The College of Chiropractors

PROGRAMME & ABSTRACTS

Wednesday 1st February 2012
Royal College of Obstetricians & Gynaecologists
27 Sussex Place, Regent’s Park, London NW1 4RG
The 2012 President’s Lecturer
Professor Helen Lester

Helen Lester is a GP and professor of primary care at the University of Birmingham. She has worked as a GP in Birmingham for over 20 years. She is Chair of the Society for Academic Primary Care, Chair of the RCGP Clinical Innovation and Research Centre and the RCGP National Mental Health Commissioning Lead. She is also Academic Clinical Lead of the Quality and Outcomes Framework (QOF), a voluntary annual reward and incentive programme for GP surgeries in England. Professor Lester has written over 100 peer-reviewed articles, most focused on mental health and quality improvement.

Special Guest Lecturer
Dr Peter Tuchin

Dr Peter Tuchin is a Senior Lecturer at Macquarie University teaching research methodology, advanced clinical diagnosis and professional studies. He completed his PhD on chiropractic treatment for headache and migraine in 2003 and the RCT he conducted as part of his doctorate is commonly cited in migraine research. He is currently conducting research on chronic pain, stroke and insomnia. Peter has been in clinical practice for more than 25 years treating a diversity of health issues including many chronic pain cases or work-related injuries. Dr Tuchin is the current President of the Chiropractic and Osteopathic College of Australasia (COCA).
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- **The UK back pain subpopulation study: predictors of outcome in patients receiving chiropractic treatment.** Laura Davies, Dave Newell, Jenni Bolton & Charlotte Leboeuf-Yde
- **Prognostic factors for short-term improvement in acute and persistent musculoskeletal pain consulters in primary care.** Hugh Hurst & Jenni Bolton
- **Predictive value of subgroups defined by the STarT Back Tool in a chiropractic population.** Dave Newell & Jonathan Field
- **Bournemouth Questionnaire and the Measure Yourself Medical Outcome Profile in low back pain patients: A comparative study.** Alison Bell, Gay Swait, Adrian Hunnisett & Christina Cunliffe

### Abstracts offered and accepted for poster presentation:

- **Chiropractic and yoga as an effective combination therapy for the treatment of low back pain: A randomised controlled trial.** Christopher Biggs, Gabrielle Swait, Adrian Hunnisett & Christina Cunliffe
- **Barriers between General Practitioners and Chiropractors.** Katherine Butler, Christina Cunliffe, Adrian Hunnisett
- **Change in referral patterns to Chiropractic Clinics over a 10-year period following introduction of the statutory register?** Nicks Dilley, Jonathan Field & Peter McCarthy
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- **Evaluation of a GP referral service for manual treatment of back and neck pain.** Mark Gurden, Marcel Morelli, Greg Sharp, Katie Baker, Nicola Betts, Jennifer Bolton
- **Attitudes of chiropractors to evidence-based practice and how this compares to other healthcare professionals. A qualitative study.** Gary Hall
- **Referral patterns to Spinal Manipulative Therapy by Welsh General Practitioners.** Annabel Kier, Matthew George & Peter McCarthy
- **Patient satisfaction and chiropractic style: A cross sectional survey.** Rosalyn Mace, Christina Cunliffe & Adrian Hunnisett
- **Detecting somatic changes related to visceral conditions: is it possible without hi-tech tools?** Peter M’Carthry & B Ridout
- **The immediate effects of pre-event high velocity low amplitude manipulation on sit and reach flexibility, acceleration and velocity speed in rugby union.** Claudio Merkier, Angela Cumine & Conor Gissane
- **The effects of a sacroiliac belt on postural control: A pilot study.** David A Taylor & Kambiz Saber-Sheikh
- **Acute Symphysis Pubis Dysfunction (SPD) in a 78 year old lady: A case study.** David A Taylor
- **A survey of “mental hardiness” and “mental toughness” in professional male football players.** Rainer Wieser & Haymo Thiel
- **The agreement of subjects’ own beliefs regarding psychosocial factors in low back pain: A cross-sectional study.** Rob Wood, Christina Cunliffe & Adrian Hunnisett
The UK back pain subpopulation study: predictors of outcome in patients receiving chiropractic treatment

Laura Davies 1, David Newell 1, Jennifer Bolton 1 and Charlotte Leboeuf-Yde 2

1 Anglo-European College of Chiropractic, Bournemouth, UK
2 Spinecenter of Southern Denmark, Hospital Lillebælt, Middelfart, Denmark

Introduction
For more than a decade, the identification of specific subgroups of low back pain (LBP) patients has been highlighted as a research priority [1, 2]. The most prominent studies to date that have attempted to identify subgroups and their prognostic factors associated with treatment outcome among LBP patients receiving chiropractic care have been conducted in Scandinavia, and have indeed established several robust predictors of treatment outcome [3-7]. However, only a small number of studies have been conducted utilising the UK chiropractic patient population [8, 9] which remains an as yet largely unstudied cohort in this context. Consequently, the aim of this research project is to conduct a prospective cohort study to identify predictors of outcomes in the short, medium and long terms in LBP patients undergoing chiropractic treatment in UK primary care settings.

