

The data collection form recorded several simple patient-reported outcomes. The first was the side-effects of the first treatment. The majority (59.4%) of patients reported no side-effects, but increased stiffness or pain was relatively common (18% and 14.6% respectively). A few experienced fatigue (6.6%), while headache (2.3%), dizziness (1.5%), or nausea (0.7%) were uncommon.

One serious adverse event was recorded by a practitioner who added free text describing this as an ³(PRWLRQDO 5HVSRQVH´ WKLV ZDV FRQVLGHUHG XQOLNHO sent an event which meets the usual definition of a serious adverse event. Table 28 shows that 12.6% of patients had more than one reaction to treatment.

Table 28.

Complications after 1st treatment	Number	Percentage
None	969	**59.4**
Increased pain	238	**14.6**
Increased stiffness	293	**18.0**
Dizziness	24	**1.5**
Nausea	12	**0.7**
Headache	38	**2.3**

Fatigue	107	**6.6**
Serious adverse event		

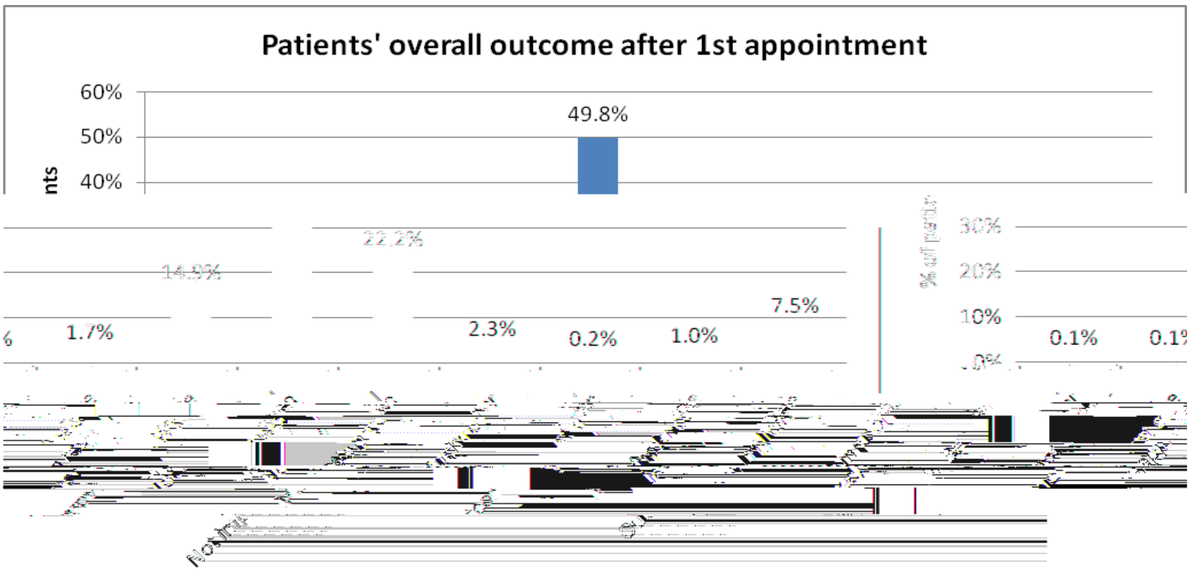
The additional cRPSOLFDWLRQV RI WUHDWPHQW were reported in five individual GHVFULEHG DV ³F patients who recorded increased crying, bruising, slight discomfort, soreness, and the development of flu-type symptoms.

3.14 Patients ¶overall outcome after the first appointment

At the end of the course of initial treatment for this episode, the overall outcome for each patient was reported. The simple measure used is not a validated outcome measure and further work, based on significantly larger numbers of presentations, is required to validate this data.

The most common outcome reported ZDV ³LPSURYHG´ZKHUH ³PXFK,LPSURYHG and 2.3% were best ever. A total of 74.3% improved after their first treatment. A small proportion (15%) was ³not improved but not worse´, and 1.7% was worse. Four patients (0.2%) reported being much worse or worst ever, after the first treatment.

Figure 21.



PART 4: SECOND AND SUBSEQUENT APPOINTMENTS

The intention of this part of the data collection form was to summarise the osteopathic care provided during both second and subsequent treatments. However, in practice it may be a record of the second treatment rather than a summary of all subsequent treatments in the course. An amendment to the wording of the definitive standardised data collection tool is indicated.

4.1 Types of treatments given at subsequent appointments

The types of treatments provided at the second and subsequent appointments continued to be varied and complex. They are shown in Figure 22.

Figure 22.

4.2 Informed consent obtained for specific techniques at subsequent appointments

Informed consent was obtained from 42% of patients for second and subsequent appointments.

Table 29.

4.3 Type of pre-consent information given about examination and treatment at subsequent appointments

Pre-consent

Table 31.

Informed consent	Number	Percentage

4.5 Specific education and advice to inform patients about their condition given at the second and subsequent appointments

Table 32.

4.6 Self-management strategies recommended to the patient at subsequent appointments

A range of self-management strategies were recommended at second and subsequent treatments. They are described in Table 33 overleaf.

Table 33.

Self-management strategies	Number	Percentage
None	152	**9.3**
Application of heat	129	**7.9**
Application of cold	411	**25.2**
Contrast bathing	122	**7.5**
Rest	234	**14.4**
Specific exercise	830	**50.9**
General exercise	304	**18.7**
Vitamin or other nutritional supplements	63	**3.9**
Use of the Back book	6	**0.4**
Use of the whiplash book	2	**0.1**
Natural remedies	24	**1.5**
Naturopathic neuromuscular techniques	3	**0.2**
Relaxation advice	143	**8.8**
Other	155	**9.5**
Total	2578	**158**

4.7 Discussion of possible causes of symptoms at subsequent appointments

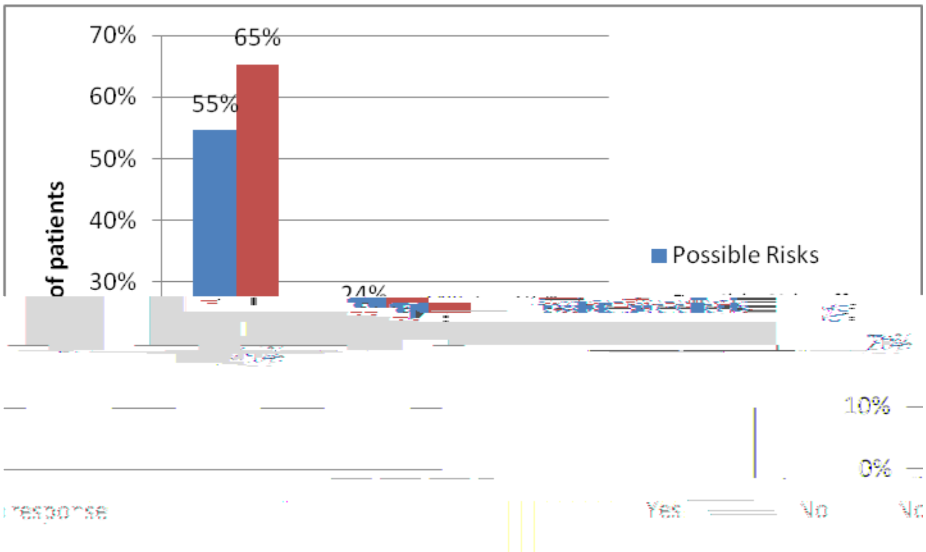
Practitioners were asked to record whether they discussed possible causes of symptoms at second and subsequent appointments.

Table 34.

4.8 Information discussed concerning the possible risks and side effects at subsequent appointments

Information concerning risks and side-effects of treatment was provided at subsequent appointments. Once again, as for the first appointment, more patients receive information on side-effects (65%) than for risks (55%).

Figure 23.



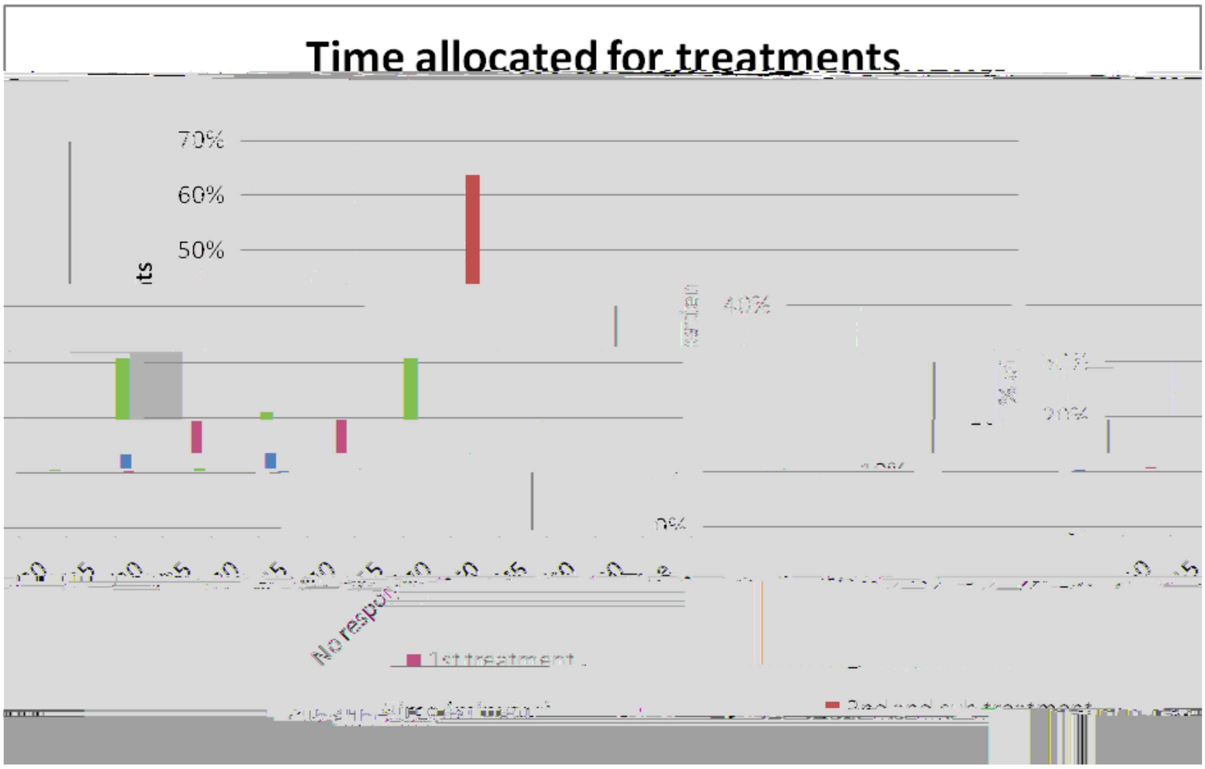
4.9 Responsibility for payment for subsequent treatment(s)

A total of 76.6% of patients were self-funding for second and subsequent treatments. The remaining 8.1% of respondents were funded by other sources.

