



THE UPPER CERVICAL
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Origin of Précis

In October 2014, Dr. Jeff Scholten was contacted by then editor of the JCCA, Dr. Allan Gotlib, asking for a summary paper on Upper Cervical Chiropractic to be published in a special edition in June 2015. The paper summarizes the various Upper Cervical procedures that comprise the ICA's Upper Cervical Diplomate program. Each author represented their particular assessment and adjusting method illustrated in the publication. This opportunity provided Upper Cervical Chiropractic a permanent place in the indexed literature.

As an added bonus, the open access status means the paper can be found, downloaded and read by anyone. Students unsure and curious about Upper Cervical procedures now have a reference to easily consult. The summary of the multiple case studies reporting the benefits of upper cervical care adds to the body of evidence into the efficacy of these systems.

The major challenge authoring the manuscript was in satisfying the peer reviewers' concerns over the quality of the papers used in support of the written text. You will note a qualifying statement in the paper. Indexed Biomedical and Chiropractic Journals demand that quality, indexed papers support the statements made in their manuscripts. This means the research supporting upper cervical procedures must appear in the indexed

journals. When it came to the summary paper, only a handful of papers met these requirements, most of which were published through NUCCA research endeavors.

NUCCA and UC Chiropractic need publications in the indexed literature to assure survival in this era of evidence-based healthcare. It is quite challenging to gain acceptance into these demanding journals as this paper's co-authors quickly learned.

"Enter to learn how" was written over the door at the Palmer Davenport Clinic. Please consider joining and supporting the UCRF Research Society in learning how to carry forward the longstanding NUCCA tradition in research while assuring the organization's presence in the indexed literature remains and will increase.

Many thanks to Dr. Scholten for making this happen.



Implications of a Research Society

by Jordan Landholm, D.C.

The Problem:

If asked, most NUCCA doctors will tell you they have a case that would make for a great publication. The chiropractic colleges have failed to create and promote a research culture in the profession. The problem is that very few doctors have the knowledge to go

through the rigor of trying to turn that case into a readable, citable, and properly formatted indexed paper.

Research, just like the NUCCA procedure, has a daunting learning curve that can leave many behind before they even get out of the starting gate.

Discussion:

As a solution, the UCRF Research Society has been created and serves as a platform for those who seek to learn how to read, write, and understand indexed, peer reviewed research. It will provide tools for writing your own paper, tools for communicating on a scientific level to other researchers and local healthcare professionals, and tools for those wishing to advance the NUCCA work.

Conclusion:

If you look at the upper cervical case studies published you will notice an interesting trend, many of the authors have published more than one paper. Why is this? It is because they have developed systems for making this an efficient process.

You can do the work now or do the work later, but it is suggested, as Dr. Tym Flory mentioned at the 2015 Spring Conference, in taking the “hard-easy route”. “Do the work now to learn how to do it right and it will serve you for a long and prosperous career.”

“Every day is a new day. It is better to be lucky. But I would rather be exact. Then when luck comes you are ready”

- Ernest Hemmingway.



Observer Reliability Using the NUCCA Spinographic Analysis System

by Daniel C. Seemann, Ph.D.

A big thank you to Ms. Kathy Waters who edited this paper, reformatted the tables, and updated some pictures with higher quality images. Many thanks to Dr. Glenn Cripe who provided Dr. Woodfield with a copy of this original manuscript submitted to JMPT in December 1982.

After one year of posturing by the Journal, it was rejected on the basis the article would be of no interest to the readers. Ironically, shortly thereafter JMPT published Sigler and Howe’s report on upper cervical x-ray analysis reliability, Inter- and Intra-examiner reliability of the upper cervical X-ray marking system. This paper essentially concluded that the examiners inability to agree meant that any measured differences produced using the orthogonal x-ray marking system “will be just as likely be from marking error as from actual atlas position change.”

This NUCCA paper describes a study that was well thought out, very organized, and

adequately tested each hypothesis. Here is another fine example of when research is needed; a NUCCA practitioner willingly steps up to the plate to volunteer.

