Presence and status of the osteopathic profession worldwide
How big is the osteopathic profession?

• What potential contribution do osteopaths and osteopathic physicians make to public health care delivery.
Worldwide survey 2020

Osteopathy is a growing profession: Since 2013 numbers have increased:
  - osteopathic physicians by 34%
  - osteopaths by 84%

In total there are an estimated total 196,861 clinicians delivering osteopathic care worldwide in 46 countries.
There are around 117,559 registered osteopathic physicians or physicians with additional training in osteopathy.
There are 79,302 osteopaths:
  - 45,093 are statutorily regulated and registered osteopaths
  - 34,207 osteopaths are not statutorily regulated and registered but may be registered with voluntary registering organizations.

Osteopathic physicians are statutorily regulated and can obtain a license to practice medicine in 57 countries.
Osteopaths are statutorily recognized as healthcare professionals and regulated by law in 13 countries.
Osteopathy is either not recognized or regulated by governmental statute in 22 countries, where registration is voluntary.

NB Difference between osteopaths and osteopathic physicians and
NB Difference between statutory and non-statutory: regulation, registration and recognition
Worldwide survey 2020

We estimate each year:

• Around 226 million osteopathic treatments are delivered worldwide

• To around 38 million people

• There is scope for more growth (osteopaths per 100,000 range from <1 to 49)
How well educated are osteopaths?
Education

• At least 6 countries offer osteopathic physician training
  • (post and undergraduate)

• ~20 countries offer courses to train students to deliver osteopathic care
  • In most countries a minimum Bachelor level education is delivered

Where osteopathy is regulated CPD is a conditional requirement for continued registration
Profiling osteopaths and osteopathic care
What are osteopaths and how do they work?

• We need to clearly describe what we are to other health care professionals and the public.
We found information profiling osteopathic care from the following countries:

• Australia
• Belgium
• Canada
• Germany
• Italy

• Luxembourg
• Netherlands
• Spain
• Switzerland
• UK

COME collaboration OPERA project
<table>
<thead>
<tr>
<th>Country</th>
<th>Mean/ median Age</th>
<th>% Female</th>
<th>Years experience</th>
<th>Works on own most or all of the time</th>
<th>Patients seen per week</th>
<th>Time spent with patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>38</td>
<td>58</td>
<td>11.4 years (mean)</td>
<td>16.3</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Belgium, Luxembourg</td>
<td>40-49</td>
<td>31</td>
<td>Belgium 12.2 years Luxembourg 8.1 yrs</td>
<td>51%</td>
<td>31-35</td>
<td>30-60 minutes</td>
</tr>
<tr>
<td>Canada</td>
<td>66</td>
<td>0-10 yrs 51% &gt;11 yrs 49%</td>
<td>55 minutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>48</td>
<td>57</td>
<td>8 years (median)</td>
<td>58%</td>
<td>30</td>
<td>30-60 minutes</td>
</tr>
<tr>
<td>Italy</td>
<td>30-39 (mode)</td>
<td>33</td>
<td>58%</td>
<td>25-50 (mode est.)</td>
<td>46-60 minutes</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>40-49 (mode)</td>
<td>Estimate 35%</td>
<td>8.7 years</td>
<td>64%</td>
<td>37</td>
<td>30-60 minutes</td>
</tr>
<tr>
<td>Spain</td>
<td>36.7 (mean) 30-39 (mode)</td>
<td>40-47%</td>
<td>7 years (mean) &lt;5 years 46% &gt;5 years 54%</td>
<td>41%</td>
<td>21-30 (mode)</td>
<td>45-60 minutes</td>
</tr>
<tr>
<td>Switzerland</td>
<td>42 yrs (mean) 30-49 yrs (mode)</td>
<td>55</td>
<td>11 years (median) 12.7 years (mean)</td>
<td>54%</td>
<td>27-36</td>
<td>45 minutes</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>46-50 yrs (median)</td>
<td>59</td>
<td>19-20 years median</td>
<td>64%</td>
<td>20 and 30 (modes)</td>
<td>45 minutes</td>
</tr>
</tbody>
</table>
Patient characteristics