Table 35.

Responsibility for payment	Numbers	Percentage
Self	1249	**76.6**
Insurance company	101	**6.2**
Employer/own company	11	**0.7**
Referral by NHS	10	**0.6**
Other	10	**0.6**
No response	249	**15.3**
Total	1630	**100**

4.10

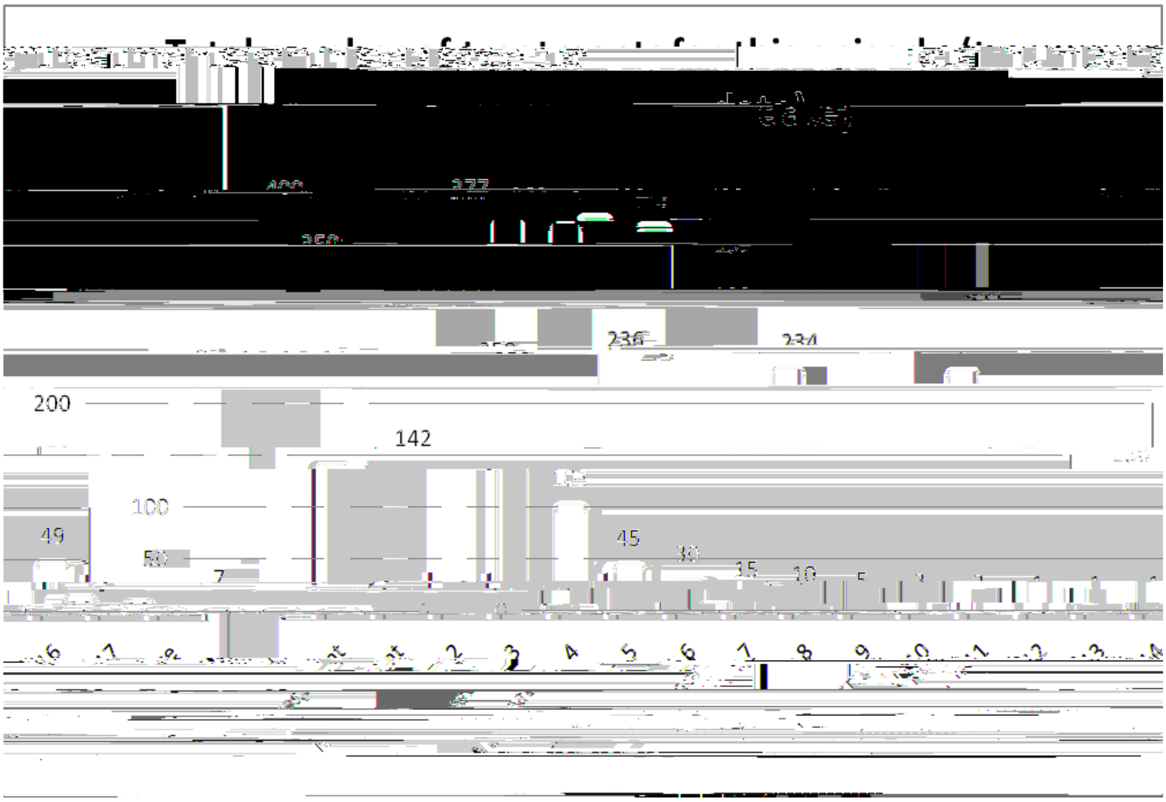


PART 5: FINAL OUTCOME(S) OF CARE

5.1 Total number of treatments for this episode

There were 49 patients with no treatment data. For the remainder, the number of treatments ranged from 1 to 17 with a mean of 3.45 (SD +/- 2.04). There was a slight but non-significant difference in the number of treatments given to the 631 patients discharged after the course of treatment (mean =3.03 treatments) compared to the 631 patients recommended to return for episodic care after their initial course of treatment (mean =3.96 treatments).

Figure 25.



5.2 Complications after further treatment

The wording of this question was a little ambiguous, and could have been interpreted as either continuation of initial reactions, or reactions present at last treatment, or reactions to subsequent treatments. Hence the response cannot be considered to be as accurate as the first report of complications in Part 3.

Table 37.

Complications after further treatment	Numbers	Percentage
None	1260	**77.3**
Increased pain	61	**3.7**
Increased stiffness	71	**4.4**
Dizziness	5	**0.3**
Nausea	4	**0.2**
Headache	12	**0.7**
Fatigue	44	**2.7**
Serious adverse event	0	**0**
No response	68	**4.2**
Other	4	**0.2**
Complications not known	12	**0.7**
Not applicable	130	**8.0**
Total	1617	**103**

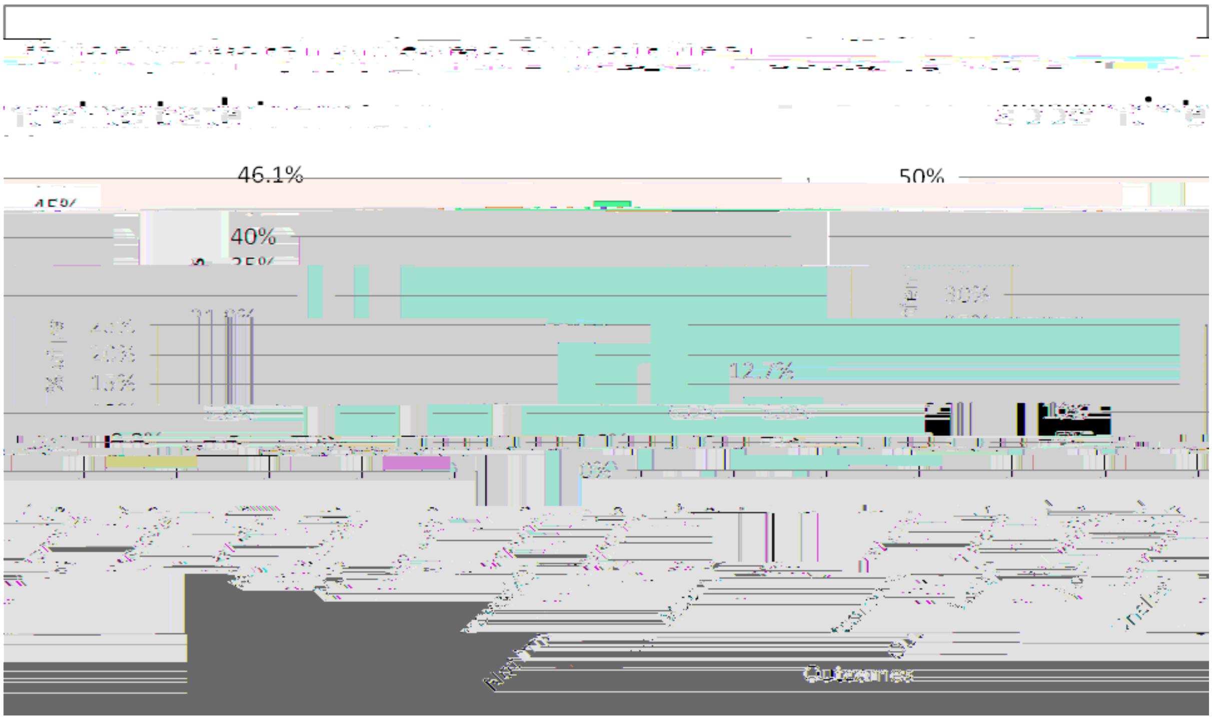
&RPSOLFDWLRQV LQFOXGHG ZLWKLQ WKH ³RWKHU´ FDWHJ increased energy, and soreness for two days after treatment. From the free text responses recorded, these responses indicate reactions after the second treatment and not lasting complications from the first appointment.

5.3 Patients ¶overall outcome at their final appointment

At the end of the course of initial treatment for the episode (or the last treatment before submitting the form), the overall outcome was reported. All but 33 patients completed their initial course by the end of follow-up.

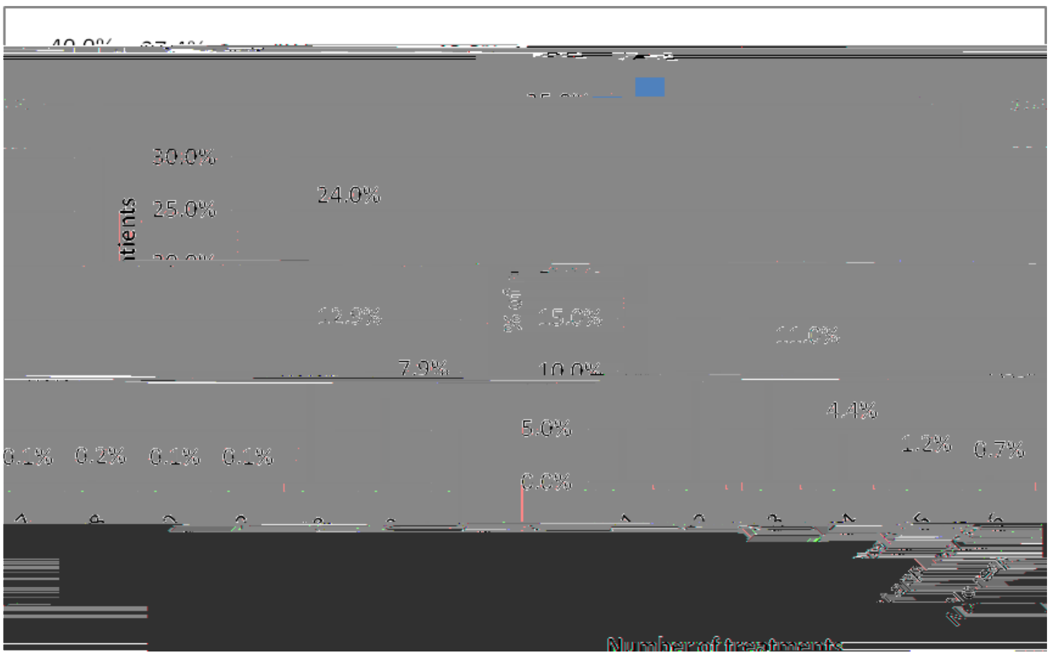
The outcomes below represent reported improvement compared with the outcomes of the first treatment; the PRVW FRPPRQ RXWFRPH ZDV ³PXFK LPSURYHG´ When taken together with the 22% of patients UHSRUWLQJ ³LPSURYHG´ D WR patients in this sample considered they gained some degree of improvement following their course of treatment.

A small proportion, 6%, was not improved but not worse, and 1% was worse. No patients reported being much worse or worst ever at the end of their treatment period.



