

# International Osteopathic Research Network Update

## Dawn Carnes

- Background
- Evidence overview
- Safety Overview
- Cost
- Plugging the gaps – the future
- International Research



# BACKGROUND TO IORN

*The OIA supports global collaboration and commitment to osteopathic:*

- Professional organization development and improvement
- High quality educational standards and delivery
- Research to inform best practices
- Standards, regulation and legislative recognition distinct to the profession.

## Research:

- Developing a research network
- Supporting collaboration
- Exploring future funding options

# MISSION STATEMENT

To foster collaboration, coordination, and knowledge exchange to promote rigorous international research efforts on osteopathic principles and practices, and to promote the translation of relevant research into clinical practice.



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# OBJECTIVES

- To facilitate international communication, cooperation and resource sharing between researchers and clinicians.
- To ensure that literature on safety, risk, effectiveness, and cost-effectiveness in osteopathy and related fields is monitored, and that up-to-date evidence pertaining to these areas are made available via the OIA website.
- To compile evidence about the scope of practice in osteopathy worldwide.
- To promote the use of rigorous research methodologies for osteopathic research.
- To coordinate international resources to synthesize and disseminate information relevant to osteopathy on current topics of interest by the profession.
- To make evidence-based recommendations to inform osteopathic practice, patients, policy and education.
- To globally facilitate and promote the collection of patient reported outcomes on manual treatment and to regularly report on the progress being made in this research topic.



# RESEARCH UPDATE

- Does osteopathy work ?
- How does it work ?
- Is osteopathy safe ?
- What does osteopathy cost ?



# RESEARCH UPDATE - EVIDENCE

Evidence Based Medicine - Evidence Informed Practice:

- Increasing use of expert consensus with health research findings
- Guidance
- Systematic reviews
- Summaries of evidence: Editorials / masterclasses / overviews / perspectives



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# RESEARCH – reconsidering the hierarchy of evidence (Walach et al 2006)



Historical and classical texts

History, longevity, experience and acceptability of treatments

Safety, familiarity and acceptability

All research methods have strengths and limitations

Experimental evidence over-riding external validity



# RESEARCH – reconsidering the hierarchy of evidence

- Gaining popularity: Evidence Informed Individualised Care

(as opposed to one treatment fits all conditions model)

- CAM
- ‘designer drugs’
- Genetic modification
- Multi-component care



# Does osteopathy work ? - Adults

- Low back pain
- Neck pain and tension type headaches
- Shoulder conditions
- Fibromyalgia / chronic fatigue
- Peripheral joint pain / immobility



# Does osteopathy work ? - Adults

- Current evidence / guidance: **Low back pain**
- NICE guidance UK

Manual therapy and manipulation as part of a package of care including self-management, cognitive behavioural therapy and exercise

- American College of Physicians

First line non-pharmacological treatment, heat, acupuncture, spinal manipulative therapy, exercise, psychological approaches

# Does osteopathy work ? - Adults

- Current evidence: **Neck pain and tension type headaches**
- Clar et al. Chiro and Man Therapies. 2014. 22:12
  - Inconclusive favourable evidence for neck pain with cervical spinal manipulation
  - Moderate evidence for spinal mobilisation for cervicogenic and miscellaneous headaches.
- Chaibi A, Russel MB. J Headache and Pain. 2014. 15: 67.
  - 6 RCTs for Chronic tension type headache. Manual therapy equivalent effect to tricyclic antidepressants.



# Does osteopathy work ? - Adults

- Current evidence: **Shoulder conditions**
- Desjardins-Charbonneau et al. J Orthopeadics and Sport Phys Therapy. 2015. 45 (5) : 330 – 350.
  - 21 studies. Stat. Sig. effect for pain reduction with manual therapy compared to other non invasive and placebo care.
- Clar et al. Chiro and Man Therapies. 2014. 22:12
  - Manipulation and exercise beneficial for rotator cuff disorders



# Does osteopathy work ? - Adults

- Current evidence: **Fibromyalgia / chronic fatigue**
- USA Guideline: Agency for Healthcare Research and Quality: management of fibromyalgia syndrome in adults (2010)
- Canadian Guidelines for the diagnosis and management of fibromyalgia syndrome 2013
- Germany, Israel, UK
  - Patient tailored approach, aerobic exercise and multi-component therapies

# Does osteopathy work ? Long term conditions

- Data for long-term conditions in musculo-skeletal health care highlights and supports:
  - Self-management
  - Exercise
  - Psychological support and management





# Does osteopathy work ? - Children

- Distressed unsettled and crying babies
- Torticollis
- Plagiocephaly / Brachiocephaly
- Otitis media
- Respiratory disorders
- Emotional / behavioural conditions
- Pre-term infants