Methods
All practising members of the British Chiropractic Association were invited to participate in the study. The chiropractors were required to recruit 10 consecutive LBP patients each. Patients were eligible for the study if they were between 18 and 60 years of age; presenting with a new episode of LBP with or without leg pain; no treatment for LBP within the previous 3 months; not pregnant; no contraindications to chiropractic care; a mobile phone user. All participating patients completed an informed consent form. Data consisting of demographics, patient characteristics (including psychosocial and work-related factors) and clinical findings were recorded by patients and chiropractors at the 1st visit utilising self-report paper questionnaires. Outcomes in the immediate short term were recorded from patients on a daily basis for 7 days following the 1st visit via text message. Further data were collected utilising paper questionnaires from patients at the 4th visit, 3 months and 6 months from baseline.

Results
Data analysis is expected to be completed by the end of autumn 2011, and the results will be presented.

Conclusions
The investigation presented here provides an important contribution to the body of research concerning predictors of outcome in the chiropractic LBP population for being the largest study of its kind to date in the UK. In terms of clinical relevance, the potential identification of prognostic factors, particularly when they are amenable to modification, may have a powerful impact on the management and subsequent outcomes for these LBP patients.
References


Prognostic factors for short-term improvement in acute and persistent musculoskeletal pain consulters in primary care

Hugh Hurst\textsuperscript{1} and Jennifer Bolton\textsuperscript{2}\textsuperscript{*}

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\textsuperscript{2}Research Professor, AECC, Bournemouth, UK. * jbolton@aecc.ac.uk

Introduction
Given the costs associated with the management of musculoskeletal pain in primary care, predicting the course of these conditions remains a research priority. Much of the research into prognostic indicators however considers musculoskeletal conditions in terms of single pain sites, whereas in reality many patients present with pain in more than one site. The aim of this study was to identify prognostic factors for early improvement in primary care consulters with acute and persistent musculoskeletal conditions across a range pain sites.

Methods
Consecutive patients with a new episode of musculoskeletal pain completed self-report questionnaires at baseline, and then again at the 4/5\textsuperscript{th} treatment visit, and if still consulting, at the 10\textsuperscript{th} visit. The outcome was defined as patient self-report improvement sufficient to make a meaningful difference. Independent predictors of outcome were identified using multivariate regression analyses.

Results
Acute (<7 weeks) patients, on average, had more severe conditions in terms of pain, disability, anxiety and work fear avoidance behaviour than patients with persistent (≥7 weeks) pain, but were more likely to be better by the 4/5\textsuperscript{th} visit. Several variables at baseline were associated with improvement at the 4/5\textsuperscript{th} visit, but the predictive models were weak and unable to discriminate between patients who were improved and those who were not. In contrast, it was possible to elicit a predictive model for improvement later on at the 10\textsuperscript{th} visit, but only in patients with persistent pain. Being employed, reporting a decline in work fear avoidance behaviour at the 4/5\textsuperscript{th} visit, and being better by the 4/5\textsuperscript{th} visit, were all independently associated with improvement. This model accounted for 34.3\% of the variation in observed improvement, and had good discriminative ability (area under curve 0.80) and approximate balance in correctly identifying improved and non-improved cases (79.0\% and 68\% respectively).

Conclusions
We were unable to identify baseline characteristics that predicted early outcome in musculoskeletal pain patients. However, early self-reported improvement and decline in work fear avoidance behaviour as predictors of later improvement highlighted the importance of speedy recovery in persistent musculoskeletal pain consulters. Our findings reinforce the elusive nature of baseline predictors, and the need for more emphasis on early changes as prognostic predictors in musculoskeletal conditions.
Predictive value of subgroups defined by the STarT Back Tool in a chiropractic population

Dave Newell\textsuperscript{1} and Jonathan Field\textsuperscript{2}\textsuperscript{*}

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Introduction

The ‘Subgroups for Targeted Treatment Back Screening Tool’ (SBT) is being recommended as a decision aid to help GP’s in the UK make treatment recommendations for patients presenting with lower back pain (LBP) [1]. Scoring the SBT places patients into one of three categories of risk for having LBP with disability that persists at three months; Low - few risk factors, suitable for GP management without referral (e.g. advice, analgesia and education). Medium - physical risk factors for poor prognosis, appropriate for referral to physical therapy. High - psychosocial risk factors for a very unfavourable prognosis likely to respond better to care including psychological components.

If the tool becomes used to influence referral decisions by GP’s in the UK it will be important for chiropractors wishing to work with NHS patients to understand how patients from the three SBT categories are likely to improve or otherwise during their care. Additionally if the SBT is able to identify groups of patients less likely to respond well to ‘standard’ treatment, its use by practitioners could help identify individuals appropriate for alternative management or onwards referral.