5.5 The number of treatments before the patient was able to return to work

Only a small number of patients (10.4%) were off work at their first presentation. The small number of patients who were absent from work due to their symptoms were able to return to work after one treatment in 5.3% of cases or two treatment in 3.1% of cases



5.7 The end result of the consultation period

At the end of the follow- up period, all but 33 patients (2%) had completed their first course of treatment for their new episode of symptoms. Practitioners were asked to report what the end result of the consultation period was.   The two most common results were that the patient was discharged (39%) or recommended to return for episodic care (39%). Episodic care is an option that patients may choose, particularly if they have recurrent problems, because it provides on-going contact for advice and suppport. A total of 8% of patients were referred on to another practitoner, or in 2% of cases were referred for investigation while remaining under the care of the practice.

This question was not well completed with a 9.2% non-response rate. Further dialogue with practitioners may be needed to improve completion of this important item.

Figure 30.

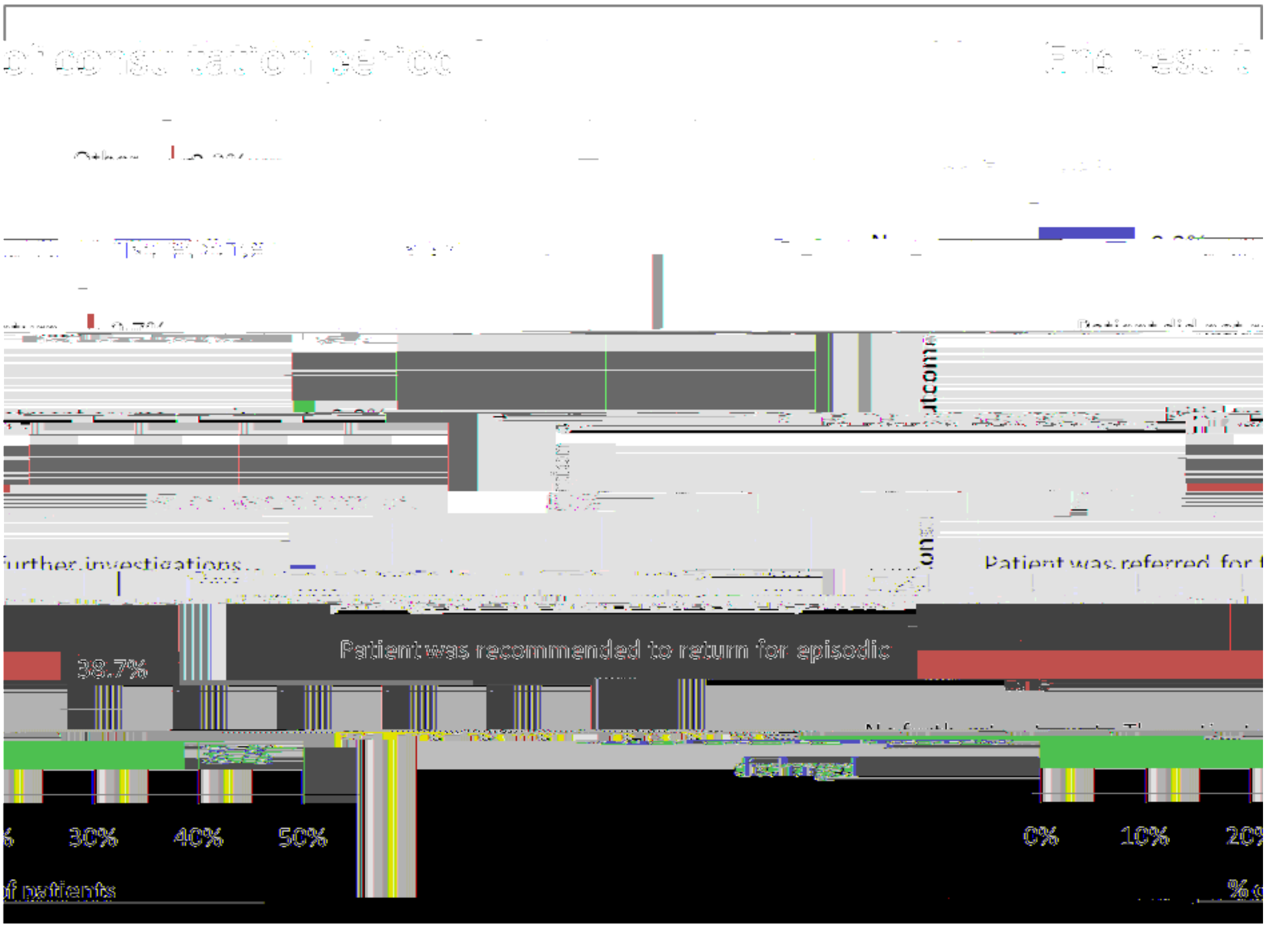


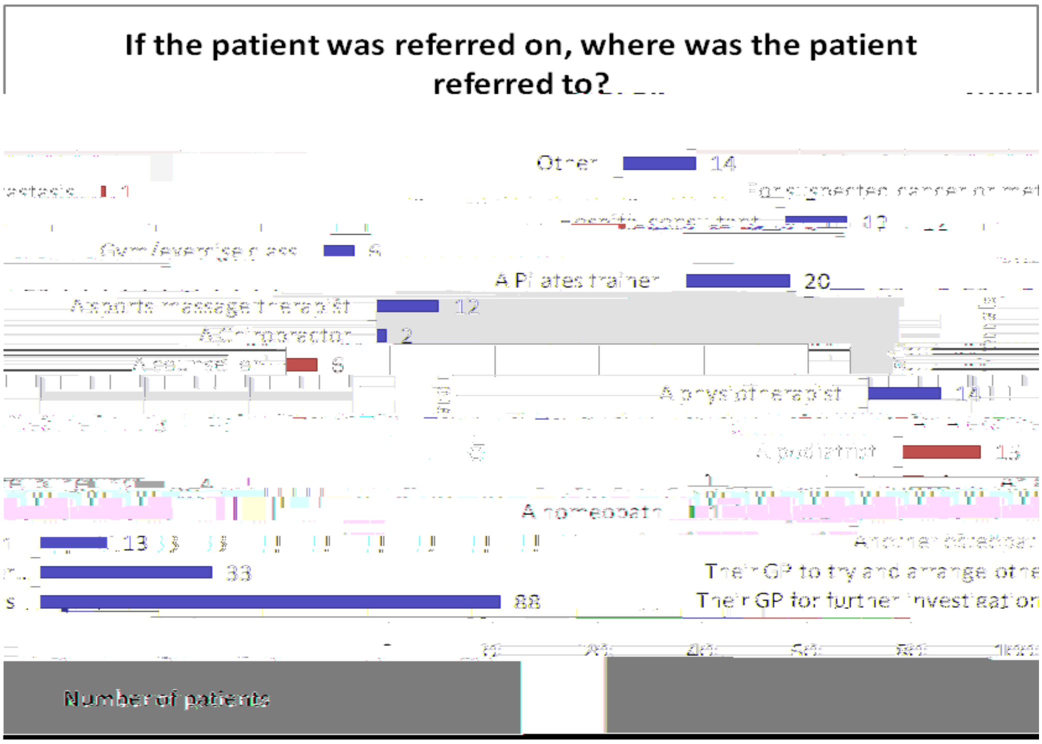
Table 40.	End result of the consultation period	Number	Percentage
	No further treatment. The patient was discharged	630	**38.7**

5.8 Onward referral from the practice

Participants were asked to record where they referred patients. A total of 244 patients were recorded as being referred on by their practitioner to other support or care. This represents onward referral at the end of the treatment course together with referral for adjuvant or parallel treatment with another practitioner. The wide range of other practitioners that osteopaths refer to may U H I O H F W W D L O R U L Q J R I U H F R P P H Q G D W L R Q V W R W K H L Q G L

The majority of onward referrals are to a S D W L H Q W ¶ V GP for further investigation, reflecting the role of the osteopaths integrated within the wider healthcare system.   One further patient was recorded as being referred on with suspected cancer, an important role that osteopaths have reported anecdotally in the past. The entire range of referral destinations is shown in Figure 31.

Figure 31.



9. DISCUSSION

9.1 Introduction

In this chapter, the outcomes of the project as a whole are discussed in terms of building research capacity, the profile of osteopathic care, and implications for the profession. The messages for the profession that emerged from the data are threaded through the sequence of the information presented in Chapter 8, and will now be drawn together. The Figures and Tables mentioned refer to those presented in the Chapter 8.

9.2 Building research capacity in osteopathy

Research capacity within osteopathy has been developed through this project in a number of ways. The development of nine regional NCOR research hubs has drawn research-interested practitioners into training, discussion and active participation in the design and conduct of projects at regional level, and the SDC project at national level. The design and development of the SDC has also involved a Steering Group of other individuals and organisations - the British Osteopathic Association, the General Osteopathic Council, and practitioners with involved in the training and education within the profession. They have had experience of working together, involvement in the development of research capacity through networks and of developing a dataset for the SDC tool through a nominal group methodology.

The concept of a research network as a way of developing research capacity has proved fruitful; considerable valuable experience has been gained, and lessons have been learnt about sustaining a research network within a profession as small as osteopathy ±this remains challenging, and is still evolving.

This data collection project has provided the most detailed cross-sectional profile of osteopathic care in the UK to date. The earlier snapshot survey in 2001 by the GOsC collected socio-demographic details of osteopaths and the patients they saw on a single day. In contrast, the patients described by this survey were homogeneous; they were all commencing treatment for a new episode- and the data about care is much more detailed, with additional follow-up of patients providing some outcome data.

The involvement of the profession in the design of the dataset clearly paid dividends:

However, almost all patients received soft tissue treatment and joint articulation. The use of high velocity low amplitude (HVLA/spinal manipulation)

The fact that outcomes among those with sub-acute and chronic symptoms were almost as good as those with acute symptoms supports the recommendations of osteopathic care as a first line option in the NICE guidelines for early chronic low back pain[10].

9.5 Patient Safety

Little information has been documented concerning the short term response to osteopathic treatment. The only published work addressing short term effects and involving only eight osteopaths was undertaken by Cagnie et al, 2004 in Belgium[139]. The data collection tool has provided some information in an area where data are notably lacking.

Reported side-effects were quite common immediately after treatment. A total of 18% of patients reported stiffness, and 14.6% reported increased pain for the first 24 to 48 hours after treatment. A total of 7.4% did not respond; for a further 0.4% the response was not known, and for 1%,

and 79% of patients respectively (Figure 20) but again the wording of this question was rather general and hence imprecise.

It is important to note that at the time the data collection project, the systematic review of adverse events associated with manual therapies, commissioned by the General Osteopathic Council, had not been published. There was little robust information for osteopaths to base their consent procedures on and, anecdotally, a degree of confusion remains concerning the exact information that should be provided and the appropriate manner to avoid unduly alarming patients while allowing them to make an informed choice about their care. This is an area which is important to all osteopathic stakeholders, but especially patients and would benefit from further work.

A series of issues can be identified from the findings of the SDC project, and areas of future work have been highlighted. These are discussed in greater depth in Chapter 10.

