Please Help Me Document TNE Quickly!

Therapeutic Neuroscience Education is taking the physical rehabilitation world to new heights. I have had the privilege and opportunity to observe multiple clinicians as they are exposed to this vital information, the current research being produced, and its associated clinical approach. I’ve watched as they have studied and internalized the science, worked to become savvy at proper patient selection and dosing of TNE, and honed their delivery skills in an effort to achieve mastery. I’ve observed them and guided them as they weave these TNE stories and metaphors into their equally important skilled manual therapy and functional/movement interventions. I’ve watched them course correct as they experienced failures, and fall in love with their profession all over again as they experience the positive impact this science can bring to their traditional evidence based therapy practice. It’s seems a bit like observing the neuroplasticity of clinician development as they are fostering and guiding neuroplasticity of patients, and in my observation, it is awesome on so many levels.

Many of us understand and embrace the enormous potential impact of TNE on a global scale. We have seen it spread from chronic pain and neuro-rehab settings, to acute orthopedic settings, to sports medicine settings and pediatric settings. We have seen its impact in pre-op settings, and the associated potential for rehabilitation clinicians to make a significant meaningful impact on continued

Christine O’Hotto PT, DPT
ISPI Faculty Assistant
Document TNE Quickly
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lowered cost of care and improved patient experience is staggering. We are seeing interest and momentum in implementing screening for TNE intervention in urgent care and ER settings. We see interest in embedding TNE in school curricula in an effort to address the public health problem of chronic pain at a grass roots level. We see TNE science embraced by CAPTE and gradually implemented into DPT curricula. We are seeing exciting new pain specialization/certification/PhD opportunities for clinicians through EIM and ISPI.

This explosion of visibility of TNE is not without challenge. There are multiple TNE conversations going on in rehabilitation circles in various venues and social media outlets. Some of these conversations are investigating the potential overuse of TNE and the replacement of research based examinations and therapies by TNE. From my perspective, as clinicians, whenever we learn new techniques, skills or interventions we often initially put that approach at the top of our toolbox and place emphasis on utilizing it with our patients as much as possible for a time. As clinicians gain skill and mastery through practice, natural improvement in patient selection and application or dosing accompanies. I do not view TNE as any different in this regard than other skill sets that therapists pursue and implement into their clinical practice. Success and failure in clinical practice is part of the natural evolution of professional development for all of us.

As we aim to steer TNE students toward success, we are challenged to provide them tools that promote standardization and reduce variability. This is necessary in any evidence based intervention approach. With standardization, we don’t seek recipe or cookie cutter robotic delivery of care, but rather an intelligent adherence to best practice recommendations and proper screening for intervention selection, ie: the proverbial “right treatment for the right patient at the right time.” (Imagine if we could be a mouse in a corner listening to conversations with payers and CMS about the extreme variability with which the medical profession approaches LBP, and the staggering costs and dismal outcomes that are a by-product of that variability!) We have been fortunate in the recent past to see more patient educational materials made available by ISPI and OPTP which have helped to promote TNE standardization.

Another approach capable of promoting standardization of TNE in your clinical practice is the implementation of electronic health record TNE documentation. For years, I watched clinicians struggle with how to document TNE in an efficient and consistent manner. This challenge prompted me to provide them with documentation tools for success. Whatever your organizations EHR choice, there are likely options to incorporate templates or smartphrases that automatically populate your dictation with TNE skilled care delivery documentation. It’s been my experience that buying coffee and treats for your IT development staff and explaining to them the impact that quickly building these templates will have on patient care goes a long way. They love to see how their work with template building produces real clinical value for patients.

One example of documentation standardization for TNE delivery can be viewed by clicking here.

Wording to Use When Billing for TNE

The EHR TNE picklist becomes fourteen TNE topics that follow the ISPI TNE patient education card box layout. When a clinician clicks one or more choices from the picklist, the associated skilled care documentation flows into the therapy note. I strongly recommend building the picklist around your patient education collateral and handouts, whether you have developed your own collateral system or use the OPTP method. Not only does this allow for intuitive ease of use for clinicians, but helps to promote standardization within a clinical practice and between colleagues. It fosters everyone using the “same language” and guiding patients successfully along in their TNE journey. And if by chance your practice has not yet gone electronic, this language can be copied, pasted, penned or phone dictated into your documentation according to your current system capabilities.

