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Health Care Reform Draft Proposal, Day 2  
Testimony of Siemens Healthcare  
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Thank you, Subcommittee Chairman Pallone and Ranking Member Deal, for the opportunity to testify, on behalf of Siemens Healthcare, on the committee's healthcare reform proposal. It is an honor to be invited to testify before Congress on a topic of such national priority.

My name is Tom Miller, representing Siemens Healthcare, a global medical and healthcare information technology company. In the USA, we employ over 18,000 employees in our healthcare business and over 69,000 across all of our businesses. On behalf of Siemens Healthcare, we fully support you and our President in the task of making changes to our healthcare system to ensure affordable, quality healthcare.

We appreciate that significant players in the healthcare marketplace/delivery system are appropriately expected to generate savings and efficiencies to extend coverage to all Americans. Our industry, in coalition, is also doing so, including developing physician-driven appropriateness guidelines that will assure appropriate and effective use of diagnostic technologies to generate savings, while assuring every patient has access.

Additionally, Siemens Healthcare, as a pioneer in the healthcare information technology industry, is a strong advocate of Congress and the Administration's commitment to the use of Electronic Health Records. We know the true potential of well-executed HIT systems to generate efficiencies, support clinical decision-making, reduce errors, and improve workflow across the care process.

Personally, my entire career has been dedicated to developing and bringing to market medical imaging technologies and healthcare information systems. When I first began my career as a young physicist and engineer, I was passionate about the transformational benefits of advanced medical technologies. And this passion has not diminished now that we have the ability to see inside the human body in exquisite detail – without resorting to the scalpel.

The evidence that medical imaging finds disease earlier, renders some invasive procedures obsolete, and saves lives, is irrefutable. Therefore, I am sometimes disappointed that myths about these life-saving technologies have crept into some segment of public opinion and healthcare reform discourse. I am concerned when these same myths could result in policy decisions that are contrary to our mutual goals. I will therefore take the opportunity to enumerate and dispel four of these myths as they apply to the committee's healthcare reform proposal.

## **Myth 1: Expensive Diagnostic Technologies Increase the Cost of Care**

Every quantum leap in productivity in history has been associated with a new technology and medicine is no exception. And the most wasteful acts in medicine are associated with treatments that are inappropriate or even totally unnecessary for the individual patient. Therefore, technology that permits greater knowledge of a patient's specific disease process, location, and extent must ultimately reduce subsequent costs.

Coronary CT angiography (CCTA) in the emergency room is a precise, rapid, and clinically effective technique to rule out/diagnose cardiovascular disease in patients presenting with chest pain. Costs for an ED-administered CCTA averaged \$1,500, while patients admitted for further observation, stress testing and telemetry monitoring incur in excess of \$4,000. Additionally, a patient receiving immediate CCTA is discharged, on average, after eight hours, while those who did not receive CCTA and were admitted for testing/monitoring have in-hospital stays exceeding 24 hours<sup>1</sup>.

The diagnosis of abdominal pain was once approached with exploratory surgery and the accompanying expense of a hospital stay, risk of infection and complications, and loss of income during recovery. Now, MR and CT have rendered this surgery obsolete: CT scans have been found to significantly reduce the negative appendectomy rate and the number of unnecessary hospital admissions, saving \$447 per patient<sup>2</sup>.

The American Heart Association estimates that the long term cost for stroke care is expected to rise to \$68.9 billion in 2009. Today, we have the imaging technologies to diagnose and categorize a stroke in the emergency room and administer, upon diagnosis, therapies that greatly diminish the likelihood of long-term disability, and, therefore, the medical and societal cost. It is estimated increased imaging could save up to \$1.2 billion annually in stroke costs.<sup>3</sup>

All of these examples, and there are many more, share one common attribute: the introduction of a diagnostic imaging procedure, some would say expensive diagnostic imaging procedure, up front, to avoid much more expensive care later in the treatment process. Unfortunately, to date, most studies of diagnostic procedure costs focus on this cost category alone and are not in-depth studies that take a longitudinal accounting approach to evaluate downstream costs and quality of care. We have not yet accounted for imaging as a replacement for once-common invasive techniques and the accompanying costs and risks. Therefore, we support comparative effectiveness research and we urge that this research be conducted with open and transparent methods that focus on holistic patient and societal outcomes and not simply payer outcomes.

