



August 25, 2009

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The American Board of Radiology Foundation (ABRF), a 501(c)3 foundation whose mission is to demonstrate, enhance, and continuously improve accountability to the public in the use of medical imaging and radiation therapy, appreciates the opportunity to comment on the upcoming NEJM article by Fazel et al and the accompanying perspective by Lauer. ABRF, a member of the Alliance for Radiation Safety in Pediatric Imaging, supports aggressive radiation dose-reduction strategies, such as the worldwide Image Gently Campaign (<http://www.pedrad.org/associations/5364/ig/>).

On August 6-7, 2009, ABRF, in co-sponsorship with the American Board of Radiology (ABR) and the National Institute for Biomedical Imaging and Bioengineering (NIBIB), held a summit in the Washington, DC area entitled, "Medical Imaging: Addressing Overutilization in the Era of Healthcare Reform." (<http://abrfoundation.org/summit.html>) This invitational meeting, which included all stakeholder groups (see list below), identified the key forces contributing to overutilization, as well as ways to control or reverse them with a collaborative national effort.

FORCES CONTRIBUTING TO IMAGING OVERUTILIZATION	WAYS OF CONTROLLING/REVERSING OVERUTILIZATION
Lack of physician awareness; culture of work environment	Physician education, robust decision support systems
Fee-for-service system	Payment reform; value-based healthcare purchasing
3 <sup>rd</sup> party payment : distances physician, patient from cost info	Payment reform; robust decision support systems
Lack of evidence base	Comparative effectiveness research
Direct marketing of imaging to patients and physicians	Education for patients, physicians; decision support systems
Patient expectations and preferences for high tech care	Education; comparative effectiveness research
Defensive medicine	Tort reform
Self-referral to physician-owned imaging facilities	Elimination of in-office Stark rule exception for MRI, CT, PET
Duplicate imaging studies	Electronic image sharing across hospitals, health systems

Comments on the Fazel paper: The Summit moved the imaging conversation toward solutions to overutilization, while the article by Fazel et al provided only a theoretical calculated risk to the population, and very few, if any, suggested solutions. The single greatest strength is the study population of a million. What does the study add? It corroborates previous work suggesting a six-fold increase in medical radiation dose to the population in the past quarter-century (1). Importantly in this study, however, high and very high effective doses occurred in only 18.6 and 1.9 enrollees per 1000 patient-years, and the median effective dose was 0.1mSv (inter-quartile range of 0.0 to 1.7). These figures indicate distribution of effective dose toward a small concentrated segment of the population, in whom specific risk/benefit justification should be sought. The data do not indicate a widespread problem in the population. The point that 81.8% of the total effective dose in this study was delivered in outpatient settings, most often in physicians' offices, was grossly under-emphasized



by the authors. Self-referral for medical imaging is such an important problem in this country that the IOM listed “Compare the effectiveness of diagnostic imaging performed by non-radiologists and radiologists” among its initial national priorities for comparative effectiveness research (2). Regarding benefits of imaging, consider all minimally-invasive image-guided interventions performed with catheters, needles, balloons, stents, etc. When viewed in proper context, each of these is a modern replacement for an open surgical, inherently riskier predecessor. Exploratory laparotomy, formerly a common surgical procedure for acute severe undiagnosed abdominal pain, has all but disappeared since the advent of diagnostic abdominal CT scanning. The authors themselves have stated, “An important reason for the growing use of such procedures stems from their ability to radically improve patient care.”

Comment on Lauer Perspective: The comment, “Overall we must conclude that with a few exceptions—such as mammography—most radiologic imaging tests offer net negative results” is completely unfounded and unreferenced by the author. The solution offered by Lauer is to “...design and execute desperately needed large-scale, randomized trials to figure out which procedures yield net benefits.” While this seemingly attractive approach will undoubtedly be pursued under federally-funded comparative effectiveness research, the author fails to address the ethical dilemma that study designers will encounter by withholding diagnostic and therapeutic procedures that are considered standard-of-care.

1. NCRPM. Ionizing Radiation Exposure of the Population of the United States: Recommendations of the NCRPM. Report No. 160, Bethesda, MD: NCRP, March, 2009.
2. Initial National Priorities for Comparative Effectiveness Research. Report Brief. Institute of Medicine, June 2009.

#### 2009 ABR Foundation Summit Attendees

##### Accreditation and Certification

- American Board of Medical Specialties
- American Board of Nuclear Medicine
- American Board of Radiology
- The Joint Commission

##### Foundations

- American Board of Radiology Foundation

##### Governmental Organizations

- Centers for Medicare and Medicaid Services
- FDA, Center for Devices and Radiological Health
- Institute of Medicine
- National Economic Council
- National Institute of Biomedical Imaging and Bioengineering
- National Institutes of Health
- Veteran’s Administration Central

##### Hospitals and Health Systems

- Brigham and Women’s Hospital
- Geisinger Health Systems



Insurers

- America's Health Insurance Plans
- BlueCross/BlueShield
- Cigna
- Health Care Service Corporation
- United Healthcare
- Wellpoint, Inc.

Medical Societies

- American Academy of Neurology
- American Academy of Orthopaedic Surgeons
- American Academy of Pediatrics
- American Association of Physicists in Medicine
- American Brachytherapy Society
- American College of Emergency Physicians
- American College of Obstetricians and Gynecologists
- American College of Physicians
- American College of Radiology
- American Institute of Ultrasound in Medicine
- American Medical Association
- American Osteopathic Association
- American Radium Society
- American Roentgen Ray Society
- American Society of Clinical Oncology
- American Society of Neuroradiology
- American Society of Nuclear Radiology
- American Society of Radiologic Technologists
- American Urological Association
- International Society of Radiology
- National Medical Association
- Radiological Society of North America
- Society of Interventional Radiology
- Society of Nuclear Medicine
- Society of Pediatric Radiology
- Society of Radiologists in Ultrasound
- Society of Thoracic Surgeons

Private Sector Organizations

- AdvaMed
- National Business Group on Health
- National Imaging Associates
- U.S. Chamber of Commerce

Quality Organizations

- National Committee for Quality Assurance
- National Quality Forum
- Physician Consortium for Performance Improvement



Regulatory

- Conference of Radiation Control Program Directors
- International Atomic Energy Agency
- Nuclear Regulatory Commission

Standards and Measurement

- Integrating the Healthcare Enterprise International
- National Council on Radiation Protections and Measurements

Sincerely,

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