Methods

Eight hundred and eight consecutive patients aged over 16, presenting with LBP to one of six chiropractic clinics were asked to complete the SBT and Bournemouth Questionnaire (BQ) before their first visit (52% male, mean age (47.9), median duration of 21 days (range;1 day to 20 years), 7.8% with any leg pain). Those who started treatment were sent follow up questionnaires containing a BQ and Patients Global Impression of Change (PGIC), at 14, 30 and 90 days follow up.

Results

The SBT rankings at baseline (26.2% High, 35.1% Medium 38.6% Low) were unable to predict outcome at any follow up time points. Patients ranked in the high risk SBT group had more pain and higher total BQ scores at presentation, but at 90 days there was no difference in either total BQ, pain or proportions reporting improvement between the SBT categories. Sub grouping of patients defined by duration of symptoms (acute:<4 weeks) subacute:4-12 weeks) and chronic:>>12 weeks) did not change these findings.

Conclusion

In this population of patients choosing to present to chiropractors in private practice the SBT was not found to be able to identify those less likely to report worthwhile benefit or to gain
meaningful reductions in BQ scores over the 3 months following presentation, regardless of the duration of their condition. These results differ from those reported in other studied populations but the reasons for this are unclear. One possibility is that potential psychological risk factors, such as those assessed within the SBT have less significance in patients seeing chiropractors [2 - 4]. It could also be that those seeing a manipulative therapist are reassured reducing the extent and possibly impact of psychological factors which may otherwise adversely affect their prognosis [4 & 5]

References


Bournemouth Questionnaire and the Measure Yourself Medical Outcome Profile in low back pain patients: A comparative study

Alison Bell, Gabrielle Swait, Adrian Hunnisett and Christina Cunliffe

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Introduction
The Bournemouth Questionnaire (BQ) and Measure Yourself Medical Outcome Profile (MYMOP) questionnaire are both used to measure treatment outcomes. MYMOP is patient-centered and investigates a whole spectrum of care [1], whilst BQ is disease specific designed for the chiropractic environment [2]. Comparing MYMOP with the disease specific BQ will determine if MYMOP is suitable for the chiropractic profession.

Methods
Twenty-three new patients presenting at a chiropractic college student clinic with LBP of >7 days duration completed MYMOP and BQ before treatment and at 4th and 6th treatments. A Global Impression of Change (PGIC) was also completed at the 6th treatment. Responsiveness of the questionnaires was assessed using Standardised Response Mean (SRM). Sensitivity and specificity were analysed by ROC curve (anchor-based method). Correlation between BQ, MYMOP and the PGIC criterion were assessed with scatter plots and Pearson’s correlation coefficients.

Results
BQ and MYMOP scores showed a similar pattern with decreasing scores between baseline, 4th and 6th treatments across all questions. The group means and changes in both BQ and MYMOP across the whole study were almost identical, indicating the comparability of the questionnaires. The SRM scores indicate that both BQ and MYMOP are responsive, but BQ less so. Similarly, ROC analysis showed that neither MYMOP nor BQ could detect clinically significant change. No correlative relationship was demonstrated between either BQ or MYMOP and PGIC. However, there is a strong correlation between BQ and MYMOP (p<0.05).

Conclusions
Neither MYMOP nor BQ were able to detect any significant clinically meaningful change. There was a positive correlation between MYMOP and BQ, suggesting strong potential for the use of MYMOP in the chiropractic profession.

References
Chiropractic and yoga as an effective combination therapy for the treatment of low back pain: A randomised controlled trial

Christopher Biggs, Gabrielle Swait, Adrian Hunnisett and Christina Cunliffe

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Introduction
Yoga practice has positive health benefits and there has been a growing interest amongst chiropractors in the suitability of yoga as an adjunct therapy to chiropractic care, especially in a rehabilitative sense. Restoring complete function and reducing back pain are important objectives of chiropractic rehabilitation and evidence suggests that yoga may be particularly effective in achieving these goals [1]. Currently, there is no study investigating the effects of incorporating yoga into chiropractic treatment for the management of LBP [2].

Methods
Randomised Controlled Trial (RCT) with a sample size of 18 participants in 2 groups, chiropractic treatment only (CG; n=9) and chiropractic and yoga (CYG; n=9). Outcomes were assessed by completion of the Bournemouth Questionnaire, Roland Morris Disability Questionnaire and the Oswestry Disability Index before and after treatment. Results were recorded and analysed on SPSS v17 using non-parametric techniques, Wilcoxon Signed Rank and Mann-Whitney U test.

Results
There were statistically significant changes pre and post treatments in both CG and CYG groups in all 3 outcome instruments (p<0.05). However, there were no significant differences demonstrated between CG and CYG groups (p>0.05).

Conclusion
The study shows clinically significant results in both groups with improved outcomes in patients with sub-acute low back pain and chronic low back pain, as measured across all outcome instruments. Whilst no statistical significance was seen, there was an apparently clear clinically relevant difference between the 2 study groups that, with an increased sample size, may become statistically relevant.

