Radiology at the Helm of High Value Care: High Value Practice Academic Alliance

Pamela Johnson, MD, Johns Hopkins University School of Medicine
Yoshimi Anzai, MD, MPH, University of Utah Health
Tharakeswara Bathala, MD, University of Texas MD Anderson
Jay Bronner, MD, MBA, Radiology Partners Research Institute
Ryan Lee, MD, MBA, Einstein Health Network
Jonathan Movson, MD, Warrant Alpert School of Medicine, Brown University
Daniel Rubin, MD, Stanford University Medical Center
Hanna Zafar, MD, University of Pennsylvania School of Medicine
Disclosures

• Pamela Johnson, MD, Johns Hopkins University School of Medicine
  – Consultant & Advisory Board, Practicing Wisely®, Oliver Wyman Consulting
  – Funding: Agency for Healthcare Research and Quality (AHRQ) Conference Grant number 1R13HS026350-01

• Daniel Rubin, MD, Stanford University Medical Center
  – Consultant for Genentech

• Hanna Zafar, MD, University of Pennsylvania School of Medicine
  – Grant funding from ECOG-ACRIN both through the state of PA and NIH

• Yoshimi Anzai, MD, MPH, University of Utah Health: n/a
• Tharakeswara Bathala, MD, University of Texas MD Anderson: n/a
• Jay Bronner, MD, MBA, Radiology Partners Research Institute: n/a
• Ryan Lee, MD, MBA, Einstein Health Network: n/a
• Jonathan Movson, MD, Warrant Alpert School of Medicine, Brown University: n/a
Health Care Debt is Creating Substantial Hardship for Patients

Broken promise to do no harm

- Exhaustion of personal savings
- Home foreclosure
- Bankruptcy

Leading contributors to debt

- Emergency department visits
- Hospitalizations
- Radiology exams like MRI
Mission: Improve Outcomes While Reducing Cost of Care

**Barriers to improvement**

- Deeply entrenched provider ordering and prescribing behavior
- House staff worry that attending will ask for test results
- Concerns over missed diagnosis with spotlight on diagnostic errors
- Fear of litigation
- Patients who want reassurance from a negative diagnostic test
- Institutional resources must be committed to initiatives that will reduce revenue
- Operating in silos

**Solutions require collaboration**

- Across disciplines
  - inclusive teams (MD, RN, APPs, pharmacy, etc)
- Across specialty
  - consensus
  - education
  - implementation
- Across health system
  - leadership and grass roots
  - engage all hospitals in the process
- Across institutions
  - Measurable improvement on national scale
Radiology-Led Quality-Driven Care Redesign

As medicine transforms to value-based care, all specialties must participate in collaborative care redesign initiatives to safely improve quality and affordability.

Given our commitment to quality and safety, expertise as consultants, and leadership in policy and health care economics, radiologists are ideally suited to lead this work locally and nationally.
At Johns Hopkins Hospital, the health system high value care committee is directed by 3 hospitalists, a pathologist and a radiologist (PTJ). Recognizing that value-improvement work was being done at institutions around the country, and that collaboration would facilitate more efficient advancement on a national scale, radiologist Pamela Johnson and Vice Dean for Education Roy Ziegelstein created the High Value Practice Academic Alliance in 2016. All AMCs were to join with no registration fee, but requiring a commitment to implement at least 1 value-based QI project annually.

**Mission:** align academic centers and engage trainees in value-based QI, education & research

**Platform:** national conference, monthly conference calls and multicenter publications for rapid dissemination

**Funding:** internal grant from JHH Radiology Chair, Karen Horton, MD

**Announcement:** AAMC email from JHUSOM Dean Paul Rothman to all academic medical centers

**Recruitment:** physicians & societies (AUR, SHM)

**Kick off:** January 2017
Specialties & subspecialties represented (largest participation from hospital medicine and radiology)

- Anesthesiology
- Cardiology
- Cardiothoracic Surgery
- **Diagnostic Radiology**
- Emergency Medicine
- Gastroenterology
- Geriatrics
- Gynecologic Oncology
- **Hospitalist Medicine**
- Infectious Disease
- Internal Medicine
- Interventional Radiology
- Medicine and Pediatrics
- Microbiology
- Neurology
- Nephrology
- Nuclear Medicine
- Obstetrics and Gynecology

- Ophthalmology
- Orthopedic Surgery
- Otolaryngology
- Pathology
- Pediatrics*
- Pediatric Critical Care
- Pediatric Emergency Medicine
- Pediatric Hospital Medicine
- Pediatric Radiology
- Primary Care
- Psychiatry
- Radiation Oncology
- Surgery
- Urology
- Vascular Surgery
HVPAA Membership
95 Partners