10. C

tool performed well, but others where the questions need re-examination to increase clarity and reduce any danger of ambiguity.

- Participants in the national pilot were volunteers; it would be preferable to produce a future dataset with a random sample of the osteopathic profession.
- The use of a validated and nationally recognised outcome measure (depending on the physical or clinical area being assessed) in combination with the tool would be beneficial.
- All outcome data must be patient completed, and a mechanism to allow this to be undertaken away from practices would ensure that the risk of bias is minimised. The practicalities of such an endeavour and the cost associated would need careful reflection.

10.4 Issues raised

Analysis of the findings identified a number of issues raised by the data. These may direct the profession to areas of future research, or it may highlight areas of activity to be addressed by osteopathic stakeholders.

- Gaining consent is now a statutory requirement but it is clear that this remains an area of considerable confusion for osteopaths as it appears to for other professions. There is a need for clarification based on sound and informed legal opinion concerning the need for verbal and/or written consent information.
- The role of manipulative techniques in older age groups has been documented in general terms but no information is available concerning which area of the body is being manipulated. Safety information on the use of HVLA techniques on this and other age groups is notably lacking.
- The provision of osteopathic care to infants and young children has been documented in the data collection process; 8.6% were under 20 years of age and 5.6% were aged 0-9 years. This is an area of therapeutic provision that requires more work to identify research priorities within this subset of patients.
- The lack of access by patients belonging to different ethnic minorities has been documented. Greater exploration concerning why this has occurred would ensure that equal access to treatment is possible for all ethnic groups, and that appropriate education is given to osteopaths to raise awareness of cultural sensitivities.
- A high proportion of osteopaths have documented that they are recommending exercise to patients. Little work has been undertaken in this area which is not formally taught in all osteopathic educational institutions.

- Osteopaths have documented that they refer to a large number of other healthcare

- There were substantial number of patients who were infants and children, but too few to permit adequate statistical analysis. Further specific research is needed to establish the presenting symptoms, treatments given and outcomes in this age group. Data collection involving infants and children will help to identify the key research priorities for this patient group.
- Investigation of the exercise regimes/advice being offered by osteopaths would be a helpful area of investigation. The inclusion of exercise in the management of patients is notably present in many clinical guidelines. It is important that the advice and recommendations by osteopaths are not only evidence based but appropriate and effective for patients[165,166].
- The need for care among older patients with chronic conditions is rising due to changing population demographics. Many elderly patients report anecdotal benefit from osteopathic care but no data exists concerning what the benefits are and if this is reflected in reduction

as all of the work commissioned by the GOsC reaches its conclusion. The final piece of work, the Clinical Risk Osteopathy and Management (CROaM) study, will build on the outcome data concerning complications of treatment identified during the national pilot data collection project[167].

ƒ $ WRWDO RI RI SDWLHQWV ZHUH UHFRPPHQGHG E\ V
FDUH´ DOVR UHIHUUHG WR DV ´PDLQWHQDQFH FDUH´ WHUP FDUH WUHDWPHQWV E\ VRPH RVWHRSDWKV Some osteopaths advocate long term management of patients as a positive aspect for the profession, while others felt this would be a barrier to the inclusion of osteopaths in the NHS and promoting their activities to insurers and other health commissioners who do not advocate the use of long term care[168,169]. Research in this area would be helpful to identify what benefits patients with recurrent symptoms, especially within an older age group, report from long term care.

10.8 Dissemination strategy

An abstract for the first intended paper for the International Journal of Osteopathic Medicine (IJOM) has been produced and is available in Appendix 9; this describes

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Appendix 1 Search strategy for literature review for development of SDC data collection tool

Search terms were developed from discussion within the project team, existing experience and from consultation with colleagues who had worked on similar projects. Terms were categorised using the PICO format devised by Glasziou *et al*, 2003[55].

P (Patient or population)
I (Intervention or indicator)
C (Comparator or control)
O (Outcome)

Search terms included:

- Population: Osteopath*, physiotherap*, manual therap*, chiropract*, physical therap*, primary care, family care, family pract*, general pract*, nurs*, osteopathic medicine (MeSH)

- Intervention or Indicator: data collect*, standardi$*, instrument*, tool*, medical record*, case record*, clinical record*, record keeping, physician progress note*, clinical evaluation, examin* form*, outpatient form*, short note form*, case history, patient notes, handover, morning report, electronic medical handover, electronic health record*, electronic patient record*, standardi$ed operating protocol, patient assessment*, single organ system, standard* operating system, MSEF, musculoskeletal examination form, proforma*, web?based data collection, on?line data collection, medical records/standards (MeSH), continuity of patient care/standards (MeSH), forms and records control (MeSH), musculoskeletal diseases/diagnosis* (MeSH), osteopathic medicine/standards*(MeSH), physical examination (MeSH).

- Outcome: quality framework, pain, mobility, quality of life, practice profile, demographics, outcome* of care, statistics and numerical data (MeSH),

Terms limiting hits to those with abstracts were not included. No limits were applied for language and date limits included literature from inception of the database to present. The search was repeated during the life of the project to detect newer literature within this topic area. Boolean operators were used where appropriate (depending on the database) to produce focussed and manageable search strings.

A bibliographic framework was plotted to facilitate the research strategy. The framework is described below.

amount of relevant material available. Pearl citation searching was utilised and hand searching of old osteopathic journals was also undertaken.

Author searches were carried out and reference lists were examined to identify any additional sources of evidence.

Appendix 2 Members of SDC Project Steering Group

Appendix 3 The data collection form used in the project -

Part 2: FORM for PRACTITIONER COMPLETION	
1. Practitioner code	2. Date of first appointment

3. Symptom areas: Please record up to three areas in order of priority

1 = Head/facial area	12 = Lumbar
2 = Temporo-mandibular	13 = Sacroiliac/pelvis/groin
3 = Neck	14 = Gluteal region
4 = Shoulder	15 = Hip
5 = Upper arm	16 = Thigh/upper leg
6 = Elbow	17 = Knee
7 = Forearm	18 = Lower leg
8 = Wrist	19 = Ankle
9 = Hand	20 = Foot
10 = Thoracic spine	21 = Abdomen
11 = Rib cage	2WKHU ««««««

4. How long has the patient had their current symptoms ZLWK WKLV HSLVRGH" ««« ZHH

5. Type of onset of symptoms? Tick one option

… Acute onset

MANAGEMENT and TREATMENT

First appointment

9. Was this patient suitable for osteopathic treatment? … Yes … No

10. What treatment has been given to the patient today?

… No treatment	… Education
… Soft tissue	… Relaxation advice
… Articulation	… Steroid Injection
… HVLA thrust	… Acupuncture
… Cranial techniques	… Dietary advice
… Muscle energy	… Exercise
… Strain/counterstrain	… Orthotics
… Functional technique	… Other (please name)
… Visceral	
… Myofascial release (MFR)	

27. What other education and advice have been given to the patient to inform them about their condition? Please record all that apply

… Anatomical information
… Possible risk factors associated with a recurrence of symptoms
… Anticipated response to treatment
… Anticipated number of treatments
… Advice concerning physical activity

36. 'LG \RX FRQWDFW WKH SDWL 37. 9

of treatment? Tick one option

… Yes since patient was referred to practice by GP

… Yes since GP had requested information

… Yes to request further information or investigation

… Yes for referral for other treatment

… 1R WKH SDWLHQW¶V *3 ZDV

HEIGHT CONVERSION CHART for adults				WEIGHT CONVERSION CHART for adults				
ft* in*	m*	ft in	m	st* lb*	kg*	st lb	kg	st lb

Source:
http://www.hantspt.nhs.uk/sys_upl/templates/AssetBrowser/AssetBrowser_disp.asp?ItemID=3069&basketPage=&basketItem=&pgid=7132&tid=146&page=1

Abbreviations: ft = feet; in = inches; m = metres; st = stone; lb = pounds; kg = kilograms

Appendix 4 Guidance notes for the SDC form, version 1.0

National Council for

Thank you for taking part.