# Does osteopathy work ? - Children

Current evidence:

- **Asthma, ADHD, dysfunctional voiding, nocturnal enuresis.** Clar et al 2014. Inconclusive evidence of effectiveness
- **Otitis media:** Clar et al 2014, Maron et al 2016. Inconclusive and unclear evidence of effectiveness
- **Pre-term infants: length of stay in hospital** (Lanoro D et al 2017) Reduced stay and costs with OMT infants. Moderate evidence
- **Cerebral Palsy in children.** Clar et al 2014, Inconclusive and unclear evidence of benefit



# Does osteopathy work ? - Children

- Current evidence: **Distressed unsettled and crying babies**
  - Review (Carnes et al 2017) some beneficial effects for crying time. Moderate evidence (4 RCTs)
  - Evidence quality variable, contentious due to bias and non-blinding of parents



# Does osteopathy work ? - Children

- Torticollis (Cochrane SR in progress Southern Cross University)
- Plagiocephaly / Brachiocephaly
- Respiratory disorders
  
- No reviews specifically for manual therapies
  
- NEED FOR MORE RESEARCH



# Summary: Does osteopathy work ?

- Adults – Encouraging evidence and guideline advice to use manual therapies for low back pain, fibromyalgia, shoulder pain, tension type headaches.
- Children – some moderate evidence for crying time in infants and length of hospital stay in pre-terms
- Mechanism of action not clear
- **NEED FOR MORE RESEARCH**



# How does it work ?

- New schools of thought:
- What happens inside the clinic - Traditional biomechanical and hands on treatment
- What happens outside the clinic – persons attitude, outlook, behaviour and activity



# Increasing evidence for:

- Activity / Exercise
  - Psychological approaches – acceptance, CBT, Mindfulness
  - Behaviour change
- 
- Consider the osteopathic approach and the training we give our osteopathic students



# Increasing evidence for:

- Evidence for:
  - Lymphatic change

## Not so much evidence for:

- Increases in range of movement long term
- Cavitation



# Is osteopathy safe?

- Yes (Carnes et al 2010)
- Lots of research now supporting the safety of osteopathy in adults and some for children.
- Safety of manipulation and other techniques
- Competence and maintenance of competence remains important



# Cost

- Implications are different in different health settings
- In terms of cost of secondary consequences very low
- Walking well population
- Primary care



# Summary of future research needs/direction

Areas still requiring more research	
Colic	Effectiveness study: Properly powered, single blinded RCT
Safety for children	Prospective cohort study
Role of psychology in osteopathy	Qualitative research , Implementation and process evaluation,
Role of behaviour change in osteopathy and delivery of public health messages	Qualitative research , Implementation and process evaluation
Exercise advice	Education and training. Adjunctive care RCT?
Patient reported outcomes	Prospective cohort studies of impact of treatment on patients
Cost (effectiveness)	Embedded with an RCT?



# Summary of global current research activity (post grad)



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# Summary of research activity

## Australia and New Zealand

- RCT methodology for osteopathic practice (Southern Cross University)
- Non-surgical and non-pharmacological therapies for congenital muscular torticollis in the 0-5 year age group (lead Inst: Southern Cross University)
- SNAPPS Plus – trialling a method of student osteopaths’ reporting of case details, and focussing on their use and integration of published evidence in their clinical reasoning (collaboration between Southern Cross University and Victoria University)
- Reviewing the capabilities for osteopathic practice (Osteopathy Board of Australia)
- Clinical reasoning in novice and experienced osteopathic practitioners: a comparative study (Southern Cross University)

# Summary of research activity

## Australia and New Zealand: PhDs Victoria University

- Osteopathic treatment and management for CTS; the effect of hormonal changes in females on pain threshold; the effect of hormonal changes in females on motor control (Michael Fleischmann)
- Evaluating the quality of clinical teaching in osteopathy (Brett Vaughan)
- Clinical judgement and reasoning in osteopathic practice (Chris Macfarlane)
- Psychosocial screening of patients attending the VU Osteopathy Clinic using the Orebro
- Evaluating pain knowledge of patients presenting to the VU Osteopathy Clinic
- Health literacy screening of patients attending the VU Osteopathy Clinic

# Summary of research activity

## Canada

- Interprofessional collaboration between physicians and osteopaths involved with pediatric population in Quebec
- Scientific production on the efficacy of osteopathy: a bibliometrics analysis from 1980 to 2016.
- Inter rater reliability project for osteopathic cranial assessment  
(Faculty of Medicine and Health Sciences, Université de Sherbrooke)