Reducing healthcare cost is a national priority, one which our industry fully supports. . . . And our industry, our customers and their patients has already been subject to very large reductions through the Deficit Reduction Act (DRA). However, we caution against looking narrowly at diagnostic imaging as a cost reduction strategy.

Medical imaging contributes to lower total healthcare costs, as supported by numerous independent studies. Researchers have found that every \$1 spent on inpatient imaging correlates to approximately \$3 in total savings<sup>4</sup>. And, according to a Harvard Medical School study, every \$385 spent on imaging decreases a patient's hospital stay by one day, saving approximately \$3,000 per patient<sup>5</sup>. Therefore, further cuts may result in the unintended consequence of ballooning costs of unnecessary treatments. Fifty-seven of Congress stated as much in their June 11 letter to President Obama urging him not to restrict access to medical imaging technologies. The bipartisan letter notes that that medical imaging can reduce health care costs and ensure better outcomes for patients.

However, we expect that, like other industries in the healthcare sector, we must continue to participate in cost reduction efforts and will continue to support efforts to achieve this aim.

## **Myth 2: The Financial Self-Interest of Physicians has led to Technology Overuse**

The use of advanced imaging technology is increasing not due to the financial self-interest of physicians, but rather because it has transformed the practice of medicine for almost every disease. In fact, there is nothing else that would account for the fact that similar patterns of increase are occurring in every industrialized nation in the world, even in those nations in which there is a clear financial disincentive to do so.

The overwhelming majority (>90%) of imaging tests are ordered by non-radiologists and read by radiologists. Therefore, the vast majority of ordering physicians have no financial incentive to order these studies<sup>6</sup>. Furthermore, studies critical of the rise in medical imaging, typically document the increase and then attribute it to financial incentives without evidence<sup>7</sup>. Rather, the volume increase in imaging studies in the USA (as in the 25% increase in a two-year period in Canada<sup>8</sup> where there are absolutely no financial incentives driving this increase) is more likely due to the clear clinical benefit resulting from the diagnostic confidence thus gained.

As imaging continues to be increasingly integral to best clinical practice, physician-developed appropriateness guidelines, with IT-based clinical decision support tools, may provide an answer. In fact, leading private health systems, such as Massachusetts General Hospital (MGH), are currently using or piloting appropriateness criteria - and it is working. As just one example, the use of appropriateness guidelines at MGH reduced the outpatient CT growth from 12% annually to 1%. This decrease occurred even as the growth of outpatient visits to the same facility increased steadily at a compound annual growth rate of nearly 5%.

By advocating for both appropriateness and accreditation criteria – both of which were included in last year's Medicare Improvements for Patients and Providers Act of 2008 (MIPPA) – the imaging community is gratified to have worked with members of Congress to produce solutions that benefit patients, providers and the Medicare program.

Therefore, we support the implementation of appropriate use guidelines as essential to healthcare reform. And we have worked within our industry coalition, the Access to Medical Imaging Coalition (AMIC), to develop such policies that ensure 'the right scan, for the right patient, at the right time.' Through such policies we can achieve the active elimination of unnecessary imaging services, defensive medicine behavior, and self-referrals, to both generate savings while preserving the quality of care. Our goal, like yours, is to achieve the optimal balance between minimizing costs and protecting patient access.

We have also been a strong advocate for the accreditation requirements contained in the Medicare Improvements for Patients and Providers Act (MIPPA) which will ensure that all imaging practices are subject to accreditation standards or will be prevented from participating in the Medicare program.

### **Myth 3: The Best Means to Reduce Costs and Overuse is to Reduce Reimbursements**

Healthcare costs have continued to climb – the anticipated rate for 2010 is 9% (slightly lower than previous rates)<sup>9</sup> -- even with greater than expected savings generated by reduced reimbursements and even as spending on advanced imaging services has slowed significantly. This suggests that reducing imaging only results in an increase in the cost of care elsewhere. In fact, a study by the Government Accountability Office (GAO) reported the slowdown in imaging services, suggesting that any further cuts could endanger the availability of imaging to patients<sup>10</sup>. This would lead to the application of expensive therapies based upon incomplete diagnostic knowledge, or worse, waiting to apply therapy at a later stage of disease when it becomes much more expensive to treat or turns into a chronic condition generating costs associated with long-term care.