Backgrou nd to the questions being asked on the SDC form

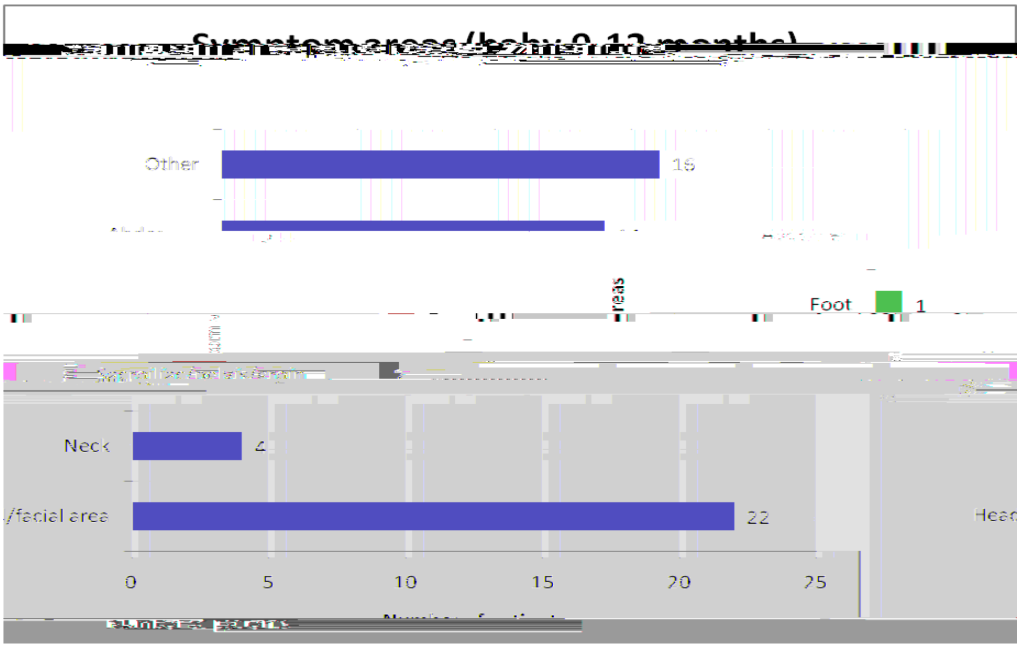
Introduction

Part 2: Practitioner completed form

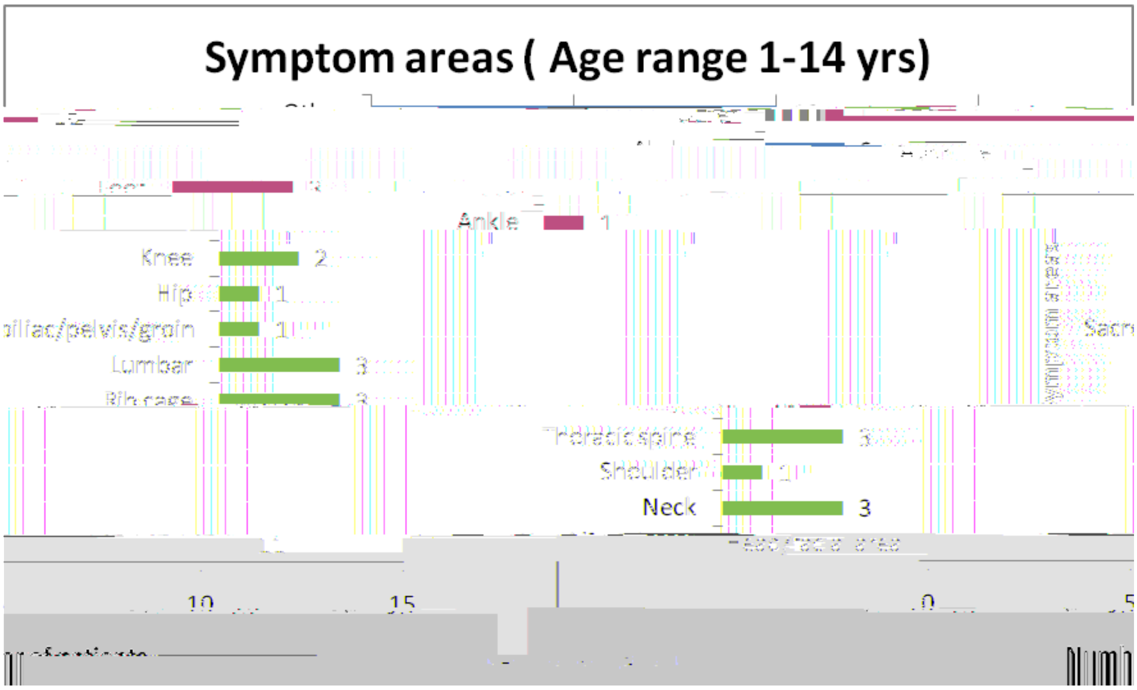
Question 3: Symptom areas
It is important that the three main areas of symptoms are recorded. It is recognise

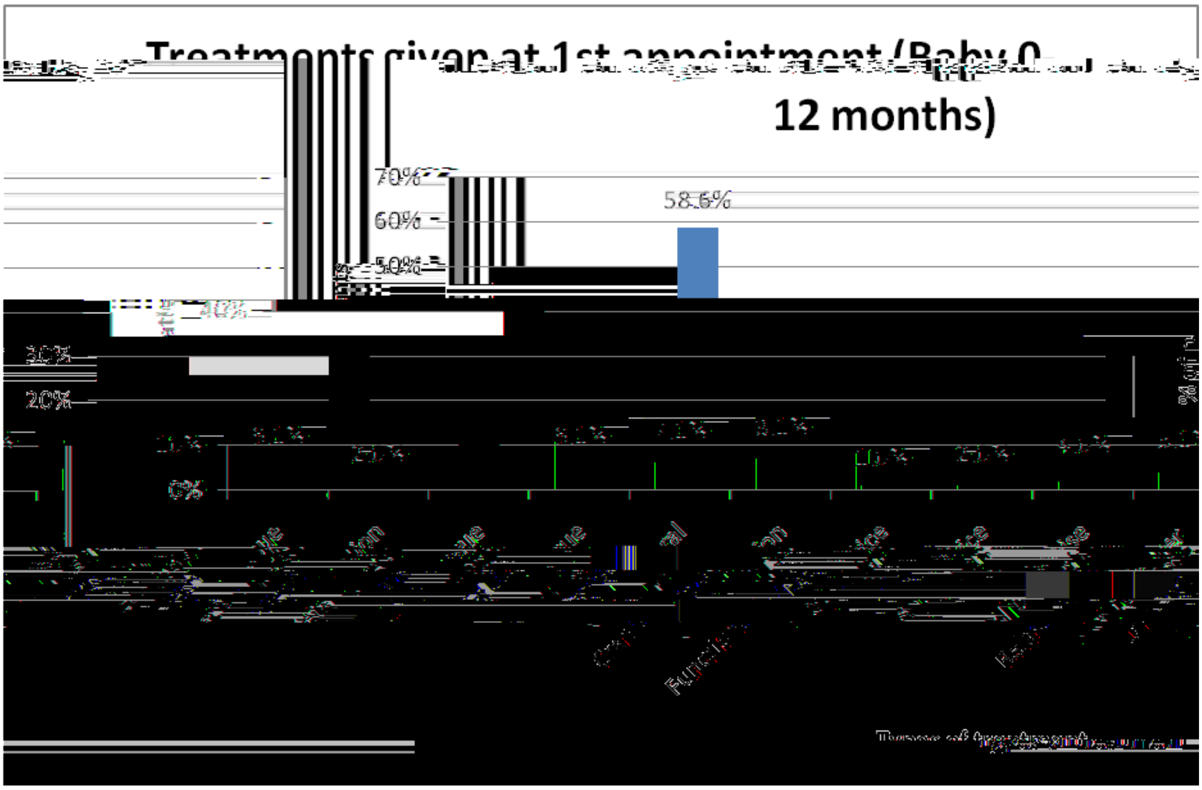
Appendix 5 Symptoms and treatments of babies and children

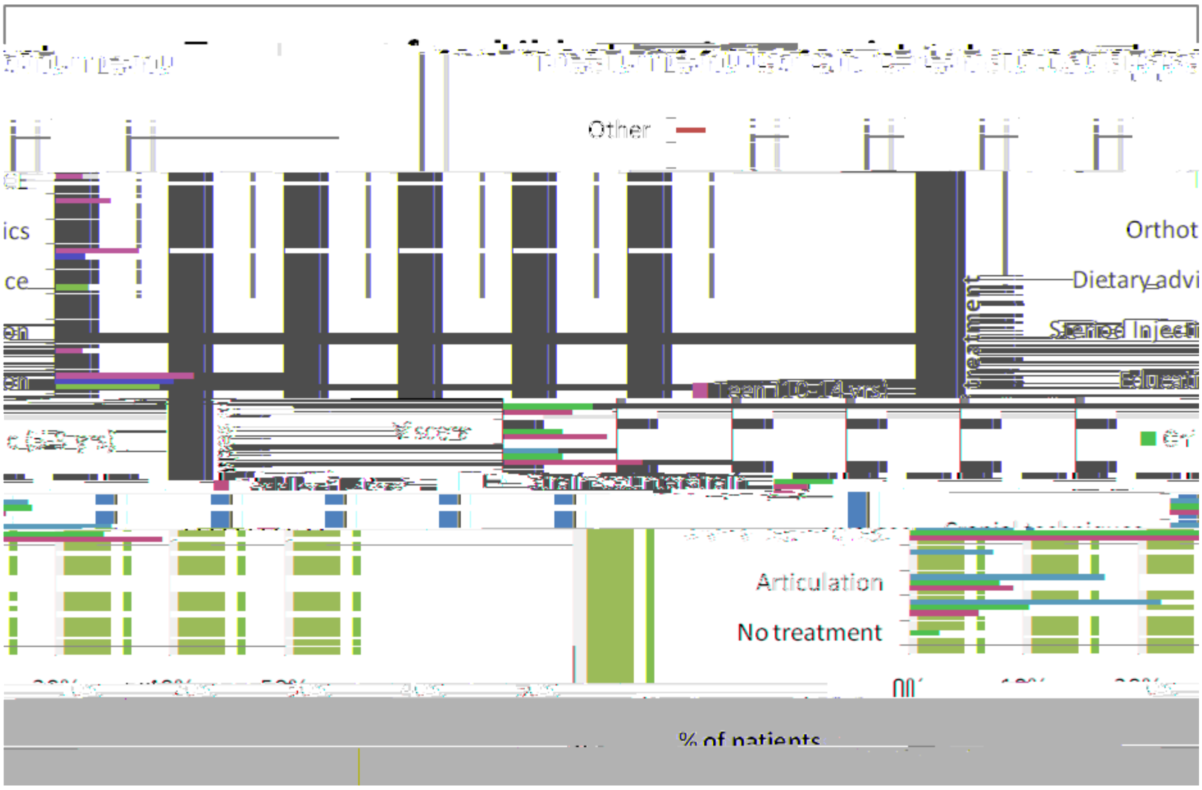
The profile of symptoms and treatment for babies and for children was extracted separately. The numbers are small and do not distort the overall picture. The graphs show numbers of patients rather than percentages.



The children included below were between 12 months and 14 years. The older teenagers 15-19 had a more adult profile of symptoms so were not included.




12 months)
70%
60%
50%
58.6%
30%
20%
0%


Other
Orthot
Dietary advi
Teen (10-14 yrs)
Articulation
No treatment
% of patients

16. How long did the patient have to wait for the first appointment to be offered?

… Same day … 2-3 days … 4-7 days … 8 d

Part 3: Information and Consent

(

Appendix 7 ±Modified guidance notes for SDC tool version 2.0

National Council for

Part 4: 7KLV VHFWLRQ UHODWHV WR LQIRUPDWLRQ JDWKHUH
appointment.

Qu. 38. Complications of treatment
This question relates to findings documented in research studies including the work by Cagnie, Vinck, *et al*. looking at common side effects of manual treatments.

What happens if I need help?

If you have any problems while trying to complete the data collection tool, please contact the project officer, insert name by telephone or email. Contact details are given below.

*Clinical Research Centre for Health Professions
Aldro Building, University of Brighton
49, Darley Road
Eastbourne
East Sussex
BN20 7UR
Telephone: 01273 643457
Email: insert email address

Appendix 8 Dissemination strategy

Dissemination of this study is planned in a series of stages.

Tool development process

Considerable feedback was received from osteopaths involved in the project and this, in combination with the data analysis, has indicated where some further changes could be made to the standardised data collection tool for future use in snapshot surveys. A definitive version of the tool has been created since the completion of the final pilot phase of the project.

Conclusions: Early analysis has provided interesting pilot data concerning the profile of UK osteopathy. This data will be used to assist the continued development of the profession by indicating future research priorities, and support osteopaths who wish to learn more about their practices and are aiming to expand their practices into other healthcare arenas e.g. the NHS. This project was made possible through funding by the General Osteopathic Council.

Appendix 10 Report for the profession and guidance on how to use the data

The Standardised Data Collection (SDC) project 2009

Report for the osteopathic profession

Authors: Carol Fawkes, Janine Leach, Shirly Mathias, Ann P. Moore

University of Brighton

CONTENTS

The project has provided baseline pilot data for comparison with future snapshot surveys, as well as providing robust information about a number of important issues relevant to professional practice, policy, regulation, and future research. The evidence presented here may be used by practitioners and professional organisations to provide information about osteopathy and osteopathic care to the general public, commissioners and government organisations. The pilot data should not be used in isolation to support advertising claims made by individual practitioners.

