

tial randomization of the 179 participants who agreed to be re-randomized and completed 5-week assessment. These Phase 2 participants received an additional 6 weeks of weekly 60 minutes massages (Booster) or no additional massage. Neck-related dysfunction (Neck Disability Index, NDI) and pain (0–10 pain numerical rating scale) were assessed at baseline, 12, and 26 weeks. Clinically meaningful improvement from baseline was defined as >5 point decrease in the NDI and >30% decrease in pain. Primary and booster treatment assignment effects were evaluated using modified Poisson generalized estimating equation regression adjusting for baseline outcomes, age, neck pain >5 years, medication, race and each treatment assignment in a single model.

Results: There were no observed differences by primary treatment assignment at 12 or 26 weeks. Those receiving booster dose had clinically meaningful improvements in both dysfunction and pain at 12 weeks (NDI: RR = 1.56, 1.08–2.25, $p=0.018$; pain: RR = 1.25, 0.98–1.61; $p=0.077$), but both were non-significant at 26 weeks (NDI: RR = 1.22, 0.85–1.74, $p=0.277$; pain: RR = 1.09, 0.82–1.43, $p=0.558$). Further analyses looking at subgroup differences by primary and booster treatments found the booster dose only effective at 12 weeks amongst those that initially randomized to one of the 60 minutes massage groups (Booster Effect: 60 minute RR = 1.92 (1.22, 3.04) versus 30 minute RR = 1.07 (0.54, 2.13)).

Conclusion: “Booster” doses for those initially receiving 60 minutes of massage should be incorporated into future trials of massage for chronic neck pain.

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Complementary and Alternative Medicine (CAM) Therapies as a Means of Advancing Patient-Centered Care for Veterans Receiving Palliative Care

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Purpose: Chronic and life threatening illnesses are influenced by the psychological state of the individuals. In veteran populations, where rates of psychological disorders, debilitating injuries and lack of social support are higher than civilian populations, allopathic medicine is often insufficient to treat these illnesses and resulting symptoms. The objective of this study was to evaluate potential efficacy of massage therapy for palliative care veterans as well as to conduct qualitative surveys to explore the feasibility of expanding Complementary and Alternative (CAM) therapies within VA settings.

Methods: A mixed method study design was used. Patients were recruited based on receiving a massage consultation from a provider or by recommendation of the massage therapist. Patients answered many measures of wellness (0–10 numeric rating scales) pre and post-massage. Medical records were extracted for patients’ demographics, histories, social status and support. Semi-structured Interviews were conducted with VA patients, providers and administrators.

Results: Data collection will be ongoing through April 2014. Currently, 95.2% of the population is male with an average age

of 67 years and 81% are Caucasian. Two-thirds have a primary diagnosis of cancer. From pre- to post-massage: pain decreased 33%, anxiety decreased 44%, nausea decreased 79%, shortness of breath decreased 61%, stress decreased 42%, relaxation increased 42%, and peacefulness increased 30%. Interviews indicate that staff and administrators perceived hesitance to CAM use among some veterans and providers and obstacles to hiring CAM therapists within the VA system as barriers to expansion. **Conclusion:** Results from current data and data obtained from a civilian population at the collaborating Abbott Northwestern Hospital (Minneapolis) all suggest positive results for the efficacy of massage therapy. This study could assist VA hospitals with expanding their CAM therapy programs for pain and symptom management. Findings may also establish the feasibility of offering CAM therapies to veterans and the impact on patient outcomes.

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Observed Changes in Quality of Life Measures and Cerebrospinal Fluid Flow Parameters in Migraine Subjects Receiving Chiropractic Care

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Purpose: This observational case series followed eleven migraine subjects investigating consistency and sustainability of previously observed changes in cerebrospinal and venous outflow parameters. Using Phase Contrast MRI (PC-MRI) imaging, craniocervical flow changes were measured before-after subjects received a National Upper Cervical Chiropractic Association (NUCCA) atlas correction.

Methods: After screening by a neurologist, potential subjects signed a consent form, completed baseline migraine-specific measures, and returned in 30-days with a headache diary. Determination in need for NUCCA indicated inclusion, permitting subjects to obtain baseline PC-MRI measures. Subjects received NUCCA care for eight weeks. Follow-up imaging occurred at week four and eight. Adverse reactions were surveyed one week after intervention. Headache diaries were maintained throughout the study. Neurologist end-of-study exit interviews allowed for final outcomes collection.

Results: Of eighteen initially screened candidates, eight females, and three males, average age 41 years, met inclusion criteria. Headache days/month decreased from a baseline mean of 14.5 (SD = 5.7) by a mean, 5.7 days, 95% CI [2.0, 9.4] at week eight. Migraine Specific Quality of Life-Preventive scores increased a mean of 32.7, 95% CI [21.0, 44.5] at week eight from a baseline mean, 54.1. Ten subjects reported mild neck pain occurring 24 hours after intervention. Four subjects with secondary paravertebral venous outflow, showed an increase of intracranial compliance, from 7.96 (SD = 4.82), 6.81 (SD = 2.3) at week four, to 9.82 (SD = 4.64) at week eight. Seven subjects exhibiting jugular venous outflow patterns, showed unchanged intracranial compliance from 5.50 (SD = 1.52), 5.94 (SD = 1.49) at week four, to 5.88 (SD = 2.05) at week eight.

Conclusion: All patients reported a clinically relevant improvement in headaches as revealed by the MSQL-Preventive scores, and on at least one of five migraine-specific outcomes