References
Barriers between General Practitioners and Chiropractors

Katherine Butler, Christina Cunliffe and Adrian Hunnisett

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Introduction
The General Practitioner (GP) is the gateway to onward referral in the NHS and consequently their opinion can influence that of the general public. Although awareness of Chiropractic amongst GPs may be high, only 33% preferred chiropractic referral for manipulative therapy [1]. The use of CAM, including Chiropractic, is rising and for this reason integrating CAM and mainstream medicine into a framework could prove to be an important factor in public health in the future [2]. By investigating the barriers to GPs referral to Chiropractors, an understanding of the attitudes of GPs, assessment of their knowledge of the Chiropractic profession and their likelihood to refer in the future could be identified and help provide a solution where both sectors of health care can work symbiotically.

Methods
Self-administered questionnaire assessing GP demographics, training and referral attitudes to CAM mailed to 102 GPs working in the author’s locality. Results were analysed using standard Microsoft Excel™ functions.

Results
A response rate of 58% was achieved. The majority (93%) reported that they had no exposure to chiropractic throughout medical school although almost half (47%) offered some form of alternative health care in their practices. A substantial number (81%) would refer to a chiropractor if it was available on the NHS. Identified barriers included education about chiropractic, guidelines on appropriate referrals, lack of communications and payment for service.

Conclusions
Barriers to referring patients for chiropractic are perceived lack of evidence base, concerns over training of Chiropractors and a lack of knowledge about conditions best treated by chiropractic. Education about chiropractic and CAM should be part of medical training, ensuring a multidisciplinary approach to patients. Chiropractors should be proactive in their relationships with GPs, taking advantage local commissioning initiatives.

References
Change in referral patterns to Chiropractic Clinics over a 10-year period following introduction of the statutory register?

Nicks Dilley¹, Jonathan Field² and Peter McCarthy¹

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Introduction
There is evidence to suggest that UK public awareness of chiropractic has increased since the creation of the statutory register (1999) following the Chiropractic Act 1994 [1&2]. Over this period clinical guidelines and health service publications have explicitly advocated the consideration of chiropractic care for the management of acute and chronic back pain [3-5]. However, the influence of these changes on those referring patients is unknown. This study aimed to investigate change in referral patterns to 5 chiropractic clinics over a 10 year period from 2000. This study focussed on different referral methods from which potential patients may gain information about a particular clinic and hence access the services of that clinic.

Methodology
Data collected as part of normal practice activity in 5 chiropractic clinics over a period of 10 years was reviewed. In these clinics new patients are asked to indicate how they had heard about the clinic from a list of eight sources; advert, friend/family, GP/consultant, other therapist, directories, signage, internet or other. Descriptive statistics were used for analysis to provide average annual referral patterns and average annual percentage referrals.

Results
Data was available for 85% of the 21,401 new patient presentations. There was an overall drop of 16% in the total number of new patient registrations in the second five years compared to the first. Varying degrees of fluctuation were seen for all referral methods across the 10 year period. The proportion and total number from recommendation by family and friends increased over the study period (from 38% to 50%). However, the proportion of GP/consultant referrals, and those accessing by either directory entry or attracted by the signage remained largely unchanged at about 10%. The numbers and proportion from adverts fell as did those categorised as other and those with missing data. Whist no patient in the first 3 years was recorded as accessing facilities following contact via internet, in 2010 this group accounted for 5%.

Conclusion
This study found that the number of new patients presenting to the assessed clinics fell over the 10 years following state regulation of chiropractic. Being recommended by a friend or family member accounted for half of new patient consultations. The data also suggests that GP/consultant referrals stayed steady, as decrease in the number of patients accessing
chiropractic services following recommendation by a GP or consultant was proportionate to the overall reduction.

References


Subjective visual vertical in patients with neck pain

Sharon Docherty

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How we perceive vertical involves the integration of information from our visual and vestibular systems as well as somatosensory input. As a result, a disruption in any of these systems is accompanied by a decrease in the accuracy with which a subject can estimate the position of gravitational vertical. Clinical applications of this phenomenon have mainly centred on either brain injuries, caused by stroke and tumours, or vestibular dysfunction however there have been a limited number of studies investigating the perception of subjective visual vertical (SVV) in patients with neck pain. This is an account of the evidence they provide, its implications and how the area of investigation can proceed.

The rod and frame test is the most commonly used method of assessing SVV. The subject is required to align to vertical a rod within a surrounding frame, which may or may not be tilted.

In patients with acute or recurrent, uncomplicated neck pain symptomatic individuals have been found to exhibit higher errors than asymptomatic controls when the frame was not tilted [1]. In situations where the frame was tilted or not present, there was no significant difference between the two groups. However in the presence of a tilted frame, patients with neck pain of insidious onset have higher errors than those who have pain of traumatic origins [2].

For chronic neck pain patients [3], no difference has been found between their errors and that of asymptomatic controls when the frame is not tilted. However when the frame is tilted, significantly more individuals have higher than normal errors. This group was also characterised by higher levels of perceived disability due to their pain. No conclusions could be drawn from grouping patients based on the laterality of their pain as those patients with unilateral neck pain exhibited errors both towards and away from the affected area.