1 Introduction

The aim of this report is to provide positive benefits for the UK profession from the SDC project, by providing information for practices about the project ¶ V results, and to show the variety of uses of that data, including

™ en

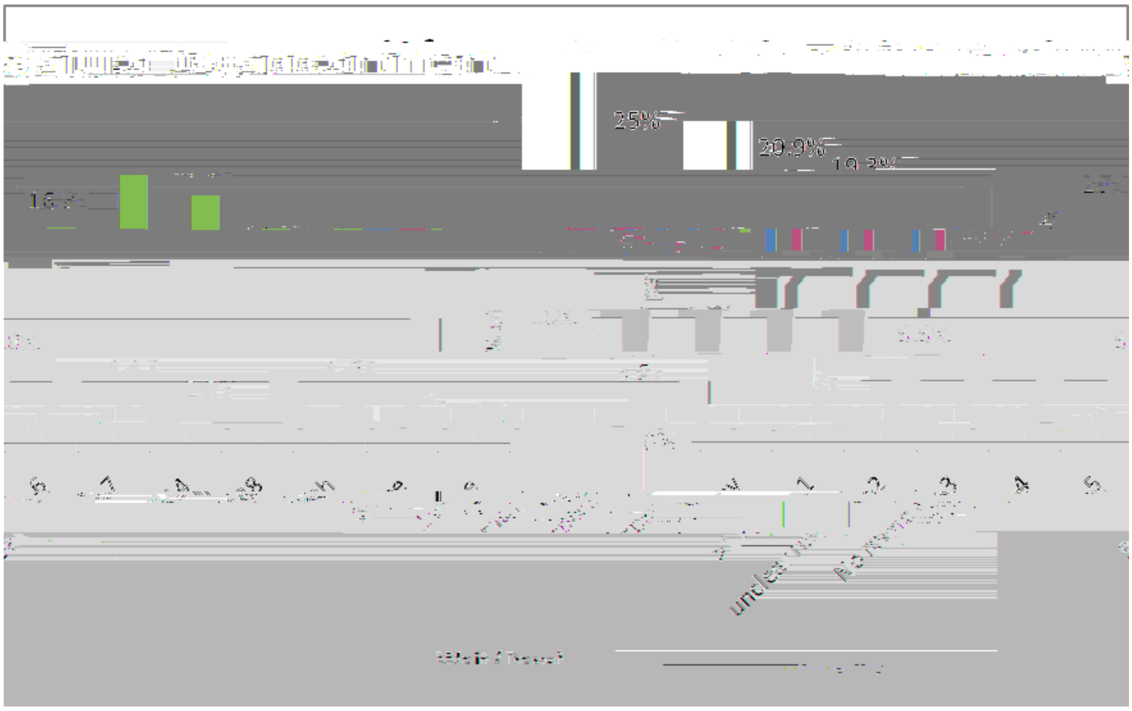
4 Profile of osteopathic care

The results supported the view that osteopaths predominantly treat musculoskeletal conditions. As shown in Figure 1, low back problems (lumbar spine and pelvic problems) comprised over 40% of presenting symptoms, with cervical spine, shoulder and thoracic spine problems comprising a further 28%

unwelcome source of confusion for members of the public. However, a

The data provided evidence that osteopaths were providing a patient-centred service. The waiting times for treatment were short, with 84% patients seen within one week (Figure 3). The patients received long consultations, normally 30-60 minutes for the first appointment and 30-45 minutes at subsequent appointments.

Figure 3. Waiting time for first appointment offered

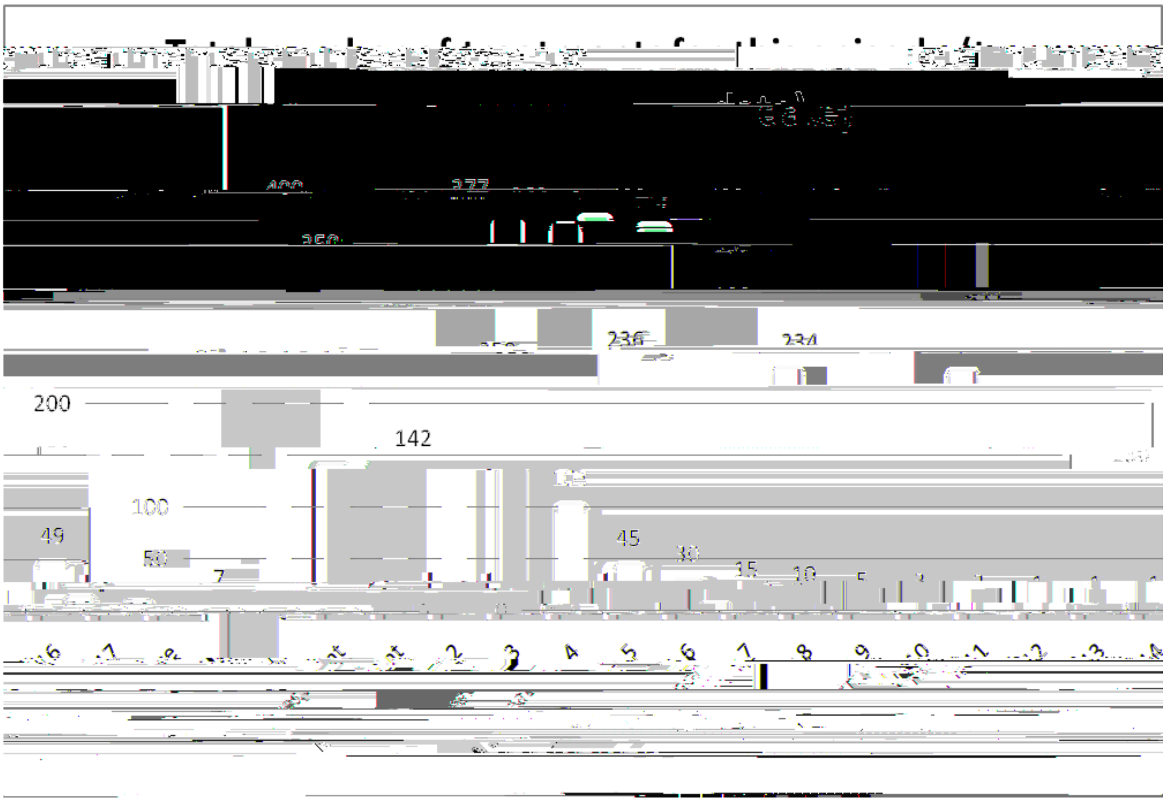


The majority of consultations included education (73%) and information-giving (84%) (Figure 4) as well as advice on self- management strategies (88%), with many patients being given more than one strategy to try (Figure 5).

Figure 4. Information-giving about possible risks and side effects

The number of treatments until discharge or the end of the initial course represents a measure of outcome and is useful for evaluating cost-benefit: the number of treatments ranged (Figure 6) from 1 to 17 with a mean of 3.45 (SD=2.04) treatments to discharge.

Figure 6.

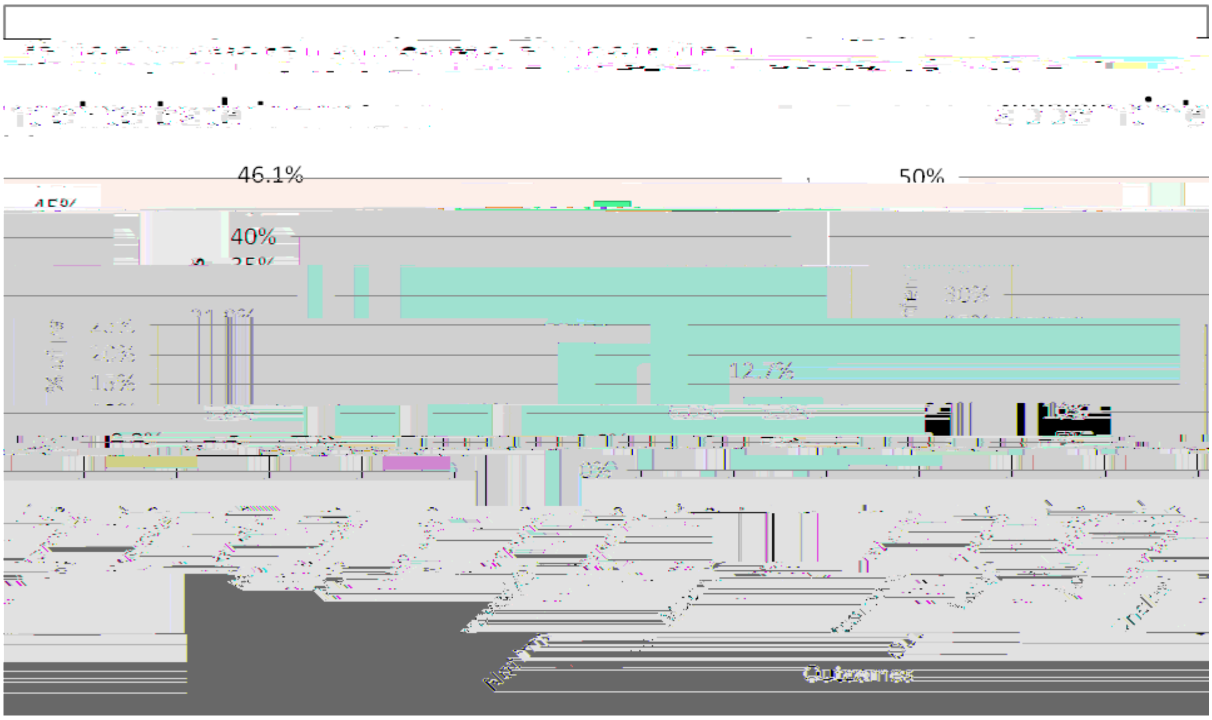


There is scant data on the cost per consultation in the UK, but in most geographical areas it is thought to be in the range £25-£50, making the thought to ht ht, it v.37 DC

Figure 7. **Number of treatments required for immediate relief of symptoms**

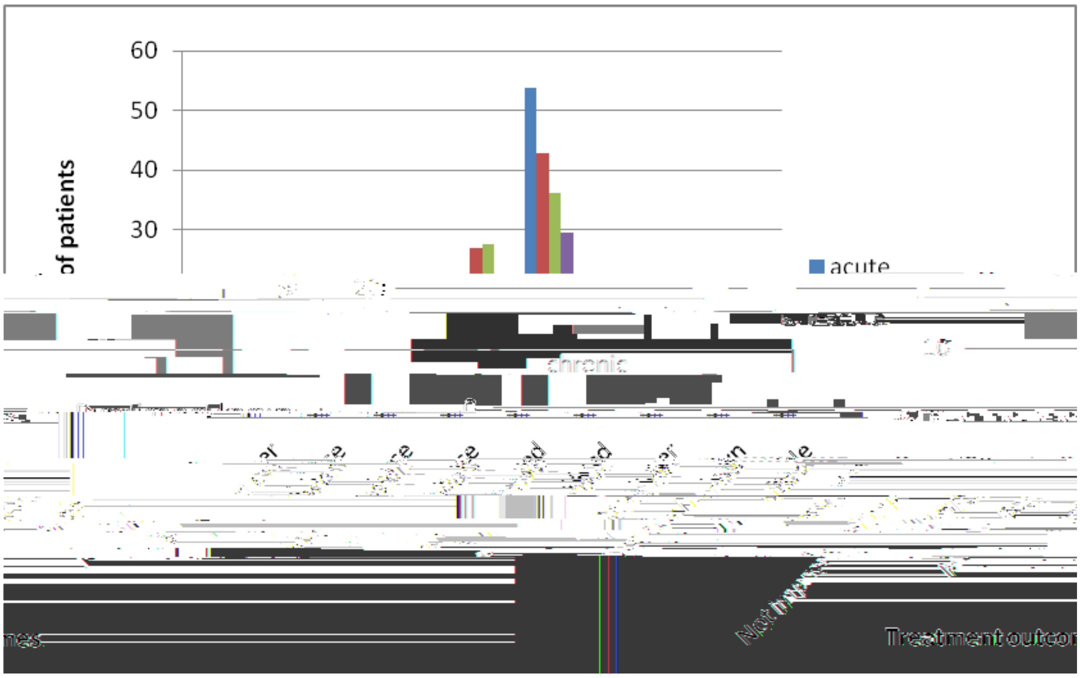
A simple patient-reported outcome scale was used which asked patients to tick whichever box

Figure 8.