• More females than males visit osteopaths
  (Canada 62%, Spain 61%, Germany 61%, Switzerland 57%, UK 58%)

• The majority of patients are working adult age.
  (20-65 years (42.6%-90%) age ranges between 40 and 65 years)

• Paediatric patients around 5 - 20% of all care
Reasons for seeking osteopathic care

• Musculoskeletal conditions are the most common
  (UK and Switzerland 81%, Spain 94%)

• Paediatric conditions associated with unsettled babies 40-60% of cases
  (Germany, Australia, Belgium, Luxembourg, Netherlands and Spain)

• Obstetrics, gynaecological and pregnancy related problems 30 – 45% of cases
  (Germany, Australia, Belgium, Luxembourg, Netherlands and Spain)

• Around half of patients had co-existing conditions.
  (UK 42%, Switzerland 54%, Spain 55%)
Body area

- Low back and neck over 95% of patients
  (Germany, Australia, Spain)
- Low back pain as primary complaint in 15-40% of patients and
- Neck pain in 10-20% of patients
  (Spain, Canada, UK, Switzerland)
- Upper back, thorax, ribs and/or chest primary complaint in 5-20% of cases
  (Spain, Canada, UK, Switzerland)
- Lower extremity specific problems 10-20%
  (Spain, Canada, UK, Switzerland)
## Duration of complaints prior to treatment

<table>
<thead>
<tr>
<th>Country</th>
<th>%acute</th>
<th>%subacute</th>
<th>%chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>33%</td>
<td>12%</td>
<td>55%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>45%</td>
<td></td>
<td>52%</td>
</tr>
<tr>
<td>Spain</td>
<td>27%</td>
<td></td>
<td>73%</td>
</tr>
</tbody>
</table>
Treatment techniques

Most common were:
- soft tissue manipulation
- muscle energy technique
- spinal manipulative technique
- articulation/mobilisation,
- visceral techniques,
- osteopathy in the cranial field
- functional technique
- strain-counter-strain
- myofascial release

- In addition advice about exercise/physical activity and lifestyle (upto 90%)
Summary take home messages

Osteopathic care has been profiled in 10 countries showing that:

• Osteopaths treat mainly musculoskeletal, but also non-musculoskeletal care and deliver around 10% of their care to infants

• They work mainly independently as health care practitioners

• They deliver manual therapy as a ‘package of care’ to patients (variety of techniques plus advice and guidance used)

• Osteopaths spend time with their patients (minimum 30 minutes)

More research is needed to show what the patient responses are to osteopathic treatment and care.
What can osteopathy offer? – Evidence
Is the evidence for manual therapy based care strong and convincing?

Literature search (2020) of:

• Systematic reviews of the effectiveness of manual therapies

• National Guidelines for the management and care of musculoskeletal conditions

• We extracted data that concluded and or recommended manipulative and body based therapies

Strength of evidence used

• **Strong evidence** = high quality research studies consistently showing the same beneficial outcomes

• **Moderate evidence** = mixed quality research studies indicating a trend but less consistent results, more research may change conclusions

(Weak evidence = lower quality studies (eg small sample sizes), results mixed and inconclusive )
Search for relevant research to support practice

**Included:** 34 systematic reviews and 6 guidelines
Research reviews showing beneficial effects
Guidelines that included a manual therapy component in care (non hospital setting)
Since 2010

**Excluded:**
Inconclusive reviews (eg. not enough research or small sample studies)
Reviews indicating no additional effect of the intervention
<table>
<thead>
<tr>
<th>Condition (+ve moderate level evidence or higher)</th>
<th>Pain reduction</th>
<th>Function/ROM*/disability</th>
<th>Return to work</th>
<th>Quality of life</th>
<th>Satisfaction with care</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult low back pain</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paediatric low back pain</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnancy related low back, pelvic pain</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post partum low back and pelvic pain</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Neck Pain</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Headaches</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Shoulder dysfunctions</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elbow pain</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hip osteoarthritis</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knee osteoarthritis</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heel pain (plantar fasciitis)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Results – Low back pain