As is well known, the DRA proposed reductions in the reimbursement to medical imaging that were estimated by the Congressional Budget Office (CBO) to produce \$500 million in 2007, the first year of implementation. However, the reality is that, according to the GAO, the DRA resulted in \$1.64 billion in Medicare cuts to imaging services in 2007 alone. This is more than three times the \$500 million estimate by the CBO.

This GAO analysis is supported by a Moran Company study that found that Medicare spending on advanced imaging was reduced by 19.2% from 2006 to 2007 and that the volume of these services grew by a modest 1.9% in that period. This analysis additionally shows that the rate of imaging volume growth has been declining since 2005. The slow 1.9% growth rate for advanced imaging is less than the overall growth rate for Medicare physician payments in general.

During the time period in which imaging reimbursements have been dramatically cut, overall healthcare cost continued to climb at two to three times the rate of inflation, exceeding \$2.4 trillion in 2007<sup>11</sup>. As stated previously, demand for imaging is not created by the suppliers of imaging. Cutting supply by reducing reimbursement is equivalent to rationing healthcare availability, contrary to one of the primary goals of healthcare reform.

The solutions to controlling costs are not an easy fix. Many inefficiencies in healthcare can be addressed through sophisticated healthcare information technology systems: the right information at the right time to the right person. We commend you and the Administration for ensuring that HIT is an integral component of healthcare reform.

Siemens Healthcare also wishes to applaud the committees in their goal to permanently fix the Medicare Physician Fee Schedule Sustainable Growth Rate (SGR) formula, a critical policy which may be omitted from the Senate committee drafts.

We were pleased to see the Committees have abandoned previous policy, in which the Ways and Means Committee approved a formula fix that would have created six separate expenditure targets, including one for radiology. To apply a volume cap on payments to radiologists for services ordered by other specialties could have resulted in inequitable payments. Siemens Healthcare strongly believes that the SGR problem should be remedied permanently for predictability in payment for our customer healthcare providers and for their patients.

We also wish to thank the House Committees for not ceding to recommendations to increase the assumption on utilization of equipment from 50% to 95%. Although 75% is more reasonable than a 95% increase, which could cut payments for CT and MR alone by over 40%, there is no credible data based on machine usage to validate either number. Therefore, our strong recommendation is that, before such a deep cut is applied to all advanced imaging services nationwide, a study be conducted to determine actual use rates and the effects of such increases on patient access to care.

The current MedPAC recommendations to change the reimbursement rate formula are based on isolated survey data. AMIC identified several problems with the survey on which MedPAC based its recommendations:

- The sample size of six urban diagnostic imaging centers excluded rural imaging centers, and was, therefore, not indicative of the actual national environment.
- The MedPAC survey only included CT and MR but the recommendation encompasses all imaging modalities. This may again result in unintended consequences such as the reduction of breast cancer screening availability reversing the gains enabled by imaging in the fight against this disease.
- The methodology used to determine the utilization assumptions did not account for current health status or age of the patient and the corresponding impact on patient preparation time, a significant factor affecting the length of an appointment, and ultimately, the utilization rates. Older and ill patients – the growing Medicare population -- simply require more time to be prepared for an imaging exam.

Increasing utilization rates will effectively change how imaging services are delivered. Today, many tests are conducted in outpatient diagnostic imaging centers which, if cuts are enacted as proposed, will not be able to survive. This forces the patient in need of imaging to go to a hospital, which may mean traveling a greater distance and long wait times. Hopefully, Americans will not see the same appointment wait times as are common in Great Britain where patients wait five weeks for a CT and up to 14 weeks for an MRI<sup>12</sup>.

Forcing patients to hospitals for imaging will over-tax hospital capacity. And, in the current financial crisis, hospitals increasingly lack the financial capital to expand capacity. Shifting the imaging burden to hospitals will therefore result in care rationing and associated long wait times for possibly time-critical medical studies.

Finally, we will, as scientists and engineers, continue to do our part to reduce the costs and increase the clinical performance of the technology we produce. As an example, the capital and operating costs of a typical 1.5T MR scanner of today cost less than one half of what it did five years after introduction, and yet offers dramatically increased diagnostic performance.

