Measuring patient outcomes after osteopathic care using Patient Reported Outcome Measurement (PROMs)

Understanding the problem

- Musculoskeletal disorders continue to be a leading cause of disability worldwide;
- Little is known about patient outcomes from day-to-day osteopathic patient care;
- Earlier snapshot data provide some information about osteopathic practice but not over an extended period.

There is a need for osteopaths to collect robust outcome data from their patients about the care they give to allow reflection and promote good patient management. Patient data will help the osteopathic profession and individual osteopaths understand more about the response patients have to treatment and ultimately improve patient care.

Aims and objectives

To develop, pilot, and implement a web and mobile phone application (app) facility for collecting PROM data to form a national database of information about patient outcomes against which individual practitioners can compare themselves (the national standard).

Service description

The app contains 16 questions at baseline, and 10 at follow up for patients to complete. Baseline data are collected prior or just after the patient’s initial consultation, and follow up data are collected at one week and six weeks post-treatment. Patients complete the questionnaires independently from their osteopath to avoid social desirability bias in their answers, this enables us to obtain more accurate outcome information. The app is available for Android and iOS operating systems, and the questionnaire takes approximately 5-10 minutes to complete.

Method and approach

Interviews with patients (n=18), and clinicians from different manual therapy disciplines (n=46) helped with the design of the app. In addition a systematic review of PROMs questionnaires properties were used to inform the content and questions contained in the app. The initial version of the app was piloted for acceptability, usability, and performance. We got data from 404 completed questionnaires to evaluate the reliability and responsiveness of electronic versions of the PROMs in the app.

After analysis of pilot study data and interview feedback, the app was refined to include questions about the patient, their symptoms and the Bournemouth Questionnaire alone as the PROM of choice. This is a composite measure containing seven questions exploring five domains: painful symptoms, pain control, activities of daily living, social activity, effect on work, and depression and anxiety). It is scored on a scale from 0-70 with increasing scores reflecting worsening symptom experience.

Results and evaluation

The PROM app has been implemented into osteopathic practice on a voluntary basis. Data collected is now in excess of 2500 datasets (at July, 2019).
Patient profile

- Nearly half (47%) of all patients were offered an appointment within 48 hours of contacting the practice;
- More osteopathic patients are between 50-59 years old (25%) than any other age group;
- Most patient were employed or self-employed (69%);
- Nearly half (49%) of all patients had acute symptoms (6 weeks or less) and 39% had chronic symptoms (more than 12 weeks);
- A third (33%) of patients had multiple symptoms areas (3 or more);
- The most common symptom problem area was low back pain (58%), followed by the neck (37.9%), shoulder (34.4%), upper back (21%) and knee (10.2%).

Patient response to treatment

<table>
<thead>
<tr>
<th>Bournemouth Questionnaire scale 0 – 70 (worst possible)</th>
<th>Baseline</th>
<th>One week post-treatment</th>
<th>Six weeks post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of scores</td>
<td>2-61</td>
<td>0-54</td>
<td>0-32</td>
</tr>
<tr>
<td>Mean scores</td>
<td>31.1</td>
<td>15.5</td>
<td>14.0</td>
</tr>
<tr>
<td>Percentage change score</td>
<td></td>
<td></td>
<td>55.8%*</td>
</tr>
</tbody>
</table>

*A change score of 55.8% represents a significant improvement in symptoms based on work by Gurden et al.5*

Key learning points

- The project has enabled osteopaths to reflect on their practices and compare their findings against the national dataset as part of their continuing professional development;
- 93% of patients reported improvement in symptoms;
- 66.1% of patients were either completely recovered or much improved at six weeks post-treatment;
- 77% of patients had between 1-3 treatments;
- 96% of patients were self-funded;
- 89% of patients were very satisfied with their care;
- 94% experienced ‘very good’ care.
- Electronic data collection with PROMs (ePROMs) are easy to use in practice and acceptable to patients.

Plan for spread

The PROMs system continues to be developed and is now suitable for collecting data about paediatric patients. The system has undergone translation and is now being used in Belgium, Germany and Switzerland.

Key contacts: Dr Carol Fawkes (c.fawkes@qmul.ac.uk). National Council for Osteopathic Research