One major shortcoming is the small number of observations needed to make these results statistically significant. The R agreement coefficient has fallen into disuse. More robust statistical tests such as, the Kappa coefficient (k) and the intra-class correlation coefficient (ICC) are in use today. Considering the quality of the papers in JMPT at the time this was submitted, it is puzzling why this manuscript was not published.

It should be noted that the Sigler and Howe study suffered from procedural errors and lacked numbers to support the conclusions made. It is not likely that the Sigler and Howe paper would stand up to peer review and published today. Please enjoy this piece of NUCCA history.



2015 Research Update

NUCCA Phase Contrast Migraine Study



Advanced MRI data analysis has been completed by Magnetic Resonance Innovations, Inc.

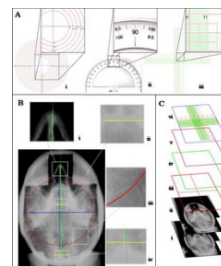
(<http://www.mrinnovations.com/>).

This inquiry allowed for exploration of additional hemodynamic and hydrodynamic

flow pattern changes. Answering a call for papers from renowned MS researcher, Dr. Paolo Zamboni, Dr. Woodfield, Dr. Hasick, and MR Innovations MR physicist, Sean Sethi, are currently preparing a manuscript for submission to: *Behavioral Neurology - Special Issue on "Blood and Fluid Circulation of the Brain: The Neurovascular Component of Neurodegeneration."* The paper provides an extensive description of venous outflow in the migraine subjects before and after the NUCCA correction. Significant findings were observed in the migraine subjects exhibiting a secondary venous outflow drainage pattern in response to the NUCCA correction.

Radiographic Animation Study (RAS) Analysis Project

Dr. David Vazquez is finalizing the manuscript reporting the findings from the RAS Analysis study supported by Small Steps. An October manuscript submission is planned to Bio Med Central - Chiropractic & Manual Therapies. This online, open access journal will facilitate viewing of the RAS animated tutorials by links to supplemental digital content from within the article.



Work has begun on the research protocol for the Precision Alignment Device for Radiographic Animation Studies (PADRAS) Multi-Site

Validation Study. It requires the production and installation of four to five functioning prototypes at various private practices. The PADRAS will be used for patient post to pre x-ray positioning comparisons with data analysis based on developments from the RAS project.

2015 ACC-RAC Conference, Las Vegas, NV,



March 19-21, 2015

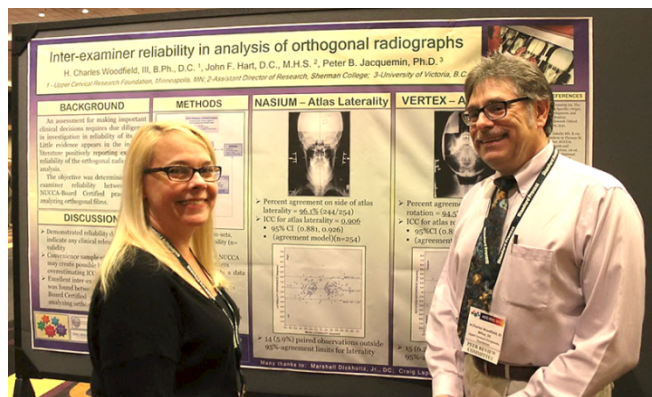
Two posters presented by Dr. Charles Woodfield were in the spotlight this year; “Inter-examiner reliability in analysis of orthogonal radiographs” and “MRI measured change in intracranial flow following upper cervical chiropractic care of a migraine headache subject—a case report.”



Dr. Woodfield at Migraine Poster, 2015 ACC-RAC

Dr. Claire Johnson the editor of JMPT, J Chiro Med, J Chiro Edu, J Chiro Hum, and the peer review chair of 2015 ACC-RAC assured Dr. Woodfield the x-ray manuscript has a home in JMPT. After viewing the Migraine case study poster, she stated interest in receiving quality case reports from NUCCA Doctors for submission into the Journal of Chiropractic Medicine. Dr. Johnson thanked Dr. Woodfield

for peer reviewing submissions to the RAC conference. Having a NUCCA presence at these Conferences demonstrates to the profession that NUCCA is serious and persistent in conducting research. Submissions are being prepared for next year’s conference, two by UCRF Research Society Members.