We acknowledge the tremendous scrutiny and pressure to enact healthcare reform and to find the means to fund the cost. We appreciate that you will not allow the pressure and demand for speed to displace an informed and cautious approach to developing a system that ensures continued access and quality for all.

#### **Myth 4: The Use of Advanced Diagnostic Technology does not Improve Health Outcomes**

Imaging has enabled screening, earlier detection, and greater accuracy and speed in diagnosing many of the most serious of diseases facing our population, including cardiovascular and neurological conditions and cancers. Earlier detection of disease has a direct relation to medicine's ability to treat and cure. Diagnostic imaging doesn't just improve health, it saves lives.

To dispute this myth, one only has to consider the effectiveness of our breast cancer imaging devices and the effect on the decrease in breast cancer deaths. A full 46% of the breast cancer mortality rate decline is directly attributable such screenings<sup>13</sup>. In patients with recently diagnosed breast cancer using mammograms, MRI is effective in detecting additional, unsuspected malignant tumors in approximately 20% of patients<sup>14</sup>. These are tumors that were previously undetected, and, therefore, were not considered in determining disease staging and appropriate treatment protocols.

New PET (positron emission tomography) scanners can allow precise discovery and localization of very small clusters of malignant cells that have metastasized. We know that for the major cancers, physicians have reported that PET scanning allowed them to avoid additional tests or procedures in 77% of patients. Moreover, in over 36% of patients, the results of the PET test led the physician to alter the course of the patient's treatment<sup>15</sup>.

The USA also has demonstrably better outcomes for many diseases, including cancer, when compared to those in European countries, with five-year survival rates of at least

90% for skin melanoma, breast, prostate, thyroid, and testicular cancer. In Europe, only one type reaches 90% survival: testicular. These outcomes are most likely due to regular and early screenings – in the USA, even the uninsured, are more likely to have regular screenings and have the fastest access to treatment. Consider that, in the USA, 84% of women (ages 50-64) have regular mammograms compared to 63% in Great Britain.<sup>16</sup> This may be directly attributable to greater access to the technology.

Furthermore, a study conducted by Professor Frank Lichtenberg of Columbia University using statistically controlled state by state variation data showed advanced imaging techniques extended life expectancy in the USA by 0.62 - 0.71 years over the time period 1991-2004<sup>17</sup>.

We have, quite simply, the most innovative medical technologies and advanced treatments, the best clinical research facilities, and the finest healthcare providers in the world. In the commitment to create an affordable, national healthcare system, we must take great caution not to continue the trend to make advanced diagnostic technologies a target for further cuts.

We commend other legislative efforts to fund medical imaging, specifically, the PRIME Act and House Resolution 353, which call for research into utilizing medical imaging to develop more effective diagnostic and treatment tools for prostate cancer. For while, one in six men will diagnosed with prostate cancer, we currently, we do not have any truly effective diagnostic means. And many men undergo unnecessary biopsies and surgery, with current treatments leaving 50-80% of men impotent, incontinent or both<sup>18</sup>. In the future, the protocol for prostate cancer will be image-guided diagnosis and treatment that is far more accurate and far less invasive saving lives as well as costs.

## Concluding Statement

In conclusion, allow me to present to you four facts about medical imaging:

1. Diagnostic technologies support more cost-effective care by enabling earlier, faster and more accurate diagnosis, eliminating the need for expensive and invasive surgeries and inappropriate therapies, reducing hospital admissions, and, in many cases, avoiding costs of long-term chronic conditions.
2. The growth in medical imaging can be attributed to its transformational effect on medicine for almost every facet of every disease. Physicians know that medical imaging is simply the best tool they have to diagnose disease with confidence. And, the great majority of physicians have one overriding interest: to achieve the best possible outcomes for their patients.
3. The best means to reduce costs and overuse is by creating a more efficient healthcare system through Healthcare Information Technology and to manage medical imaging utilization through physician-driven appropriateness guidelines.
4. Advanced diagnostic imaging technologies don't just improve health – they save lives. Simply ask any woman whose mammogram detected breast cancer in its earliest stages to make her a survivor. Ask anyone whose Coronary CT Angiography found blocked arteries before he/she suffered a catastrophic – or fatal – heart attack. Or ask my father, who, after suffering a stroke, can now still converse with his grandchildren due to immediate access to critical diagnostic imaging technology.

