**ORIGINAL RESEARCH & CONTRIBUTIONS**


Jeffrey R. Curtis, MD, Leslie K Harrell, MD, MPH, Nanay M Aguas, MD, MPH;旭Del Dougherty, Craig Selman, Joel M Gerfand, MD, MICE, Efstathios Karamanos, MD; Nathan P Neil, MD; Michael K Gould, MD, MSCE; Jashin J Wu, MD; Lisa J Herrinton, PhD

**Summary**

In the computerized data, 5568 adults had diagnostic codes indicating axial spondylarthropathy (AxSpA). Observed prevalence in the Kaiser Permanente Northern California population, compared with national estimates for axial and ankylosing spondylitis, suggests there is substantial underrecognition of these conditions in routine clinical practice. However, use of computerized data is a viable tool to identify true cases of ankylosing spondylitis, facilitating population-based research.

**11 Safe and Effective Implementation of Telestroke at Multiple Sites**

Anthony Falvo, DO; Ilan Rubinfeld, MD; Efstathios Karamanos, MD; Nathan P Neil, MD; Michael K Gould, MD, MSCE; Joel M Gelfand, MD, MSCE; Jashin J Wu, MD; Lisa J Herrinton, PhD

**Summary**

A stepped-wedge cluster randomized trial of 10 community hospitals connected to 2 tertiary care centers via telestroke was implemented at each hospital incrementally over a 1-year period. Among 9787 patients, utilization of tissue plasminogen activator (tPA) increased from 4.3% to 10.9%, without a significant change in complication rates. Postintervention patients were more likely to receive tPA than were premaintenance patients. Before implementation, if <15% of the 10 community hospitals were significantly less likely to administer tPA than the highest-volume tertiary care center; however, after implementation, 9 of 10 were at least as likely to administer tPA.

**16 Association of Unplanned Readmission with Higher Mortality in Male, Frail Patients: A National Surgical Quality Improvement Program Analysis**

Elisabeth Karamanos, MD, Nathan Schmolck, DO, Dwayne Eldred, MD, Anthony Falvo, DO, Dan Rubinfeld, MD

Unplanned postoperative readmission increases the risk of mortality, but factors associated with readmission are unclear. In this retrospective study, patients older than age 40 years who underwent unplanned readmission from 2005 to 2010 were identified using the American College of Surgeons National Surgical Quality Improvement Program database. A total of 17,051 postoperative readmissions in adults were analyzed. Overall mortality was 28.4% (n = 4706). As American Society of Anesthesiologists score increased from 1 to 5, readmission was associated with a mortality of 12.1% to 41.6%, respectively. Similarly, increasing age decade was associated with increasing incidence of mortality, among patients who underwent unplanned reoperation, older and more frail patients had an increased risk of mortality.

**22 Preferential Use of Total Thyroidectomy with or without Prophylactic Central Nodes Dissection in Adults With Early-Stage Thyroid Cancer: Oncologic Outcomes in an Integrated Health Plan**

Marian Sait, MD; Michele Fugimoto, MD; Cara Runkin, MD; Susan Woo, MD; Brenda Yang, MD; Philip Hagg, MD, MS; Marcia, FACS

This retrospective cohort study of patients with clinically node-negative or early-stage thyroid cancer who underwent total thyroidectomy with or without prophylactic central lymph node dissection (CLND) in Kaiser Permanente Southern California Region hospitals, between January 1999 and December 2015, identified 1184 patients. The TNM tumor, node, metastasis stages for the 2 groups were not significantly different (p = 0.18). There were 23 (2.0%) recurrences in the no-CLND group and 11 (2.5%) recurrences in the CLND group (p = 0.23). Presently, routine CLND is not used to advocate in our medical system.

**Standardizing Management of Adults with Definitive Hospitalized on Medical-Surgical Units**

Ely Angel, MD, Kristin Brooks, MD, Julie Frossen

Delirium, common among inpatients aged 65 and older, is associated with multiple adverse consequences, including increased length of stay (LOS). However, delirium is frequently unrecognized and poorly understood. During a pilot from 2011 to 2013 (n = 1418) involving participating hospitals, a delirium management team included a redesigned role for consulting psychiatrists and a new clinical nurse specialist role. Electronic health record functions supported accurate problem list coding, referral to the team, and standardized documentation. Average LOS decreased (8.5 to 6.6 days; p = 0.001) while average LOS for the Medical Center remained stable. The delirium team is an effective model that can be quickly implemented with few additional resources.