Dr. Woodfield and Dr. Janice Hubbard from Palmer Research discussing the X-ray Reliability Study Poster



UCRF Strategic Planning Session

A special UCRF strategic planning session was held prior to the 2015 Spring Conference in Newport Beach to map out the next steps of our research agenda. Jaime Nolan, President of IntrinXec, facilitated the daylong retreat. In attendance were eleven Doctors from UCRF and three of our staff members from IntrinXec. The entire day was spent looking at



our past, present and future status of NUCCA as an organization within chiropractic as well as the healthcare community.

The day began by looking at the four boards comprising the NUCCA architecture and how they function together. These four boards include NUCCA, UCRF, Standards and Certification and Education Boards. It became very clear how they all work and are integral in supporting the membership of the NUCCA organization. The organization's role in the chiropractic profession as well as in other Upper Cervical Chiropractic procedures was considered. An examination of UCRF's strengths, weaknesses, opportunities, threats and future alternatives provided interesting conversations while presenting planning challenges. A current list of projects and their status were evaluated.

We have successfully grown the number of current projects with expanded funding to meet the budgetary requirements. Success in publication of significant papers over the past few years has been accomplished with several in the pipeline. A new strategic initiative for 2015 to 2017 was created.

Thank you to all of our supporters that have helped us successfully move this research agenda forward. The future looks very bright and busy for UCRF!



Attendees of the 2015 Spring Conference UCRF Planning Session:

Drs. Glenn Cripe, Keith Denton, Marshall Dickholtz Jr., Gordon Hasick, Johanna Hoeller, Kerry Johnson, Craig Lapenski, Jeff Scholten, Jack Stockwell, Chuck Woodfield, Lee Yardley
IntrinXec Staff:

Jessica Burgus, Jaime Nolan, Debbie Norton



NUCCA Publications Online

Here you will find a listed bibliography of research articles you may download and share with other health professionals and your patients. Just click on the link and download the paper.

The National Library of Medicine (Pub Med) is the "go to" index for healthcare information for the world. When papers are submitted for publication, editors and peer reviewers go to Pub Med to find previous publications and others in support of the submission. It is crucial for NUCCA research to appear in Pub Med to allow anyone in the world to find it.

Only those articles found in the indexed sections meet the high quality standards of PubMed and best represent the high quality research performed by the NUCCA organization through UCRF.

This Publications section on the Upper Cervical Monograph web site is a work in progress in support of what you do as NUCCA Doctors. The listed bibliography is in the Vancouver format, standard for most Journals in PubMed. In writing a paper, all you need do is copy and paste the citation in the references section. It will be in the correct format for the Journal you are submitting which should help save time.

If you are aware of any published NUCCA Research that has been missed in this section, please contact Dr. Charles Woodfield so that it can be added. The intention is to maintain a “go-to” home on the web for Doctors to remain informed on the latest in NUCCA Research publications.

Indexed Publications:

Here are papers indexed by the US National Library of Medicine (PubMed), available for the world to find in documenting NUCCA's research effort. Indexed journals should be used to publish our research efforts.

Woodfield HC, York C, Rochester RP, Bales S, Beebe M, Salminen B, Scholten JN. Craniocervical chiropractic procedures - a précis of upper cervical chiropractic. J Can Chiropr Assoc. 2015 Jun;59(2):173-92. PubMed PMID:

26136610; PubMed Central PMCID: PMC4486989.

Woodfield HC, Gerstman BB, Olaisen RH, Johnson DF. Interexaminer reliability of supine leg checks for discriminating leg-length inequality. J Manipulative Physiol Ther. 2011 May;34(4):239-46.doi: 10.1016/j.jmpt.2011.04.009. PubMed PMID: 21621725.

Bakris G, Dickholtz M Sr., Meyer PM, Kravitz G, Avery E, Miller M, Brown J, Woodfield C, Bell B. Atlas vertebra realignment and achievement of arterial pressure goal in hypertensive patients: a pilot study. J Hum Hypertens. 2007 May;21(5):347-52. Epub 2007 Mar 2. PubMed PMID: 17252032.

Abstracts in Indexed Journals:

Here are abstracts published in the indexed literature from NUCCA research at Research Conferences and Symposiums.