Understanding disease – finding it sooner, intervening earlier and with better outcomes is the true solution to our healthcare crisis. And, diagnostic imaging –with its insight into the human body – is the key.

Thank you for the privilege of representing Siemens Healthcare in the national dialogue of healthcare reform. As the legislative process progresses, we look forward to working with you and with our President and all involved institutions and organizations to build policies that ensure appropriate use of imaging and access to these technologies to prevent, detect, and treat disease – and to build a healthier America.

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<sup>1</sup> **Society of Academic Emergency Medicine Proceedings**, Study presented by Judd E. Hollander, MD, University of Pennsylvania, May 2009. Goldstein, James A. et al. **A Randomized Controlled Trial of Multi-Slice Coronary Computed Tomography for Evaluation of Acute Chest Pain.** *Journal of the American College of Cardiology.* 2007: 9(8)

<sup>2</sup> Rao, Patrick M., et al. **Effect of Computed Tomography of the Appendix on Treatment of Patients and Use of Hospital Resources.** *N Engl J Med* 1998 338: 141-146

<sup>3</sup> Gleason, et al. **Potential Influence of Acute CT on Inpatient Costs in Patients with Ischemic Stroke,** *Academic Radiology,* 2001 Oct; 8(10): 955-64

<sup>4</sup> Beinfeld, Molly, MPH and Gazelle, Scott. **Diagnostic Imaging Costs: Are They Driving Up the Costs of Hospital Care?** *Radiology,* June 2005

<sup>5</sup> **Medical Expenditures Panel Survey 2004,** (Average expense per night for a hospitalization in 2004 was about \$3,000 while median per diem was about \$1,800) ([http://medps.ahrq.gov/mepswebdata\\_files/publicationsst164/stat164/stat164.pdf](http://medps.ahrq.gov/mepswebdata_files/publicationsst164/stat164/stat164.pdf) on 1/07/09)

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<sup>6</sup> Smith-Bindman et al. **Rising Use of Diagnostic Imaging in a Large Integrated Health System**, *Health Affairs*, Volume 27, Number 6, DOI: 10.1377/hlthaff.27.6.1491

<sup>7</sup> Baker, et al. **Expanded Use of Imaging Technology and the Challenge of Measuring Value**, *Health Affairs*, Vol. 27 Number 26 doi: 10.1377/hlthaff.27.6.1467

<sup>8</sup> **Canadian Institute for Health Information**,  
([http://secure.cihi.ca/cihiweb/dispPage.jsp?cw\\_page=media\\_13jan2005](http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=media_13jan2005))

<sup>9</sup> **Behind the Numbers: Medical Cost Trends in 2010**, Price Waterhouse Coopers, pwchealth.com, June 2009

<sup>10</sup> **Medicare: Trends in Fees, Utilization, and Expenditures for Imaging Services before and after Implementation of the Deficit Reduction Act of 2005**, GAO-08-1102R, September 26, 2008, p.8

<sup>11</sup> **Facts on Healthcare Costs**, National Coalition on Healthcare, (<http://www.nchc.org/facts/cost.shtml>)

<sup>12</sup> **An Improving Picture**. Healthcare Commission UK

<sup>13</sup> Berry, et al. **Effect of Screening and Adjuvant Therapy on Mortality from Breast Cancer**, *N Eng J Med*, Volume 353:1784-1792

<sup>14</sup> Schell, et al. **Role of Breast MRI in the Pre-operative Evaluation of Patients with Newly Diagnosed Breast Cancer**. *American Journal of Roentgenology*, 2009, 192 (5): 1438 DOI: 10.2214/AJR.08.1551

<sup>15</sup> Hillner, et al. **Relationship between Cancer Type and Impact of PET and PET/CT on Intended Management: Findings of the National Oncologic PET Registry**, *Journal of Nuclear Medicine*, 2008, 49 (12) 1928-1935 DOI: 10.2967/jnumed.108.056713

<sup>16</sup> **National Center for Policy Analysis**. October 2007

<sup>17</sup> Lichtenberg. **The Quality of Medical Care, Behavioral Risk Factors, and Longevity Growth**, National Bureau of Economic Research, Working Paper

<sup>18</sup> The AdmeTech Foundation ([www.admetech.org/TakeAction/index.php](http://www.admetech.org/TakeAction/index.php))