# Summary of research activity

## Central Europe

- **European Federation of Osteopaths**

- Pilot project - PROMs (Belgium, Germany, Switzerland)

- **Belgium**

- Health Economic Value study for Osteopathy II. CORPP (National Centre Belgium of COME) together with the university of Ghent (Belgium), the Intermutualistic Age

- **France**

- Effects of Thoraco-Abdominal Pump Technique on primary tumor growth and spontaneous lung metastasis in a murine model of osteosarcoma (IDHEO)

- **Germany**

- Osteopathic treatment of patients with shoulder pain. A randomized controlled trial.
- Osteopathic treatment in addition to medical standard therapy in patients with Gastroesophageal Reflux Disease (GERD). A randomized controlled trial.
- Osteopathic treatment of infants in their first year of life-the OSTINF-Study

(Florian Schwerla)



# Summary of research activity

- Central Europe (cont):
- **Italy**
  - COME collaboration 5 projects:
    - COSMOS (exploration of the somatic dysfunction)
    - BIOMECH O (Biological mechanisms in osteopathy)
    - NEMO (Neurological mechanisms in osteopathy)
    - CAMEO (measurement of outcomes and effectiveness in osteopathy)
    - PRESS (Student preparedness to practice and satisfaction)
    - Ne-O (osteopathy for pre-term infants)
    - OPERA (census in osteopathic practice) Italy, Spain, Portugal, Belgium, Canada, Netherlands, Andorra, Luxembourg
    - INTEROST (study of brain mechanisms in osteopathy)



# Summary of research activity

## Central Europe (cont.)

- **Netherlands**
  - Adverse events in pediatric osteopathy (SWOO)
- **Portugal**
  - COME Collaboration and Instituto Piaget Portugal – OPERA Survey of osteopathic practice study in Portugal
- **Switzerland**
  - Osteopath patient survey (2018)
  - Using a palpation detection device for the training of student osteopaths (University of Applied Sciences – Fribourg)





# Summary of research activity

## Northern Europe

- Norway
  - Cross-sectional study of pain curricula in full-time entry-level osteopathic education in Europe (University of Oslo)

# Summary of research activity

## UK

- Spine Tango project (Integrating osteopathy in an orthopaedic setting) (Institute of Osteopathy)
- PROMs (Electronic data capture for National Database of outcomes) (NCOR)
- Feasibility study of blinding parents from treatment of babies (European School of Osteopathy)
- Census of osteopaths (2017) (Institute of Osteopathy)
- Osteopath retrospective patient survey (2018) (NCOR)
- Review of literature on Touch and Boundaries (General Osteopathic Council)
- MOCAM Non specific effects (University Southampton)
- Concerns and complaints raised against osteopaths



# Summary of research activity

## UK (cont)

- Developing the use of the MSK - HQ as a routine PROM in our general clinic and specialist clinics
- EBASE: Attitudes and use of evidence-based practice amongst osteopaths in the UK: a cross-sectional survey
- Effect of feedback on physical activity on people with sub-acute back pain (PhD)
- Making sense of cranial osteopathy: an Interpretative Phenomenological Analysis (PhD)
- Exploration of the characteristics of German osteopaths: a mixed methods approach (PhD)

(University College of Osteopathy (BSO))



# Summary of research activity

## United Arab Emirates and Saudi Arabia

- Developing collaboration (early stage) for a ne-O project (osteopathy for pre-term infants) in a public children's hospital in Dubai - COME Collaboration project
- Neurobiological effects of stroking and static touch on preterm infants: a RCT (COME Collaboration, Gulf Region and Instituto Piaget Portugal and Liverpool John Moore Somatosensory and Affective Neuroscience Group)



# Summary of research activity

## USA

- Use of the Lymphatic Pump Technique as a Novel Therapy for Inflammatory Bowel Disease (IBD) (AOA funded)
- Lymphatic Pump Treatment of Inflammation in Rat-Adjuvant-Induced Arthritis (AOA funded)
- Analytical Assessment of the Cranial Rhythmic Impulse (AAO funded)
- A Novel Approach to Study the Effect of OMT on Tissue Edema in Rats with Impaired Lymphatic Function (AAO funded)

(University North Texas)

- Adverse Events – prospective cohort study (AT Still University)



# Summary of research activity

- Summary of all research with lead researchers and institutes / organisations will be provided on the OIA web page for research (updating previous current research document)
- List is not exhaustive, please let me know after if you have research to add
- With thanks to:

Pal Anderson, Francesco Cerittelli, Brian Degenhardt, Jorge Esteves, Carol Fawkes, Rob Froud, Gary Fryer, Lisa Hodge, Sander Kales, Olivier Merde, Paul Orrock, Patrick Van Dunn, Steve Vogel



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