2015

Woodfield HC, Hart JF, Jacquemin PB. Inter-examiner reliability in analysis of orthogonal radiographs. Poster presentation. J Chiropr Educ. 2014;29(1); 108.

Woodfield HC, Hasick DG. MRI measured change in intracranial flow following upper cervical chiropractic care of a migraine headache subject—a case report. Poster presentation. J Chiropr Educ. 2014;29(1); 108.

2014

Woodfield HC, Becker W, Hasick DG, Rose S. Observed changes in quality of life measures and cerebrospinal fluid flow parameters in migraine subjects receiving chiropractic care. Poster presentation. J Altern Complement Med. 2014 May;20(5):A50

Woodfield HC, Gerstman, BB, Hart J. Examiner reliability in analysis of orthogonal radiographs-phase 2 (abstract). Poster presentation. J Chiropr Educ. 2014;28(1);101.

Vazquez D, Johnson D. Method for evaluating the precision of patient positioning in pre- and post-nasium x-ray film pairs. Platform presentation. Chiropr Educ. 2012;26(1); 114.

Vazquez D, Gerstman B, Khauv K, et al. Inter- and intraoperator patient positioning repeatability in pre- and postradiographic studies using a novel positioning device and a phantom mannequin (abstract). Poster Presentation. Chiropr Educ. 2010;24(1); 143.

Woodfield HC, Khauv K. Efficacy of Hands-on Instructional Training for the Supine Leg Check: A Feasibility Study. Chiropr Educ. 2010;24(1); 144.

Non-indexed Publications:

Listed below are papers that are not indexed yet are peer reviewed for journal acceptance. The lack in journal indexing makes searching for articles supporting NUCCA care a challenge.

Tymothy Flory, DC, Jonathan Chung, DC, Jonathan Ozner, DC. Resolution of Facial Neuralgia Following Reduction of Atlas Subluxation Complex: A Case Study. J Upr Cerv Chiropr Res. 2015 Win;1: 6-13.

Bagnaro N. Improvement in Subjective, Academic and TOVA Measures in a Child with ADHD Following Upper Cervical Chiropractic Management. J Upr Cerv Chiropr Res. 2014 Sum;3:42-46.

Chung JC, Brown JB, Busa JB. Resolution of hypertension following reduction of upper cervical vertebral subluxation: a case study. J Upr Cerv Chiropr Res. 2014 Win;1:1-6.

Woodfield HC, Dickholtz MD. Quality of life improvement in patients with chronic fatigue syndrome following upper cervical chiropractic care. J Upr Cerv Chiropr Res. 2012 Fal;4:92-99.

Brown JB, Chung JC, McCullen BM. Upper cervical chiropractic care of a female patient with multiple sclerosis: a case study. J Upr Cerv Chiropr Res. 2012 Win;1:16-19.

Chung JC, Brown JB. Reduction in symptoms related to parkinson's disease concomitant with subluxation reduction following upper cervical chiropractic care. J Upr Cerv Chiropr Res. 2011 Win;1:16-19.

Chung JC, Salminen BS. Reduction in scoliosis in a 10-year-old female undergoing

upper cervical chiropractic care: a case report.
J Pedi Matrnl Fam Heal. 2011 Win;1:23-30.

Khauv KB, Dickholtz, Sr. M.
Improvement in adolescent idiopathic scoliosis
in a patient undergoing upper cervical
chiropractic care: a case report. J Pedi Matrnl
Fam Heal. 2010 Fal;4:136-142.

Palmer JP, Dickholtz MD. Improvement
in radiographic measurements, posture, pain &
quality of life in non-migraine headache
patients undergoing upper cervical chiropractic
care: a retrospective practice based study. J
Vert Sublux Res. 2009 Jun;1:1-11.

Abstracts in Non-indexed Publications:

Below are abstracts presented at
Conferences that appear in non-indexed
journals.

Proceedings of the 11th International Research
and Philosophy Symposium (IRAPS)
Spartanburg, SC. October 16-19, 2014. An.
Vertebral Subluxation Res. 2015 Spr;2: 48-98.