While we are some way to investigating the influence of neck pain on perception of vertical, more work is required. In particular, the issue of laterality of pain and asymmetry of error requires a more detailed investigation. In addition, studies including recordings of neck muscle activity and eye movement patterns may further our understanding of this sub-group of patients.

References
Is chiropractic valuable in the treatment of children with learning disability?

Eslytt Graham, Christina Cunliffe and Adrian Hunnisett

McTimoney College of Chiropractic, Kimber Road, Abingdon, Oxfordshire. OX14 1BZ, UK.

Introduction
Dyslexia is the most common type of learning disability with 80% of affected children labeled as “learning disabled” [1]. A recent systematic review has suggested a positive effect of chiropractic care in individuals suffering from learning disabilities and dyslexia and that further research is needed [2].

Methods
Children (n=27) with reading delay were randomised into two groups. Test group received weekly chiropractic intervention for 3 months whilst controls received no intervention. The Neale Analysis of Reading Ability was used at baseline and conclusion of the study. The data was analysed descriptively and Intention to Treat analysis was undertaken to account for drop-out.

Results
The 27 participants were randomised into 14 test participants (51.9%) and 13 controls (48.1%). Drop-out rate was confined to 2 control participants. No statistical difference was demonstrated between the groups for reading comprehension or reading accuracy. A trend towards an increased reading rate in the intervention group was shown. Intention to Treat analysis showed a statistically significant difference between the groups (p<0.05) at best case, with no differences at worse case (p>=0.3).

Conclusion
This study demonstrated that chiropractic intervention did not significantly improve the reading ability of children with reading delay compared with children who received no intervention. A trend was observed suggesting that children read more fluently following chiropractic adjustments. Reading more fluently potentially leads to improved confidence and enjoyment in reading encouraging reading which, like all skills, improves with practice.

References
Evaluation of a GP referral service for manual treatment of back and neck pain

Mark Gurden, Marcel Morelli, Greg Sharp, Katie Baker, Nicola Betts and Jennifer Bolton

Private Practice, Braintree Chiropractic and Back-Pain Clinic, Essex
Private Practice, Stansted Chiropractic and Back-Pain Clinic, Essex
Private Practice, Colchester Osteopathic Centre, Essex
Physiotherapist, Private Practice, Colchester
Anglo-European College of Chiropractic, Bournemouth, UK

Background
Persistent musculoskeletal conditions, including back and neck pain, are costly in terms of primary and secondary healthcare resources.

Aim
To describe and evaluate a community-based musculoskeletal service in terms of patient-reported outcomes and satisfaction.

Design
Prospective, service evaluation.

Setting
NHS NE Essex PCT commissioned service.

Method
Patients consulting for up to 4 weeks for back or neck pain were referred by their GP according to patient preference to either a chiropractor or osteopath or physiotherapist working in the independent sector. Patients completed questionnaires at baseline and at discharge from the service.

Results
Questionnaire data were obtained from 696 patients, 97% of whom were seen within 2 weeks. About half (51%) had had their pain for <3months, and of the remainder 49% for more than 12 months. Patients received on average 6 treatments. Using the Bournemouth Questionnaire, the Bothersomeness scale and the Global Improvement Scale, approximately two-thirds (64.6%, 67.8% and 69.9% respectively) reported improvement at discharge, and approximately 65% a significant reduction in medication. Almost all (99.5%) patients were satisfied with the service. Similarly almost all (97%) patients were discharged from the service with advice on self-management; the remainder were recommended for secondary care referral.

Conclusions
This service improved patient access and choice resulting in shorter waiting times and effective outcomes. An impact analysis of the first 12 months of the service by the PCT showed a reduction in primary care consultations and in inappropriate referrals to secondary care.
Attitudes of chiropractors to evidence-based practice and how this compares to other healthcare professionals: A qualitative study

Gary Hall

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Introduction
Evidence based practice is now becoming accepted as the standard modality in the NHS and the allied healthcare profession. This study explores chiropractor’s attitudes towards EBP, the barriers they face and how this compares to other professions.

Methods
Seven field chiropractors were interviewed by the author, the interviews were semi-structured, audio recorded and later transcribed. These transcriptions were systematically evaluated using a data analysis software package to identify thematic categories in the chiropractor’s narratives.

Results
Research was considered to be an integral part of the future of the profession by all however; the influence that research has upon daily practice was perceived to be limited. Sourcing research was not routinely undertaken and the ability and confidence to evaluate research was low. Current research was deemed to lack true representation of many clinical experiences and therefore was considered not relevant to practice life in many aspects.

Conclusion
This study does not show these chiropractors to be anymore disadvantaged to certain other healthcare professionals in educational skills when considering EBP. Nor does it show that these chiropractors are, in theory, less willing to adopt an EBP than other healthcare professions. They are similar to their counterparts in terms of not bearing this out on occasions. However, a larger study would have to be carried out to establish if these chiropractors are representative of the wider chiropractic profession before similarities could be drawn between chiropractors and other healthcare professionals.