The documentation language provided in the link above can be tweaked, rearranged, copied, or thrown out the window with the bathwater according to your preference. But please give consideration to how documentation of TNE is structured in your own clinical practice. As we work collaboratively to take the TNE and pain message on a global scale, accurate documentation of skilled care for what we are providing to patients will be essential for progress. Researchers, employers, payers and patients will be better off if we commit to capturing and reporting outcomes associated with the intervention we provide. Standardization of delivery and documentation is an inherent component of success in this endeavor. We are all called to pursue the Triple Aim of health care reform, and embracing these principles moves us responsibly in that direction. Go forth and multiply.
Neural Substrates for Head Movements in Humans: A Functional Magnetic Resonance Imaging Study

The neural systems controlling head movements are not well delineated in humans. It is not clear whether the ipsilateral or contralateral primary motor cortex is involved in turning the head right or left. Furthermore, the exact location of the neck motor area in the somatotopic organization of the motor homunculus is still debated and evidence for contributions from other brain regions in humans is scarce. Because currently available neuroimaging methods are not generally suitable for mapping brain activation patterns during head movements, we conducted fMRI scans during isometric tasks of the head. During isometric tasks, muscle contractions occur without an actual movement and they have been used to delineate patterns of brain activity related to movements of other body parts such as the hands. Healthy individuals were scanned during isometric head rotation or wrist extension. Isometric wrist extension was examined as a positive control and to establish the relative locations of head and hand regions in the motor cortex. Electromyographic recordings of neck and hand muscles during scanning ensured compliance with the tasks. Increased brain activity during isometric head rotation was observed bilaterally in the precentral gyrus, both medial and lateral to the hand area, as well the supplementary motor area, insula, putamen, and cerebellum. These findings clarify the location of the neck region in the motor homunculus and help to reconcile some of the conflicting results obtained in earlier studies.


Patients with knee osteoarthritis demonstrate decreased pressure pain thresholds (PPTs), facilitated temporal summation (TS) of pain, and decreased conditioned pain modulation (CPM) compared with healthy controls. This study aimed to correlate preoperative PPTs, TS, and CPM with the development of chronic postoperative pain after total knee replacement (TKR) surgery. Knee pain intensity (visual analog scale [VAS]: 0-10), PPTs, TS, and CPM were collected before, 2 months, and 12 months after TKR. Patients were divided into a low-pain (VAS < 3) and a high-pain (VAS ≥ 3) group based on their VAS 12 months after TKR. The high-pain group (N = 17) had higher pain intensities compared with the low-pain group (N = 61) before surgery (P < 0.009) and 12 months after surgery (P < 0.001). The PPTs of the low-pain groups were normalized for all measurement sites comparing pre-surgery with 12 months post-surgery (P < 0.05, contra lateral arm: P = 0.059), which was not the case for the high-pain group. The low-pain group showed a functional inhibitory CPM preoperatively and 12 months postoperatively (P < 0.05), which was not found in the high-pain group. The high-pain group had higher facilitated TS preoperatively and 12 months postoperatively compared with the low-pain group (P < 0.05). Preoperative TS level correlated to 12-month postoperative VAS (R = 0.240, P = 0.037). Patients who developed moderate-to-severe pain had pro-nociceptive changes compared with patients who developed mild pain post-surgery. Preoperative TS level correlated with the postoperative pain intensity and may be a preoperative mechanistic predictor for the development of chronic postoperative pain in patients with osteoarthritis after TKR.

Spine J. 2015 Feb 1;15(2):265-71

BACKGROUND CONTEXT: Surgical treatment for lumbar degenerative disc disease (DDD) remains controversial. Options include anterior lumbar interbody fusion, posterior approach fusion procedures such as posterior lumbar interbody fusion (PLIF) and posterolateral lumbar fusion (PLF), anterior and posterior lumbar fusion (APLF), and total disc replacement (TDR). However, the trends during the last decade are uncertain.

PURPOSE: To examine the trends in the surgical treatment for lumbar DDD on a national level.