Schalow PR. Resolution of Myasthenia
Gravis Symptoms Following Upper Cervical
Chiropractic: A Case Report. p88.

Woodfield HC, Hasick DG, *et al.*
Changes in Quality of Life Assessments and MRI
Measured Intracranial Compliance of Migraine
Subjects Receiving a National Upper Cervical
Chiropractic Association (NUCCA) Atlas
Correction. p89.

Chung J. Improvement in Post-
Concussion Symptoms in a 16-Year-Old Female
Under Upper Cervical Chiropractic Care— A Case
Report. p90.

Giffen B, Orem H. Outcome of an Infant
with Chronic Constipation Following Upper
Cervical Care: A Case Report. p97.

Woodfield HC, Gerstman B, Hart JF.
Examiner Reliability in Analysis of Orthogonal
Radiographs. p98

Miscellaneous:

Many of these papers have not been
published or appeared in Journals no longer in
print.

Seeman DC. Observer Reliability Using
The NUCCA Spinographic Analysis System.
Submitted to JMPT. Unpublished manuscript.
1982.

Goodman RJ, Mosby JS. Cessation of a
seizure disorder: correction of the atlas
subluxation complex. 1991: unpublished
manuscript.

Thomas MD, Wood J. Upper Cervical
Adjustments May Improve Mental Function. J
Manual Medicine 1992;6:215-216.

Wallace HL, Dickholtz, Sr. M, Woodfield
HC. Rand-36 used as an outcome measure in a
NUCCA practice (abstract). Chiropr Res J.
1997;4(1):33.

Webster SK, Dickholtz, Sr. M, Woodfield HC, Bakris GL. Acute effect of NUCCA upper cervical adjustment on patients with diabetes type II (abstract). Chiropr Res J. 2000;7(2):81.

Posters:

Here are copies of posters presented at various Scientific Conferences and Symposiums. Poster sessions require a blinded peer reviewed abstract for acceptance. Some may require a written manuscript before consideration. These are papers reporting NUCCA research in a visual form and many are supported with abstracts in the indexed literature.

Woodfield HC, Hart JF, Jacquemin PB. Inter-examiner reliability in analysis of orthogonal radiographs. Association of Chiropractic Colleges Research Agenda Conference. 2015.

Woodfield HC, Hasick DG. MRI measured change in intracranial flow following upper cervical chiropractic care of a migraine headache subject—a case report. Association of Chiropractic Colleges Research Agenda Conference. 2015.

Woodfield HC, Becker WJ, Hasick DG, Rose MS, Scott JN. Changes in intracranial compliance & quality of life in migraine subjects receiving an atlas intervention using a National Upper Cervical Chiropractic Association (N.U.C.C.A.) procedure. IN-CAM Conference. 2014.

Woodfield HC, Becker WJ, Hasick DG, Rose MS. Observed Changes in Quality of Life Measures and Cerebrospinal Fluid Flow Parameters in Migraine Subjects Receiving Chiropractic Care. International Research Congress of Integrative Medicine and Health. 2014.

Woodfield HC, Gerstman, BB, Hart J. Examiner reliability in analysis of orthogonal radiographs-phase 2. Association of Chiropractic Colleges Research Agenda Conference. 2014.

Woodfield HC, Dickholtz M, Bell BM, Jacobs L. An Alternative for Chronic Fatigue Syndrome. International Research Congress of Integrative Medicine and Health. 2012.

Woodfield HC, Alperin N, Lichtor T, Bell BM, Brown J. Phase contrast magnetic resonance measured changes in migraine subject following chiropractic care. International Congress of Complementary Medicine Research. 2011.

Woodfield HC, Gerstman BB, Olaisen RH, Johnson DF. Inter-examiner reliability of supine leg checks for discriminating leg length inequality. Association of Chiropractic Colleges Research Agenda Conference. 2011.

Woodfield HC, Khauv K. Efficacy of Hands-on Instructional Training for the Supine Leg Check: A Feasibility Study. Association of

Chiropractic Colleges Research Agenda
Conference. 2010.

Woodfield HC, Bakris GL. Health-related
quality of life in stage one hypertensive
subjects after a chiropractic correction. World
Federation of Chiropractic. 2009.