References
Referral patterns to Spinal Manipulative Therapy by Welsh General Practitioners

Annabel Kier¹*, Matthew George² and Peter McCarthy¹

¹WIOC, University of Glamorgan, Wales, UK
²Private Practice
   *akier@glam.ac.uk

Introduction
Though guidelines have supported the use of Spinal Manipulative Therapy (SMT) for low back pain (LBP) [1,2] and recent contract opportunities with local primary care trust are emerging, General Practitioners (GP) referral patterns to any of the 3 registered professions that perform SMT is generally unknown.

Methods
A short questionnaire was designed and piloted. Demographic information, patient referral to SMT and the GPs own personal utilisation of SMT was obtained. 385 GP’s were contacted representing approximately 20% of the GP’s in Wales Autumn 2008.

Results
182 (50.8%) questionnaires were returned.
Profile characteristics: 2/3 of respondents were male, 79% were ≥40 years old and 62% had ≤ 20 years in practise. Personal use of SMT by GP’s: 48 respondents had sought SMT treatment and a further 56% of those that had not previously sought SMT indicated that they would consider doing so. Patient referral to SMT by GP’s: 131 respondents (72%) had referred patients to SMT and of those who had not a further 13% would consider referring. The general referral pattern and utilisation pattern was Physiotherapy:Osteopathy:Chiropractic. 21% who had never referred patients neither had nor would consider it for themselves. A Subsection appeared to manage personal choice differently from patient referral: 5 individuals who had not referred patients either had or would consider it for themselves and 23 of the group that would refer patients neither had nor would seek it for themselves.

Conclusions
This small investigation indicates that GP’s do, according to their own admission, comply with guidelines on back pain and SMT as a care option. There was a minor group that did not comply irrespectively of their own use of SMT. Further investigation on the % referral of patients to SMT would enhance an understanding of this situation, as would investigation into the reasons for why guidelines are not followed.

References
[1] Department of Health 2006 Musculoskeletal Services Framework
Patient satisfaction and chiropractic style: A cross sectional survey

Rosalyn Mace, Christina Cunliffe and Adrian Hunnisett

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Introduction
When comparing satisfaction studies of medical and chiropractic back pain care, chiropractic care does better than medical care overall [1]. Treatment length may be a contributing factor [2] as may treatment frequency [3]. There is no current literature that compares chiropractic styles and satisfaction, therefore inter-satisfaction differences between the various styles of chiropractic practice is not known. An understanding of these factors is a key part of increasing patient satisfaction and confidence.

Methods
The study design was a cross sectional survey. A self-administered questionnaire was mailed out to a number of pre-recruited chiropractic clinics in varying locations in the UK. The questionnaires were completed anonymously by the patients in these clinics.

Results
A total of 186/250 valid questionnaires were received, giving a response rate of 75%. Most respondents attended chiropractic clinics for the treatment of back pain. The results showed some clear and important opinions regarding treatment length and frequency. Overall satisfaction and quality of life scores were highest in clinics with treatments times over 20 minutes. In addition clinics practicing wellness care had lower satisfaction scores with higher frequency of care, than those with less frequent care sessions.

Conclusions
The results would imply more emphasis is placed on patient choice for treatment frequency. This element, along with less frequency, may optimise satisfaction. The results of this study have shown that patient satisfaction is influenced by different chiropractic styles, but further studies are required to clarify a wider range of variables.

References
Detecting somatic changes related to visceral conditions: is it possible without hi-tech tools?

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Introduction

One area of chiropractic remaining clouded by more anecdote than fact is the viscero-somatic reflex. Published reports (clinical cases even a pilot of an RCT) purport that treatment of spinal dysfunction alleviates visceral conditions; however, obtaining objective or otherwise quantifiable evidence of a dysfunction is difficult.

Aim

Produce a low-tech-clinically relevant answer to this problem;

Rationale

Use the spinal screening data created by the student with confirmation by the supervising clinician (>5 years of clinical experience). Blinding was ensured as this was: a retrospective study and the disorder under scrutiny presented as a co-morbidly.

Methodology

Retrospective analysis of randomly chosen case notes (WIOC archive: 100 control and 20, age/sex matched cases with noted REFLUX/HEARTBURN of \textgreater{}3 months (medicated or unmedicated). Primary complaint was apparently unrelated to this condition (e.g., acute traumatic low back pain). Spinal restrictions (painful and painless) collated with spinal level (Excel, Windows XP), initial qualitative analysis reported here. Signed consent obtained from all patients included.

Results: Painless spinal restrictions at c1-2 to c4-5 c6-7 to T1-2 and lower thoracic more prevalent in the reflux group (shown in Fig 1).