STUDY DESIGN: A retrospective analysis of population-based national hospital discharge data collected for the Nationwide Inpatient Sample (NIS).

PATIENT SAMPLE: In the NIS from 2000 to 2009, patients aged 18 years or older with primary diagnosis of lumbar/lumbosacral DDD who underwent surgical treatment were included.

OUTCOME MEASURES: Trends in the surgical treatment for lumbar DDD.

METHODS: Clinical data were derived from the NIS between 2000 and 2009. Patients aged 18 years or older with a primary diagnosis of lumbar/lumbosacral DDD who underwent spinal fusion or TDR were identified. Data regarding patient- and health care system-related characteristics were retrieved and analyzed.

RESULTS: A total of 380,305 patients underwent surgical treatment for lumbar DDD between 2000 and 2009. Population adjusted incidence increased 2.4-fold from 2000 to 2009. Among the procedures, APLF increased 3.0-fold and PLIF/PLF increased 2.8-fold. Total disc replacement did not increase significantly. Anterior lumbar interbody fusion was performed in 16.8% of patients, PLIF/PLF in 67.9%, APLF in 13.6%, and TDR in 1.8%. Surgical treatment for lumbar DDD was 1.8 times more common in the Midwest region and 1.7 times more common in the South region than in the Northeast region. Total disc replacement was more common in younger patients and in the Northeast region. Posterior lumbar interbody fusion/PLF was more common in older patients and in the South region.

CONCLUSIONS: During the last decade, surgical treatment for lumbar DDD has increased 2.4-fold in the United States. Although all fusion procedures significantly increased, TDR did not increase. Surgical treatment for lumbar DDD was more common in the Midwest and South regions. Trends in the procedures were different depending on the age group and hospital region.
How can placebo effects best be applied in clinical practice? A narrative review

Placebo effects are documented in a number of clinical and experimental studies. It is possible to benefit from placebo effects in clinical practice by using them as effects additive to those of documented and effective treatments. The purpose of this paper is to discuss how doctors and other health workers may benefit from placebo effects within an ethical framework. A narrative review of the literature relating to placebo effects in clinical practice was performed. We searched PubMed and selected textbooks on placebo effects for articles and book chapters relating to placebo effects in clinical practice. By drawing on placebo effects, doctors may access patients’ self-healing potentials. In practice, doctors may best benefit from placebo effects by influencing the patient’s expectations through communication. An important principle is to give the patient information stating that a particular treatment is effective, as long as this is based on realistic optimism. A patient-centered style involving elements such as developing trust and respect, exploring the patient’s values, speaking positively about treatments, and providing reassurance and encouragement might aid in activating placebo effects. The total effect of a documented treatment will partly depend on how well the placebo effects have been activated. Thus, placebo effects can be understood as a form of supplemental treatment.
The probability of spontaneous regression of lumbar herniated disc: a systematic review
Clinical Rehabilitation 2015, Vol. 29(2) 184–195

OBJECTIVE: To determine the probability of spontaneous disc regression among each type of lumbar herniated disc, using a systematic review.

DATA SOURCES: Medline, Cochrane Library, CINAHL, and Web of Science were searched using key words for relevant original articles published before March 2014. Articles were limited to those published in English and human studies.

REVIEW METHODS: Articles had to: (1) include patients with lumbar disc herniation treated conservatively; (2) have at least two imaging evaluations of the lumbar spine; and (3) exclude patients with prior lumbar surgery, spinal infections, tumors, spondylolisthesis, or spinal stenosis. Two reviewers independently extracted study details and findings. Thirty-one studies met the inclusion criteria. Furthermore, if the classification of herniation matched the recommended classification of the combined Task Forces, the data were used for combined analysis of the probability of disc regression of each type. Nine studies were applicable for probability calculation.

RESULTS: The rate of spontaneous regression was found to be 96% for disc sequestration, 70% for disc extrusion, 41% for disc protrusion, and 13% for disc bulging. The rate of complete resolution of disc herniation was 43% for sequestrated discs and 15% for extruded discs.