2 Guidelines and 9 reviews

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Pain</th>
<th>Function /Disability/ Range of Movement</th>
<th>Return to Work</th>
<th>Coordination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spinal manipulation</td>
<td>1, 2, 3, 4, 5*, 6,7,8,10</td>
<td>1, 3, 5*, 6, 8, 10</td>
<td>5*</td>
<td>1</td>
</tr>
<tr>
<td>Mobilisation</td>
<td>1, 2, 3, 5*, 10</td>
<td>1, 3, 5*, 10</td>
<td>5*</td>
<td>1</td>
</tr>
<tr>
<td>Muscle Energy Technique</td>
<td>9</td>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Osteopathic Care</td>
<td>11</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft tissue /Massage</td>
<td>5*, 6, 7</td>
<td>5*</td>
<td>5*</td>
<td></td>
</tr>
</tbody>
</table>

* As part of a package of care

1 American Physical Therapy Association 2012,
2 Brontfort et al 2010,
3 Coulter et al 2018,
4. Furlan et al 2012,
5* NICE UK 2016 (As part of a package of care),
6 Paige et al 2017,
7 Qaseem et al 2017,
8 Rubinstein 2019,
9 Thomas et al 2019,
10 USA Department of Veterans Affairs 2017,
11 Verhaeghe et al 2018
## Results – Neck pain

1 Guideline and 9 reviews

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Pain</th>
<th>Function, disability range of movement</th>
<th>Satisfaction</th>
<th>Quality of life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spinal manipulation</td>
<td>1,2,4, 6, 7</td>
<td>1,2,4,7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobilisation</td>
<td>1,2, 4, 6, 7</td>
<td>1,2, 4,7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Manual therapy</td>
<td>3,5,10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual therapy with Exercise</td>
<td>1, 8</td>
<td>1, 8</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Muscle Energy Technique</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft tissue massage</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 American Physical Therapy Association 2016,
2 Brontfort et al 2010,
3. Coté et al 2019,
4 Coulter et al 2019,
5 Franke et al 2017,
6 Furlan et al 2012,
7 Gross et al 2010,
8. Miller et al 2010,
9 Thomas et al 2019,
10 Vincent et al 2013
# Results – Tension type Headaches

1 Guideline and 10 reviews

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Pain</th>
<th>Function, disability</th>
<th>Quality of life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spinal manipulation</td>
<td>1,2,5,8, 10</td>
<td>1,2,8</td>
<td></td>
</tr>
<tr>
<td>Mobilisation</td>
<td>1,2,5,8</td>
<td>1,2,8</td>
<td></td>
</tr>
<tr>
<td>Ost Manual therapy</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual Therapy</td>
<td>3,9,11</td>
<td>3</td>
<td>3,9</td>
</tr>
<tr>
<td>Manual therapy with Exercise</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 American Physical Therapy Association 2017,  
2 Brontfort et al 2010,  
3. Camplido-Transmonte et al 2017,  
4 Ceritelli et al 2017,  
5 Chaibi et al 2017,  
6. Clar et al 2014,  
7. Coté et al 2019,  
8 Coulter et al 2019,  
9 Falsirola et al 2019,  
10, Fernandez et al 2020,  
11 Yaseen al 2018
Is osteopathy safe? - Evidence
Safety

Results

About 37% of patients are likely to experience some minor to moderate short lived adverse event(s) after manual therapy treatment. Most of these resolve within 48 hours.

Adverse events are most likely to be reported after the first treatment.

Risk of major (irreversible or long lasting) adverse events such as stroke with manipulation are very low.
Effectiveness and safety

Positive evidence base of beneficial effects of manual therapy for pain reduction and function in the following conditions:

• Low back pain
• Neck pain
• Shoulder dysfunctions
• Headaches
• Hip and knee osteoarthritis
• Elbow and heel pain

Manual therapy delivered by trained practitioners is a relatively safe and effective option for patients with the above conditions.
Take home messages
Summary

• Growing profession but plenty of scope for more growth

• Standardisation of education

• Recognition and regulation still needed in some countries

• Need for better patient reported outcomes of care

• Strengths: time, complex multi-modal component package of care, safety

• Challenges: lone practitioners, the countries without recognition and regulation (working together), increasing the quality of the evidence base to reflect the strengths and practice