**34 The Kaiser Permanente Northern California Adult Member Health Survey**

Nancy Gordon, K.D. Teresa Lin, MD, MPH

Between 1989 and 2011 the adult Health Plan membership became better educated and was less non-Hispanic white. Compared with 1989, in 2011 the prevalence of self-reported diabetes and hypertension significantly increased in most age groups. There was a significant increase in the percentage of those age 35–64 years who considered their health to be very good or excellent, primarily among those with higher education. There was an increase in the percentage of adults who indicated that physical or emotional health problems interfered at least moderately with their daily activities.

**The 28th Annual National Forum on Quality Improvement in Health Care**

Create a game plan for improving quality across your organization.

The greatest wins in health care improvement come from careful analysis, planning, and team work. Attend the 2016 National Forum and ruff-up with more than 3000 health care professionals to share ideas, insights, and inspiration that will help you chart a course for continuous improvement in your organization. Whether you come for one day or stay for all four, you’ll leave with the strategies you need to put your ideas into action. Enroll today at <b>nql.org</b>
43 Reduced Trauma Symptoms and Perceived Stress in Male Prison Inmates through the Transcendental Meditation Program: A Randomized Controlled Trial. Santord Nidich, EdD; Tom O’Connor, PhD; Thomas Rutledge, PhD; Jeff Duncan; Blaze Compton, MA; Angela Seng; Randi Nidich, EdD

Trauma events are 4 times more prevalent in inmates than in the general public and are associated with increased recidivism and other mental and physical health issues. Inmates (N = 181) with a moderate- to high-risk criminal profile were randomly assigned to either a Transcendental Meditation (TM) program or to a no-treatment control group. Significant reductions in total trauma symptoms in the TM group were found compared with controls.

Narrative Medicine
49 Voices on “99 Percent”: The Role of Online Narrative to Improve Health Care. Beth Sundstrom, PhD, MPH; Stephanie J Meier; Michael Anderson; Kathleen E Booth; Lacey Cooper; Ellie Flock; Jackelyn B Payne; Priya Hirway, ScM

Researchers conducted a qualitative content analysis of 2003 blog posts. Bloggers discussed medical crises and the role of injury and illness in maintaining financial solvency. Difficulty of obtaining health care and lack of accessible quality care emerged as themes. In particular, under- and unemployment limited access to health insurance coverage. Results suggest opportunities to address health care gaps of marginalized populations and to develop public health policy.

56 Trend of Decreased Length of Stay in the Intensive Care Unit (ICU) and in the Hospital with Palliative Care Integration into the ICU. Eluned Mun, MS, MSN, DNP, APRN-RN, ACNP-BC, CCRN; Clementina Cerra-Ulep, PhD, RN; Lillian Umberger, MD; Craig Nakatsuka, MD

A comparison between pre- and postintervention data in the Intensive Care Unit (ICU), incorporating palliative care into the routine ICU workflow, showed positive trends in measured outcomes, including increased early identification of advance directives, code status, and goals of care along with a decrease in the ICU length of stay and hospital length of stay. The number of ICU family meetings and palliative care consultations increased.

62 Development and Application of a Plant-Based Diet Scoring System for Japanese Patients with Inflammatory Bowel Disease. Mitsuro Chiba, MD, PhD; Kunio Nakane, MD, PhD; Yuko Takayama, MD; Kae Sugawara, MD; Hideo Ohno, MD, Hajime Ishii, MD, PhD; Satoko Tsuda, MD; Tsuyoshi Tsuji, MD, PhD; Masafumi Komatsu, MD, PhD; Takeshi Sugawara, MD

A semivegetarian diet (a plant-based diet [PBD]) has been shown to prevent a relapse in Crohn disease. PBD scores were assigned according to the frequency of consumption provided on a food-frequency questionnaire, obtained on hospitalization for 159 patients with ulcerative colitis and for 70 patients with Crohn disease. Higher PBD scores indicated greater adherence to a PBD. The PBD scores in the ulcerative colitis and Crohn disease groups were 10.9 ± 9.5 and 8.2 ± 8.2, respectively. For patients with Crohn disease, those with long-term remission and normal C-reactive protein concentration were significantly more likely to have PBD scores of 25 or greater.

69 Accreditation Council for Graduate Medical Education Core Competencies at a Community Teaching Hospital: Is There a Gap in Awareness? Mohammed Al-Temimi, MD, MPH; Michael Kidon; Samir Johna, MD, MACM

Physicians at the Kaiser Permanente Fontana Medical Center (480) were surveyed for their knowledge of ACGME core competencies before starting new residency programs. Of the 164 physicians who taught residents, 65 (39.7%) were unsure of their knowledge of the core competencies. However, most stated that they provided direct teaching to residents related to the knowledge, skills, and attitudes stated in each of the 6 competencies. Full-time faculty (teaching 10-12 rotations per year) were more likely to provide competency-based teaching. Discrepancy between knowledge of the core competencies and acclaimed provision of competency-based teaching emphasizes the need for standardized teaching methods that incorporate the values of these competencies.