Discussion/Conclusions

Although there are admittedly weaknesses in both retrospective methodologies and using student derived data, there is mitigation on this occasion by the benefit of blinding regarding both the relevance and expectations. Furthermore, with the relatively untrained clinician more likely to miss subtle restrictions, any inclusion is more likely to have been obvious, thus strengthening the likelihood of the relationship being robust. Therefore, this method might be worth considering in relation to further study of the viscera-somatic phenomenon.
The immediate effects of pre-event high velocity low amplitude manipulation on sit and reach flexibility, acceleration and velocity speed in rugby union

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Introduction
Manual therapists use high velocity low amplitude manipulation (HVLAM) for the treatment of low back pain, neck pain and joint dysfunction. In rugby union, the development of overall posterior trunk, shoulder and lower limb flexibility in conjunction with acceleration and speed can help to avoid injuries and improve performance. The objective of this study was to evaluate changes in sit and reach flexibility (SR), 10 m acceleration and 35 m velocity speed following HVLAM.

Methods
This study was a double blinded, randomised design. Nineteen male student level rugby union players volunteered to participate in this study. Subjects performed a 10 min prescriptive running warm up to be followed by AS 10, VS 35 and SR tests. A chiropractor then delivered either HVLAM as intervention or mobilization (MOB). Afterwards, player’s heart rate pulse and blood pressure was measured again and he returned to perform a second warm up and set of testing as described previously.

Results
Mean and peak SR increased after HVLAM (1.35 vs 1.40 cm; p=0.978 and 1.40 vs 1.40 cm; p=0.972). Mean and peak AS 10 decreased in time after HVLAM (-0.008 vs -0.005 sec; p=0.568 and -0.018 vs -0.024 sec; p=0.621). No time changes for VS 35 after intervention (0 vs 0.101 sec; p=0.427). Peak VS 35 decreased in time after HVLAM (-0.042 sec vs 0.093 sec; p=0.468).

Conclusion
Within the limitations of this study, a single encounter of pre-event HVLAM had a positive trend effect on increasing SR scores and on decreasing short distance sprinting performance times. However, it showed no significant difference. Further investigations with longer intervention periods are needed.

References
Australian Rules footballers: a randomized controlled trial *BMC Musculoskeletal Disorders* 11:64. doi:10.1186/1471-2474-11-64.


The effects of a sacroiliac belt on postural control: A pilot study

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Introduction
Many patients experience pain relief when using a pelvic belt. Studies have indicated that the mobility of the sacroiliac joints (SIJs) is restricted by application of a belt and the force required for relief is small [1]. In clinical practice, observation of postural sway is noted for patients considered to have hypermobile SI joints, as indicated by a positive arm fossa test [2], or positive Hochman’s Standing Stress Test [3] (SOT Category II). The purpose of this study was to investigate an objective method of measuring the effects of a pelvic belt on postural control so that the use of the belt may be included in the management of patients with hypermobile SIJs.

Method
19 volunteers were used in this study under 3 conditions: without a belt, wearing a pelvic belt manufactured for the Anglo-European College of Chiropractic (belt 1), and wearing a commercial Serola belt (belt 2) (Serola Biomechanics Inc, 5281 Zenith Parkway, Loves Park, IL (USA)). For each condition, each subject stood on a force plate ( OR6-7 AMTI Inc., 176 Waltham St, Watertown, Ma (USA)) with feet apart and eyes opened for 60 seconds. The force plate was used to obtain the Centre of Pressure (CoP) [4], in the X and Y planes, which was then analysed as a function of time to give the Mean CoP, Standard Deviation of CoP (sway), and range of CoP. Measurements were repeated 3 times. Arm fossa and standing stress tests were performed on each subject to check for sacroiliac hypermobility.

Results
Averages and standard deviations for the three trials per condition were calculated and compared. For example, the mean CoPx values for the 19 subjects were calculated to be 6.7mm, 5.6mm and 7.3mm without a belt, and for belts 1 and 2, respectively. Initial SPSS analysis showed that no statistical significant difference in the measurements with and without either of the 2 belts for mean CoP, sway and range. Further calculations are yet to be performed for sway velocity and sway area.

Conclusion
Data analysis is still ongoing. However, further study is indicated, with larger sample groups, to include symptomatic and non symptomatic subjects.
References


Acute Symphysis Pubis Dysfunction (SPD) in a 78 year old lady:  
A case study

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Introduction
Symphysis Pubis Dysfunction (SPD) is a relatively common cause of groin pain, and often disability, in pregnancy [1] due to increase weight bearing and shearing force on the pubic symphysis. It can be overlooked as a source of pain in non pregnant women where groin pain is often considered to be hip related or referred from the back or sacroiliac joints.

Case report
A 78 year old lady presented with acute right groin pain of one month's duration. She was unable to weight bear on her right leg and walked with a stick. Prior to the onset of right groin pain she had left buttock pain for which she received osteopathic and physiotherapy treatment. The pain then move to the right buttock, disappeared, then a month later the groin pain started. She had a history of ongoing low back ache, but was generally healthy for her age, played golf and enjoyed gardening.

Assessment
SOT arm fossa testing [2] indicated Category II bilateral sacroiliac joint hypermobility. There was a superior right pubic rami determined by hip adductor muscle strength testing [3] and by palpation.

