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#### RESEARCH REPORT

# An audit of the accuracy of medication documentation in a United Kingdom osteopathic training clinic before and after an educational intervention

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#### **KEYWORDS**

Clinical audit;
Inaccuracy;
Incomplete;
Medication;
Medication reconciliation;
Osteopathic medicine;
Osteopathy;
Recording;
Student

**Abstract** *Background:* There are potential clinical consequences and medicolegal implications related to inadequacies in medication documentation in osteopathic practice but limited information about accuracy of medication recording by osteopaths or osteopathic students.

*Objective*: To audit how well British School of Osteopathy (BSO) students record patient medication on case history forms, implement an educational intervention to maximise accuracy, and reassess recording, to improve patient care.

Method: A clinical audit cycle was conducted. Benchmark criteria were defined by distributing a questionnaire to 61 BSO clinic tutors, and an a priori optimum standard of recording accuracy was set at 75%. A retrospective audit was conducted on 100 anonymised case histories to establish baseline accuracy levels, followed by an educational intervention which included a lecture, Drugs Handbook, and Quick Reference Sheet. A second audit 7 weeks later evaluated changes in recording accuracy.

Results: In the pre-intervention audit only 19% of case histories recorded total accuracy scores of more than 75% (the a priori optimum standard). After intervention total percentage accuracy scores in the 'more than 75% accurate' group increased to 31% (p=0.05). The least accurately recorded aspects of medication were strength and frequency of dosage.

Conclusion: The educational intervention appeared to contribute to improved accuracy of medication recording by BSO students, although some areas require further improvement. Complex barriers to obtaining full and accurate patient medication lists exist within orthodox and osteopathic healthcare practice, so

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ongoing audits and interventions within the BSO are recommended, as well as further research in osteopathic practice.

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#### Introduction

### **Background**

The study was conceived following a clinical experience at the British School of Osteopathy (BSO). A student osteopath (the researcher) was treating a regular patient for the first time and noticed that one of the patient's long-term prescription medications was recorded inaccurately on the case history form. The name had been misinterpreted, leaving a potent drug unidentifiable. This raised the question: How well do osteopathic students record patient's medication?

Certain osteopathic techniques are widely thought to be contraindicated in some patients, for example spinal manipulation in patients with severe osteoporosis, and atlanto-axial manipulation in patients with rheumatoid arthritis. Cervical spine instability is a complication of rheumatoid arthritis, 1-3 and osteoporotic vertebral fractures are considered low-trauma injuries, with merely sneezing identified as a risk factor.4 Patient UK5 classifies rheumatoid arthritis and osteoporosis as contraindications to spinal manipulation, associating manipulation with 'increased risk of compression fractures in someone with osteoporosis'. Spinal manipulation is also contraindicated in patients taking anticoagulants<sup>6</sup> due to possible bleeding problems.

Furthermore, hypertension, hyperlipidaemia and diabetes mellitus are all risk factors for atherosclerosis, and should be carefully considered in order to help identify patients who may be at risk from cervical manipulation, or who may be presenting with non-musculoskeletal neck pain resulting from cervical arterial dysfunction.

Within general healthcare and manual therapy, thorough and accurate medical histories, including drug therapy, are essential to assess these 'at-risk' patients accurately, and provide safe, optimal quality healthcare.  $^{10-12}$ 

Patients with poor general health, or numerous medical conditions and on multiple drug therapy may easily fail to recall conditions or medications. <sup>13,14</sup> If a patient reports, for example, antirheumatic drugs when questioned about medication, but fails to report having rheumatoid arthritis, osteopaths must be able to identify potential conditions from the drug history to inform

treatment. Clinical consequences of missing the pathology in this case could be 'slippage of the atlanto-axial joint with high spinal cord compression' following manipulation of the cervical spine.<sup>5</sup>

High standards of clinical documentation are important for research, audit and medicolegal purposes', 15 (p. 92) and the General Osteopathic Council's (GOsC) Code of Practice<sup>11</sup> states that comprehensive and accurate case histories are a professional requirement for osteopaths. Between 2004 and 2008, 351 complaints were made by patients about osteopathic care, 16 and the GOsC's 2008/09 and 2009/10 Fitness to Practice Reports 17 describe many cases where substantiated complaints against osteopaths relate to inadequacies in case histories and record keeping. Lambden<sup>18</sup> discusses the correlation between inadequate records and allegations of negligence, suggesting that drug therapy and osteoporosis are amongst the least adequately documented details.

Medication documentation by practitioners in orthodox medicine has been found to be inadequate. 14,19,20 and there are clinical consequences and medicolegal implications for inadequate documentation in osteopathy. Errors of medication omission were the most common discrepancies, but Lau et al., 19 and Shepherd and Schwartz 14 failed to consider potential inaccuracies in documented medications and underestimated errors. Inaccurate documentation in orthodox medicine can be clinically significant and potentially harmful to patients. 20,21 Cornish et al.'s 20 (p.426) hospital-based study recruited qualified members of medical teams to classify medication recording errors and found that 5.7% of errors had 'the potential to cause severe discomfort or clinical deterioration'.

Many studies present strong evidence that educational interventions targeting healthcare teams and patients can significantly improve the accuracy of medication documentation. <sup>22–26</sup> Interventions targeting patients most often included encouraging patients to bring medication containers to appointments. However, 'barriers to accurate medication reconciliation are complex and not easily resolved'. <sup>26</sup> (p. 493)

Clinical audit has an important role in supporting best quality patient care, <sup>27,28</sup> and an article in the GOsC journal The Osteopath in January 2012 emphasised that it should be a key part of, and is

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