Special Report
74 Anal Health Care Basics. Jason Chang, MD; Elisabeth McMenemy, M.D., FACS, FASCRS; Talar Tejirian, MD, FACS

Although countless patients suffer from anal problems, there tends to be a lack of understanding of anal health care. Common diagnoses include pruritus ani, anal fissures, hemorrhoids, anal abscess or fistula, fecal incontinence, and anal skin tags, most of which can be avoided by improving bowel habits. Adequate fiber intake is important for many reasons, including improving the quality of stool and preventing colorectal and anal diseases. This Special Report provides an overview of commonly encountered anal problems, their presentation, initial treatment options, and recommendations for referral to specialists.

82 Implementation of the YMCA Diabetes Prevention Program through an Integrated Health System: A Transitional Study. Ron Adams, MD; Christopher J. Hebert, MD, MS; Linda McCvey; Roger Williams, M.D

This observational study focused on engagement, persistence, recruitment, and adherence to the evidence-based YMCA Diabetes Prevention Program (DPP) of Greater Cleveland. Of the 2200 Medicare-eligible patients at risk of prediabetes, 351 (16.0%) responded by attending an information session; 228 enrolled in the DPP (11.3%) and persisted through at least Week 9. Because of the motivation and reinforcement provided to patients through YMCA-provided signs, brochures, and posters; a Web site; and in-person conversations with primary care physicians, an improvement occurred over the 1.7% who responded to the mailing for the previous DPP study.

87 Assessing the Value of High-Quality Care for Work-Associated Carpal Tunnel Syndrome in a Large Integrated Health Care System: Study Design. Craig Conlon, MD, MPH; Steven Asch MD, MPH; Mark Hanson, PhD; Andrew Avins, MD, MPH; Barbara Levitan; Carol Robs, BSN, MPH; Michael Robbins, PhD; Michael Dworsky, PhD; Seth Seabury, PhD; Teryl Nuckols MD, MSHS

Little is known about quality of care for occupational health disorders, although it may affect worker health and workers’ compensation costs. This is a prospective observational study of 477 individuals with new workers’ compensation claims for carpal tunnel syndrome (CTS) without acute trauma, treated at 30 occupational health clinics from 2011 to 2013 and followed for 18 months. Two hundred sixty-seven subjects (56%) received a diagnosis of CTS and had claims filed around the first visit to occupational health.

Special Report
97 Anmiotic Fluid Embolism: Using the Medical Staff Process to Facilitate Streamlined Care. Peter M Hession, MD; Cynthia J Millward, MD; Joyce E Gottesfeld, MD; Thomas F Rehring, MD; Kevin B Miller, MD; Paul M Cetham, MD; Kel Muckleroy, MD; Christopher A Bates, MD; Harris W Hollis, Jr, MD

There are no published algorithmic approaches to the management of anmiotic fluid embolism (AFE). Post hoc analysis of a complicated case of AFE resulted in development of a care pathway that addresses many of its major consequences. It is a template for use by any institution willing to implement a clinical pathway to treat AFE. It is accompanied by the remarkable case outcome that prompted its development.
Carpal Tunnel Syndrome in Sarcoidosis: A Case Report

Cátia Canelas, MD; João M Carvas, MD; Laxmikant Ramkumarsingh Tomar, MD, MBBS; Akanksha Swadi, MD, MBBS; Ed Thomas, RN, MBA; Melissa Barber, MSc

The patient experienced steady and significant improvements for dietary choices and supplementation. Blood-, urine-, or stool-based measurements of relevant markers for multiple systemic issues identified previously unrecognized root causes of his constellation of symptoms. These functional measurements guided rational recommendations for dietary choices and supplementation. The patient experienced steady and significant improvement, as well as the unexpected resolution of his chronic idiopathic pancytopenia.

Effectiveness of Cannabidiol Oil for Pediatric Anxiety and Insomnia as Part of Posttraumatic Stress Disorder: A Case Report

Scott Shannon, MD, ABIHM; Janet Opila-Lehman, ND

An ethics of Permission: A Response to the California End of Life Option Act

Craig Nelson, PhD, CLS

The California End of Life Option Act law does not define morality, and reaching a moral understanding demands thorough reflection. An ethics of permission includes the importance of exercising professional tolerance in honoring clinicians who participate or who refuse to participate.