CONCLUSIONS: Spontaneous regression of herniated disc tissue can occur, and can completely resolve after conservative treatment. Patients with disc extrusion and sequestration had a significantly higher possibility of having spontaneous regression than did those with bulging or protruding discs. Disc sequestration had a significantly higher rate of complete regression than did disc extrusion.

This past month the sports world was focused on the prestigious Wimbledon tennis tournament from England. Apart from the tennis, viewers were also “exposed” to some physical therapy. During one of the semifinal matches, Andrew Murray developed some pain which needed some attention. To the rescue: A physical therapist performing a thoracic spine manipulation on the grass, in front of the world! Anyone want to critique the technique? We feature this for those therapists who complain at weekend classes when they’re stuck with a table with no high-low plinth! For scenarios like this, the next ISPI manipulation course will explore manipulation on a variety of surfaces: grass, floor, hood of a car, etc.
Dr. David Tiberio
Ph.D., PT, FAFS,
FMR, NG360-GPS
David serves as dean of the GIFT Mentorship program and is professor emeritus at The University of Connecticut. David’s experience as a clinician and educator provides a foundation that allows the integration of the principles and strategies of Applied Functional Science with the biomechanics of human movement. He has published numerous articles in scholarly journals and taught educational courses with Gary Gray since 1984. In 2007, David received the Kendall Award from the American Physical Therapy Association for “outstanding and enduring contributions to the practice of physical therapy”.

Presents: Live Function Seminar:
The Functional Thoracic Spine
Saturday, August 15, 2015 at Rockhurst University

Course Overview:
An innovative, one day seminar that provides participants with essential principles, strategies and techniques of Applied Functional Science. This seminar encourages direct participation and interaction with the instructor and participants to enhance the ability to assess and address client/patient function. During this course, you will learn a principle based approach to creating strategies for assessment/testing, prevention, training and rehabilitation to facilitate improved functional thresholds. This class is designed for all health professionals and applies to all patient populations.

Course Objectives:
The Thoracic Spine provides the back bone to all functional activities, although often overlooked, when compared to the lumbar and cervical spine. Epidemiology of the thoracic and posterior chest wall pain discomfort is poorly understood; studies indicate that this region accounts for between 10% - 5% of spinal pain disorders in the general population. Its dysfunction may lead to breakdown of other regions often overlooked-understudied. When viewed functionally and as one with the rest of the kinetic chain, we begin to appreciate how the thoracic spine dictates much of the function to the rest of the body and may be the cause of pain in other regions.

To gain a greater understanding of the function of the Thoracic Spine and how the Thoracic Spine integrates with the entire kinetic chain, we will share a principle-strategy-application process.

To accomplish this, participants will learn:
• A principle, strategy and technique process for the Thoracic Spine.
• Over 50 new Thoracic Spine techniques for all levels of patients.
• The science of “Tweakology,” allowing you to expand all techniques into specific applications.

Topics Include:
1. Functional principles and concepts that relate to the Thoracic Spine.
3. Integrated Thoracic Spine programming.

Schedule:
7:00 AM Registration/Set Up
8:00 – 9:30 AM Principles of function
9:30 – 10:00 AM Strategies of function
10:00 – 10:15 AM BREAK
10:15 – 12:00 PM Technique Lab
12:00 – 1:00 PM LUNCH
1:00 – 2:45 PM Technique Lab
2:45 – 3:00 PM BREAK
3:00 – 4:00 PM Technique Lab
4:00 – 5:00 PM Putting it all together: program design
5:00 – 5:30 PM Questions, Answers, Review

For more information or to register: pread@kcsportsrehab.com

Cancellation/Refund Policy: Cancellations must be received in writing at least two weeks prior to the seminar date for a tuition refund less $50.00 administration fee. NO refunds will be made after this date.

Course Cancellation: Sports Rehab reserves the right to cancel a course up to two weeks prior to the seminar date. In the event of cancellation, only the tuition fee will be refunded in full. Sports Rehab is not responsible for reimbursement of nonrefundable airline tickets, lodging or other related costs.
We are thrilled to announce that we currently have 70 CSMTs nationwide with 24 more in the final stages of testing. This prestigious certification will aid these clinicians in achieving better patient outcomes and grow professionally.