Outcomes were compared, after sub-dividing the patients according to duration of symptoms at presentation. As shown in Figure 9, outcomes among those with sub-acute and chronic symptoms were almost as good as those with acute symptoms. This result supports the recommendations of osteopathic care as a first line option in the guidelines published by the National Institute for Health and Clinical Excellence (NICE) for the early management of chronic non-specific low back pain[10].

Figure 9. Overall outcomes at final appointment, by duration of symptoms at presentation



6 Patient Safety

Reactions to treatment were reported more frequently by patients after the first treatment than after the second and subsequent treatments (Table 1). The reactions that were reported were minor and transient after the first treatment and included stiffness (18%), pain (14.6%), fatigue (6.6%), headache (2.3%), dizziness (1.5%), or nausea (0.7%. These figures are comparable to those reported in the literature[12,13]. No serious effects were reported.

Table 1

Complications reported after Treatment	Percentage after 1st treatment	Percentage after 2

7KLV ZDV UHFRUGHG LQWLURHQHD OW HU[HWV SDRVQ VD HQ´ ³ HWPKRLV ZDV represent an adverse event as defined commonly in the literature.

7 Equality and diversity in access to care

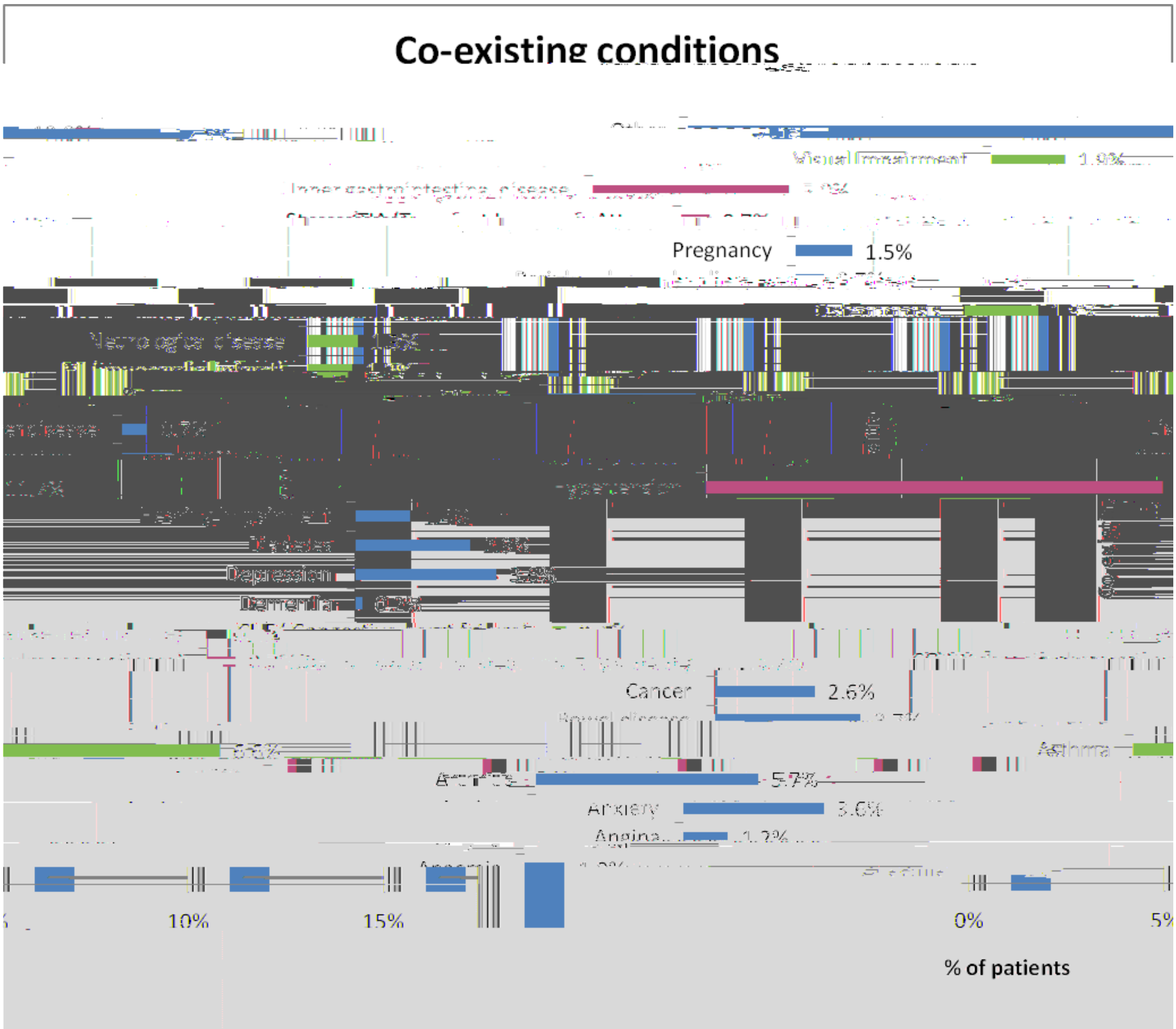
The gender profiles showed that osteopathy was accessed equally by men and women. While the age distribution of patients (Figure 10) showed that people of all ages from birth to octogenarians used osteopathy, it also showed that users were concentrated in those of working age, the peak in the distribution spanning ages 30-59 years, with the mean at age 45 years. In addition, the data showed evidence of the popularity of osteopathic care for infants: of the 91children aged 0-9 years, 58 (64%) were babies of 0-12 months old.

For example, the age profile of patients does not resemble the frequency of musculoskeletal problems within the population, and suggests that the elderly may be particularly disadvantaged in accessing osteopathic care.

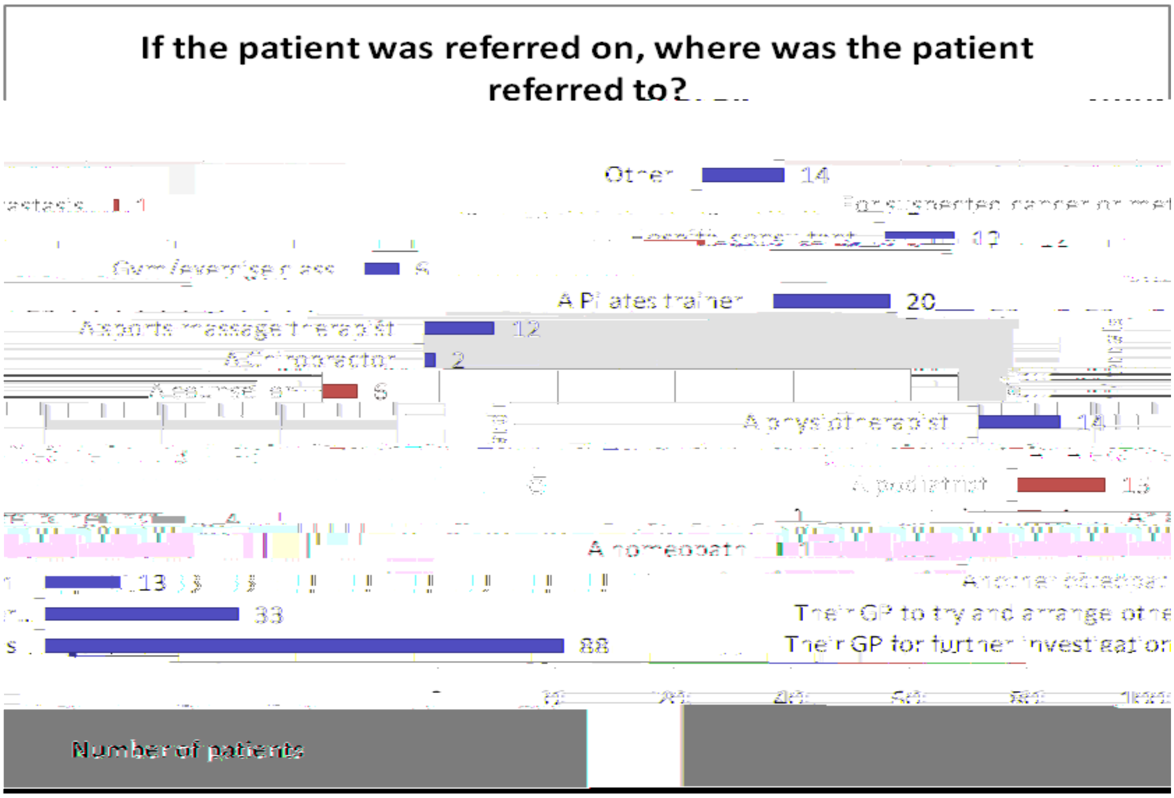
The ethnic profile of osteopathic patients showed that the vast majority (94%) of patients were white British or white European, and a slightly lower proportion of ethnic minorities compared to the UK population as a whole. The data raises questions about whether under-representation of ethnic minorities is because so little osteopathic care is paid for from the public purse. Investigation of the reasons for the lack of ethnic diversity would be helpful.

The data on co-morbidity confirmed that the general health of the patient sample was good, with recorded co-morbidity in only 13% of the sample (Figure 11).

Figure 11.