Carpal Tunnel Syndrome in Sarcoidosis: A Case Report

Cátia Canelas, MD; João M Carvas, MD; Laxmikant Ramkumarsingh Tomar, MD, MBBS; Akanksha Swadi, MD, MBBS; Ed Thomas, RN, MBA; Melissa Barber, MSc

The patient experienced steady and significant improvements for dietary choices and supplementation. Blood-, urine-, or stool-based measurements of relevant markers for multiple systemic issues identified previously unrecognized root causes of his constellation of symptoms. These functional measurements guided rational recommendations for dietary choices and supplementation. The patient experienced steady and significant improvement, as well as the unexpected resolution of his chronic idiopathic pancytopenia.

Effectiveness of Cannabidiol Oil for Pediatric Anxiety and Insomnia as Part of Posttraumatic Stress Disorder: A Case Report

Scott Shannon, MD, ABIHM; Janet Opila-Lehman, ND

An ethics of Permission: A Response to the California End of Life Option Act

Craig Nelson, PhD, CLS

The California End of Life Option Act law does not define morality, and reaching a moral understanding demands thorough reflection. An ethics of permission includes the importance of exercising professional tolerance in honoring clinicians who participate or who refuse to participate.

Carpal Tunnel Syndrome in Sarcoidosis: A Case Report

Cátia Canelas, MD; João M Carvas, MD; Laxmikant Ramkumarsingh Tomar, MD, MBBS; Akanksha Swadi, MD, MBBS; Ed Thomas, RN, MBA; Melissa Barber, MSc

The patient experienced steady and significant improvements for dietary choices and supplementation. Blood-, urine-, or stool-based measurements of relevant markers for multiple systemic issues identified previously unrecognized root causes of his constellation of symptoms. These functional measurements guided rational recommendations for dietary choices and supplementation. The patient experienced steady and significant improvement, as well as the unexpected resolution of his chronic idiopathic pancytopenia.

Effectiveness of Cannabidiol Oil for Pediatric Anxiety and Insomnia as Part of Posttraumatic Stress Disorder: A Case Report

Scott Shannon, MD, ABIHM; Janet Opila-Lehman, ND

An ethics of Permission: A Response to the California End of Life Option Act

Craig Nelson, PhD, CLS

The California End of Life Option Act law does not define morality, and reaching a moral understanding demands thorough reflection. An ethics of permission includes the importance of exercising professional tolerance in honoring clinicians who participate or who refuse to participate.

Carpal Tunnel Syndrome in Sarcoidosis: A Case Report

Cátia Canelas, MD; João M Carvas, MD; Laxmikant Ramkumarsingh Tomar, MD, MBBS; Akanksha Swadi, MD, MBBS; Ed Thomas, RN, MBA; Melissa Barber, MSc

The patient experienced steady and significant improvements for dietary choices and supplementation. Blood-, urine-, or stool-based measurements of relevant markers for multiple systemic issues identified previously unrecognized root causes of his constellation of symptoms. These functional measurements guided rational recommendations for dietary choices and supplementation. The patient experienced steady and significant improvement, as well as the unexpected resolution of his chronic idiopathic pancytopenia.

Effectiveness of Cannabidiol Oil for Pediatric Anxiety and Insomnia as Part of Posttraumatic Stress Disorder: A Case Report

Scott Shannon, MD, ABIHM; Janet Opila-Lehman, ND

An ethics of Permission: A Response to the California End of Life Option Act

Craig Nelson, PhD, CLS

The California End of Life Option Act law does not define morality, and reaching a moral understanding demands thorough reflection. An ethics of permission includes the importance of exercising professional tolerance in honoring clinicians who participate or who refuse to participate.

Carpal Tunnel Syndrome in Sarcoidosis: A Case Report

Cátia Canelas, MD; João M Carvas, MD; Laxmikant Ramkumarsingh Tomar, MD, MBBS; Akanksha Swadi, MD, MBBS; Ed Thomas, RN, MBA; Melissa Barber, MSc

The patient experienced steady and significant improvements for dietary choices and supplementation. Blood-, urine-, or stool-based measurements of relevant markers for multiple systemic issues identified previously unrecognized root causes of his constellation of symptoms. These functional measurements guided rational recommendations for dietary choices and supplementation. The patient experienced steady and significant improvement, as well as the unexpected resolution of his chronic idiopathic pancytopenia.

Effectiveness of Cannabidiol Oil for Pediatric Anxiety and Insomnia as Part of Posttraumatic Stress Disorder: A Case Report

Scott Shannon, MD, ABIHM; Janet Opila-Lehman, ND

An ethics of Permission: A Response to the California End of Life Option Act

Craig Nelson, PhD, CLS

The California End of Life Option Act law does not define morality, and reaching a moral understanding demands thorough reflection. An ethics of permission includes the importance of exercising professional tolerance in honoring clinicians who participate or who refuse to participate.