The following tested at our Clinical Conference in June:

- Jarrod Brian – Rochester, MN
- Tyler Burcham – Fargo, ND
- Sarah Freund – St. Louis, MO
- Eldon Johnson – Fargo, ND
- Jason Keel – Meridian, ID
- Chris Kraemer – St. Louis, MO
- Michael Sheedy – Rochester, MN
- Josh Shucha – Beloit, WI
- Ross Van Natta – Smithfield, RI
- Becky Vogsland – New Hope, MN

The following tested at the SSM facility in St. Louis, MO:

- Joel Dougherty
- Jill Eveker
- Lise Garger
- Meghan Gravlin
- Ann Hug
- Caroline Jaycox
- Cathy Krebel-Nevois
- Emily Nieters
- Karyle Penelton
- Scott Portell
- Christine Rufkahr
- Paul Spadone
- Sarah Wallingsford
- Christina Welch

Congratulations to our newest Certified Spinal Manual Therapists!
### 2015

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<tr>
<td>Aug 21-23</td>
<td>Fri/Sat/Sun</td>
<td>Therapeutic Neuroscience Education: Educating Patients About Pain</td>
<td>Santiago, Chile</td>
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<tr>
<td>Sep 26 &amp; 27</td>
<td>Sat/Sun</td>
<td>Therapeutic Neuroscience Education I: Educating Patients About Pain</td>
<td>Spartanburg, SC</td>
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<tr>
<td>Oct 3</td>
<td>Saturday</td>
<td>Too Hot to Handle: Desensitizing a Hypersensitive Patient</td>
<td>Kansas City, MO</td>
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<td>Oct 4</td>
<td>Sunday</td>
<td>Preoperative Therapeutic Neuroscience Education</td>
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<tr>
<td>Oct 10 &amp; 11</td>
<td>Sat/Sun</td>
<td>A Study of Neurodynamics: The Body’s Living Alarm</td>
<td>Philadelphia, PA</td>
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<tr>
<td>Oct 10 &amp; 11</td>
<td>Sat/Sun</td>
<td>The Upper Quadrant: A Differential Diagnosis Approach to Manual Therapy</td>
<td>Liberty, MO</td>
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<td>Oct 24 &amp; 25</td>
<td>Sat/Sun</td>
<td>A Study of Neurodynamics: The Body’s Living Alarm</td>
<td>Rochester, MN</td>
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<td>Oct 31 &amp; Nov 1</td>
<td>Sat/Sun</td>
<td>Therapeutic Neuroscience Education: Teaching People About Pain</td>
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<td>Nov 7 &amp; 8</td>
<td>Sat/Sun</td>
<td>Spinal Manipulation I: A Physical Therapy Approach</td>
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<tr>
<td>Nov 14 &amp; 15</td>
<td>Sat/Sun</td>
<td>The Lower Quadrant: A Differential Diagnosis Approach to Manual Therapy</td>
<td>Carroll, IA</td>
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<td>Nov 14 &amp; 15</td>
<td>Sat/Sun</td>
<td>Therapeutic Neuroscience Education I: Educating Patients About Pain</td>
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<td>Dec 5 &amp; 6</td>
<td>Sat/Sun</td>
<td>Spinal Manipulation I: A Physical Therapy Approach</td>
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<td>Dec 5 &amp; 6</td>
<td>Sat/Sun</td>
<td>Focus on Function: Changing Pain-Related Behavior</td>
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### 2016

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<td>Sat/Sun</td>
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<td>Apr 16 &amp; 17</td>
<td>Sat/Sun</td>
<td>Therapeutic Neuroscience Education I: Educating Patients About Pain</td>
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<td>Jun 24-26</td>
<td>Fri/Sat/Sun</td>
<td>Conference: Chronic Low Back Pain, What You See is What You Get</td>
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<td>Sat/Sun</td>
<td>Therapeutic Neuroscience Education: Teaching People About Pain</td>
<td>Minneapolis, MN</td>
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<td>Sat/Sun</td>
<td>Therapeutic Neuroscience Education: Teaching People About Pain</td>
<td>Des Moines, IA</td>
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Courses are always being scheduled, keep checking back if you don’t see what you are looking for!
If you are interested in hosting a one or two-day class at your facility, contact us.

Education is Therapy…