Treatment
SOT Category II pelvic blocking protocols were applied for sacroiliac instability. Pubic symphysis adjustment via resisted knee abduction/adduction [3] proved too painful, therefore the superior pubic rami was adjusted using an activator via a thumb contact. A sacroiliac pelvic belt was also used to help hold the adjustments and give weight bearing support [4].

Results
After 14 office visits over a 10 week period, the patient was pain free, no longer used a stick, and was back to playing golf and gardening.

Discussion
The pubic symphysis is an often forgotten but important part of the 3 joint complex that forms the pelvic ring. In this case, although the SI joints were no longer symptomatic, all 3 joints were involved and needed to be stabilised.
**Conclusion**
When considering groin pain, the involvement of the pubic symphysis should not be overlooked. This case demonstrates the successful outcome in the treatment of a 78 year old lady with acute Symphysis Pubis Dysfunction. The low force techniques used can be readily applied in the management of SPD and pelvic girdle pain in pregnancy.

**References**


A survey of “mental hardiness” and “mental toughness“ in professional male football players

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Design
Survey design, quantitative research.

Background
Recent research findings indicate that mental hardiness can be determined reliably with the use of specific self-assessment questionnaires.

Objectives
The objectives of the present study were to determine the level of mental hardiness in a group of professional soccer players using two established questionnaires (modified Sports Mental Toughness Questionnaire (SMTQ-M) and Psychological Performance Inventory (PPI-A)) and to investigate the degree of correlation between the scores of these two measures. Further, the study aimed to establish the level of inter-rater agreement between two coaches in rating the level of mental hardiness of their players, and whether the results of the players’ self-assessments agreed with the coaches’ ratings.

Setting
A professional championship football club in Wales.

Subjects
Convenience sample of 20 professional soccer players and two football coaches.

Methods
After written and witnessed consent, two self-assessment questionnaires (modified PPI-A and SMTQ-M) were completed by the football players. Two coaches, who did not know the outcome scores of the players’ self-assessments, independently rated each player. Each player was awarded a percentage score for each test, and an average percentage score \(\frac{(\text{SMTQ-M} \% + \text{PPI-A} \%)}{2}\). Mean scores were established for the whole team, International players and Non-International players. The PPI-A and SMTQ-M scores obtained for each player were analysed for correlation with Pearson’s correlation. The ratings of the coaches were analysed for agreement with Kappa-statistics. Finally, the data were analysed with Kappa-statistics to determine whether the players’ self-ratings agreed with the coaches’ ratings.
Results
The average \( \frac{{(\text{SMTQ-M} \% + \text{PPI-A} \%)} \div 2} \) mean score was 77 \%, (SD = 7.98). The independent t-test (\( p = 0.04 \)) showed that international players scored on average 7.4 \% higher than non-international players. The players’ scores obtained from the PPI-A and SMTQ-M correlated well (\( r = 0.709, p < 0.001 \)). The ratings of the players by the two coaches showed a significant, but weak to moderate agreement (Cohen's kappa = 0.33). No statistical significant agreement was found between player self-assessments and the ratings given by the coaches.

Conclusions
There is significant correlation between SMTQ-M and PPI-A scores. The levels of mental hardiness in professional football players can be assessed with both questionnaires. Higher performers had a slightly higher mental hardiness score. The results would suggest that either coaches were not able to judge the mental hardiness levels of their players appropriately, or that the players over- or under-rated their own mental hardiness and therefore, made it impossible for coaches to concur with the players’ self ratings.
The agreement of subjects’ own beliefs regarding psychosocial factors in low back pain: A cross-sectional study

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Introduction
Disability from low back pain is increasing with only 15% of cases directly attributable to underlying pathology [1]. Psychosocial factors contribute in many cases, yet the public are seemingly unaware of these factors and the influence they can have [2]. This study aims to correlate subjects’ psychosocial health scores with their agreement as to the applicability of psychosocial factors.

Methods
An online cross-sectional small-population survey was circulated to a pool of 130 randomly selected subjects through email contacts and social networking sites. The survey enquired about back pain history, and agreement on the general applicability and self-applicability of psychosocial factors (Duke Health Profile). Analysis was undertaken using SQL Database and Microsoft Excel.

Results
A response rate of 84% was achieved (n=109) with 40% currently suffering back pain, 47% previously suffering back pain, and 13% never suffered back pain. There were no significant differences in agreement on the self-applicability or general applicability of psychosocial factors between groups based on their back pain history. However, mean Anxiety-Depression health scores for subjects who broadly agreed in the applicability of psychosocial factors to their own case were “worse” than those who did not agree (p<0.005), with other composite psychosocial scores showing the same degree of disparity.

Conclusion
The results show that those subjects who agree that psychosocial factors had an impact on their own back pain condition had worse psychosocial health scores than those who did not agree. This may highlight some feeling of uniqueness, or a degree of increased self-awareness as result of condition-linked introspection, and in either case requires that a clinician be aware of the disparity in belief in order to build and maintain rapport.

References