Alpert Medical School of Brown University, Radiology
Akron Children’s Hospital
Baylor College of Medicine; Radiology
Baylor University Medical Center; Radiology
Beth Israel Deaconess Medical Center
California Pacific Medical Center; Internal Medicine
Cedars-Sinai Medical Center
Children’s Hospital at Montefiore
Children’s Hospital Colorado
Children’s Hospital Los Angeles, USC Keck SOM
Children’s National Medical Center
Cleveland Clinic
Cleveland Clinic Florida
Creighton University
Crozer-Chester Medical Center
Danville Regional Medical Center
Drexel University, Internal Medicine
Duke University Medical Center
Einstein Healthcare Network, Radiology
Floating Hospital for Children, Tufts Medical Center
Florida Hospital; Radiology
Greenwich Hospital, affiliate of Yale New Haven Health
Griffith Hospital, Internal Medicine
Henry Ford Hospital; Internal Medicine and Radiology
HonorHealth; Internal Medicine
Icahn School of Medicine at Mount Sinai Hospital
Indiana University School of Medicine; Radiology
Johns Hopkins All Children’s Hospital, Florida
Johns Hopkins Children’s Center
Johns Hopkins Hospital and Bayview Medical Center
Johnston Memorial Hospital
Lehigh Valley Health Network, USF Morsani
Loyola University Medical Center
Massachusetts General Hospital, Emergency Medicine
McClaren Health
Medical College of Wisconsin; Radiology
Michigan Medicine (University of Michigan)
Michigan State University College of Human Medicine
Midwestern University, Department of Radiology
Monroe Carell Jr. Children’s Hospital at Vanderbilt
Munibush Project for Teaching Hospitals, Okinawa, Japan
Mount Sinai Beth Israel, Icahn Medical School
NYU Langone Health System
Ochsner Clinic Foundation; Radiology
OSF Saint Francis Medical Center/UICOMP
Our Lady of the Lake Children’s Hospital*
Packard Children’s Hospital Stanford, Hospital Medicine
Penn State College of Medicine
Piedmont Athens Regional Graduate Medical Education
Rutgers Robert Wood Johnson Medical School, Radiology
St. Christopher’s Hospital for Children*
Saint Louis University School of Medicine; Internal Medicine
 Sinai Health System, University of Toronto, Canada
Stanford Medical Center
University of Alberta, Canada; Radiology
University of California Davis; Radiology
University of California Irvine; Internal Medicine
University of California, Los Angeles
University of California, Riverside; Internal Medicine
University of California San Diego
University of California San Francisco
University of Chicago Medicine
University of Colorado School of Medicine
University of Connecticut Medical School, Radiology
University of Florida College of Medicine, Pediatrics
University of Kentucky; Hospital Medicine
University of Maryland Medical Center
University of Massachusetts, Baystate, Radiology & IM
University of Miami, Jackson Health System, ID
University of Nebraska; Radiology
University of North Norway
UNC Chapel Hill; IM, Pediatrics & Urology
University of Pennsylvania, Radiology & IM
University of Pittsburg
University of Rochester Medical Center
University of Southern California, Keck Medical School
University of South Carolina School of Medicine
University of South Carolina, School of Medicine – Greenville
University of Texas Houston & Memorial Hermann Hospital
University of Texas MD Anderson Cancer Center
University of Texas Medical Branch at Galveston
University of Texas Southwestern
University of Utah Health Sciences
University of Vermont, Internal Medicine
University of Virginia
University of Washington
University of Wisconsin
VAMC West Los Angeles, Infectious Disease
Vanderbilt University Medical Center
Virginia Commonwealth University Health, Pediatrics
Wayne State University School of Medicine, Infectious Disease
Weill Cornell Medicine/NYP, Radiology
Yale School of Medicine, Internal Medicine
Architecture of High Value Care
Defined by >300 Conference Abstracts

NATIONAL RESEARCH AND EDUCATION SYMPOSIUM
October 8-9, 2017 | Baltimore, Maryland

22 QUALITY IMPROVEMENT PRESENTATIONS
6 EXPERT SPEAKERS
100 QUALITY IMPROVEMENT POSTERS
20 INNOVATIVE WAYS TO TEACH HIGH VALUE CARE
44 MEDICAL CENTERS

ARCHITECTURE OF HIGH VALUE HEALTH CARE
2018 NATIONAL CONFERENCE

56 ACADEMIC MEDICAL CENTERS
200+ ABSTRACT PRESENTATIONS

21.75 Approved for AMA PRA CATEGORY 1 CREDITS™
25 SESSIONS ON APPROPRIATE USE CRITERIA
8 VALUE-BASED QI WORKSHOPS

High Value Health Care
- Diagnostic & therapeutic efficiency
- Quality-driven care pathways
- Discharge transitions
- Optimizing patient care setting
- Preventive medicine

September 21-23, 2018 | Baltimore Convention Center | www.hvpaa.org/national-conference
Radiology Appropriate Use
CME/MOC for Providers