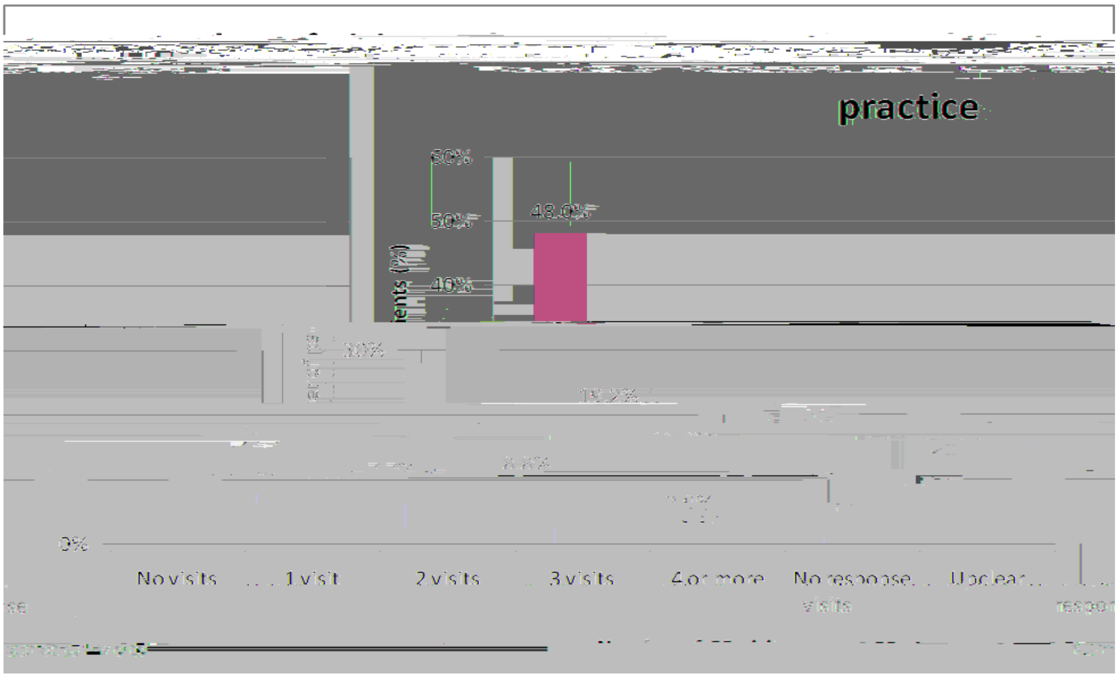
In summary, the data suggest possible



Practice which requires osteopaths to work with other healthcare practitioners and refer patients on if appropriate. The variety in the routes of onward referral (Figure 12) suggested that patients were offered choice. The data also confirmed anecdotal reports of osteopaths detecting suspected malignancy and referring patients appropriately for further investigation or treatment.

Almost half of the patients (48.1%) had visited their GP prior to visiting the osteopath (Figure 13). In contrast, only 6% had been referred to the osteopath by their GP and only 0.6% of patients were paid for by the NHS 7KH SDWLHQWV¶ *3 ZDV FRQWDFWHG GXU 10.1% of patients; for 6.4% this represented a request for further information or investigation, or a referral requesting other treatment.

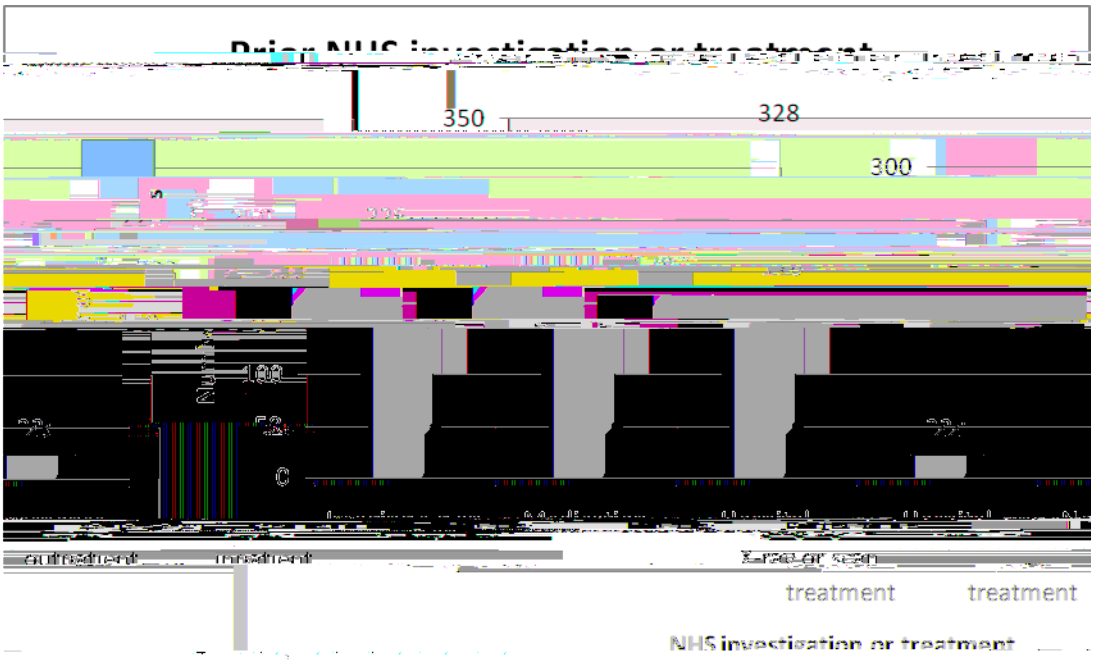
Figure 13



9 Cost-effectiveness and NHS resources

While the NHS was paying for the osteopathic treatment of only 0.6% of patients in the sample, the patients reported considerable use of other NHS resources prior to attending the osteopath for their symptomatic episode (Figure 14), with 29% of patients having received NHS treatment or investigations, a few of these being for hospital in-patient treatments.

Figure 14. Use of NHS resources



A small number (6%) of patients were on an NHS waiting list for treatment, and 23% of these had been waiting for NHS treatment for more than 2 months. In view of the favourable outcomes reported by even those with chronic symptoms, these data raise significant questions about whether early referral to an osteopath could potentially lead to significant savings to the NHS. A targeted research study investing this specific question would be required to support this.

10 Sickness absence and return to work

Most people using osteopathic treatment (86%) were able to remain at work whilst under-going their course of treatment (Figure 15). Some 13% were off work at their first appointment, most for less than 1 week. Those patients that were off work were able to return to work within 1-3 treatments (Table 3).

Figure 15. Sickness absence

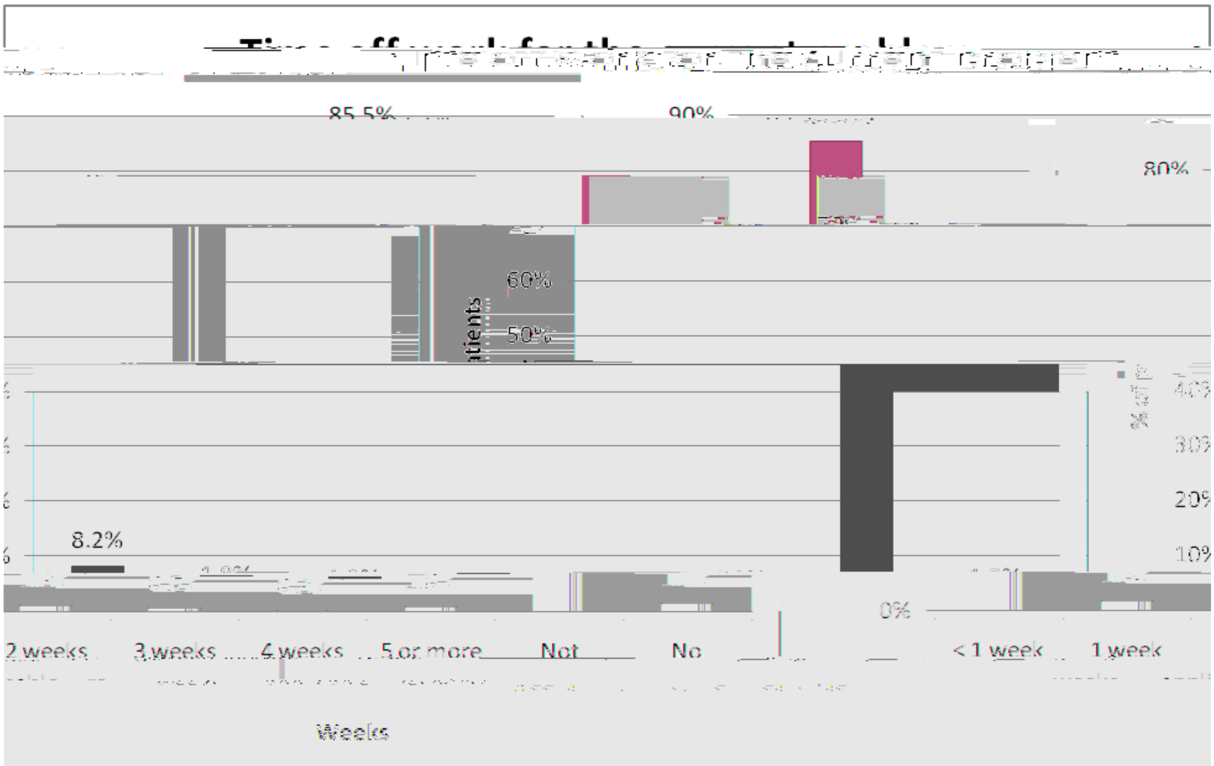


Table 3. The number of treatments before the patient was able to return to work

Number of Treatments	Number	Percentage
1	86	**5.3**
2	51	**3.1**
3	18	**1.1**
4	11	**0.7**
5	2	**0.1**
10	1	**0.1**

Chronic sickness-absence was rare in this sample of patients; only 1% of patients were referred by their employer. In view of the favourable outcomes suggested by the data for chronic symptoms, there would appear to be a potential opportunity for marketing by the profession among employers.

11 Practice management issues

Figure 16. Informed consent for examination

Consent for treatment using specific techniques was obtained from 57% of patients at first treatment (Table 4) and 42% at subsequent treatment.

Table 4. Informed consent for treatment using specific techniques

Information about the risks and side effects were reportedly given to 63% and 79% of patients

The data from the standardised data collection provided evidence about current osteopathic care in the UK. Important messages emerged from the data about possible inequity of access to osteopathic care, the quality of osteopathic care, favourable outcomes, the active role of osteopaths in the wider healthcare arena, and the possible potential for osteopathy to offer savings of NHS resources, and to aid employers with long term sickness absence.

14 Implications for research and future use of the current dataset

The dataset will be available as a resource for future research, with appropriate permission from the sponsors. Individuals or organisations will be able to apply to NCOR and the University of Brighton, the research sponsor, if they wish to use the data or the results for any specific purpose.

The results have raised a number of important questions about practice that can only be fully

This report represents dissemination to practitioners, and this will be utilised as the basis for wider dissemination through shorter articles in The Osteopath and Osteopathy Today.