“Order Wisely®” Best Practice Ordering & Prescribing

**MORNING**
- Appropriate Imaging for CMS PAMA AUC Priority Clinical Areas & More
  - Headache, Sachin Gujjar, MD
  - Neck Pain, Ari Blitz, MD, PhD
  - Low Back Pain, Gary Gong, MD
  - Shoulder Pain, Shivani Ahtlawat, MD
  - Hip Pain, Shadpour Demehri, MD, PhD
  - Chest Pain, Jeff Trost, MD
  - Pulmonary Embolism, Pamela Johnson, MD
  - Abdominal Pain, Pamela Johnson, MD
  - Managing Incidental Findings on Body Imaging, Pamela Johnson, MD
  - Radiation Exposure from CT: Facts vs Myths, Mahadaveppa Mathesh, PhD
  - Best Practice Breast Imaging (Screening, Mass, Pain), Lisa Mullen, MD
  - Lung Cancer, Cheng Ting Lin, MD

**AFTERNOON**
- High Value Hospital Medicine
  - Inpatient Hypertension, Andrew Parson, MD
  - Hospital Acquired Acute Kidney Injury, George Hoke, MD
  - Noneurologic Syncpe, Lenny Feldman, MD
  - TIA & Stroke, Toyin Idowu, MD
  - Optimizing Catheters (Peripheral IVs, PICCS, & Midlines), David Bozaan, MD
  - C Difficile Testing and Treatment, Clare Rock, MBBCh
  - UTI vs Asymptomatic Bacteruria/Pyuria, Valeria Fabre, MD
  - Targeted antibiotic therapy for LRTI, Jennifer Townsend, MD
  - Cellulitis & Mimics: Imaging & Antibiotics, Jennifer Townsend, MD
  - Paraneoplastic Syndrome: Labs & PET, John Probasco, MD
  - Transfusions, Steve Frank, MD, PhD
  - VTE Prophylaxis, Brandyn Lau, MPH
  - Low Value Labs, Mike Borowitz, MD, PhD

**THE TEACHING VALUE INNOVATOR AWARD**
The Teaching Value Innovator Award will recognize clinicians who have implemented, or plan to implement, innovative ideas and projects that improve the clinical learning environment in the area of low value care.

**WINNERS**
- Konniee Graves, MD
  - The Future Leaders Program: A national web-based educational program for value in healthcare
- Pamela Johnson, MD
  - Order Wisely: A new cross-specialty paradigm for imaging appropriateness continuing medical education

[https://valuechallenge.costsofcare.org/awards](https://valuechallenge.costsofcare.org/awards)

Order Wisely®: Appropriate use of tests & treatments

A leading principle of high-value practice is avoidance of unnecessary tests and treatments in accordance with established clinical practice guidelines. To reinforce this practice, we designed a full-day educational program that reviews appropriate use of imaging exams, lab tests, medications, transfusions, and procedures. An understanding of the evidence behind appropriate ordering and prescribing is important to change long-standing practice habits and overcome concerns about missed diagnoses. Included are presentations on best imaging exam selection for the 8 CMS Priority Clinical areas, to ensure that providers are prepared for the CMS Appropriate Use Program, which will include evaluation of their ordering appropriateness beginning in January 2020.

**Appropriate Imaging for CMS AUC Priority Clinical Areas** & more
- Headache
- Dizziness
- Traumatic neck pain
- Low back pain

Free online at www.hvpaa.org/order-wisely
The Gamut of Value-Based Radiology Quality Improvement

- Improve appropriate use of imaging exams by decreasing low value tests and increasing high value exams
- Deliver high value interpretations that optimize use of downstream tests and treatments
- Protect patients from unnecessary surgery, emergency department visits and avoidable hospitalizations
HVPAA
Radiology Collaborative

• Alpert/Brown
• Baylor Dallas
• Baylor Houston
• Baystate, U Mass
• Einstein/TJUH
• Florida Hospital
• Henry Ford
• Indiana University
• Johns Hopkins Medicine
• UT MD Anderson
• UT Southwestern
• Medical College of Wisconsin
• Michigan Medicine
• Michigan State University

• NYU Langone Health
• Ochsner Clinic Foundation
• Penn State/Hershey
• Stanford
• U Alberta, Canada
• UC Davis
• University of CT
• University of Maryland
• University of Nebraska
• University of Pennsylvania
• University of Utah
• University of Wisconsin
• PP: Radiology Partners, California
Multi-institutional Radiology Value Improvement Projects

- Standardized recommendations for thyroid nodules and AAA surveillance in CT & MRI reports
- Improve report quality to guide patient management and measure imaging value: ACR PE-RADS 2019
- Pooling data for EM imaging positive exam benchmarks after appropriateness improvement
- Rad/EMed/ID: Reduce imaging-driven antibiotic overuse in nonbacterial lower respiratory infection and noninfectious bacteriuria/pyuria (pursuing AHRQ funding with ACR CRI)
- Design, develop and test measures of radiology value related to optimizing patient management
Partnership with Harvard Library of Evidence

- HVPAA became CMS approved QPLE in 2018
- Collaborating on systematic reviews for all 8 CMS Priority Clinical Areas
- Completed 1st paper on hip pain
Radiology-Led Quality-Driven Care Redesign

- Evidence-based care redesign
- Optimize resource utilization on national scale, from imaging to ED visits to hospitalizations to reduce total cost of care for patients
- Ensure that care redesign maintains or improves quality and safety through robust outcomes analyses
- Protect patients’ from cost-driven interventions and maintain patients’ trust in physicians