

Letter from the Director

It is probably an understatement to say that these are interesting and tumultuous times for those working hard on unleashing the power of information technology to transform healthcare. The American Recovery and Reinvestment Act of 2009, President Obama's frequent invocation of health IT as a transformational agent for improving quality and controlling cost, and healthcare featuring as a budget priority in the administration's agenda only validates what many of us have been arguing for several years.

With this increased attention and investment also comes a deeper responsibility. This responsibility is two-fold: one, to ensure that health IT investments are made in areas where there is truly a payoff, and two, to guarantee that no citizen gets left behind in the march towards healthcare digitization. The first dimension of responsibility requires that we continue to question, evaluate, and measure the outcomes from health IT implementations. That we don't lose sight of the longer-term goals of system-wide interoperability and connectivity as we continue to address short-term priorities. That the dollars expended on health IT truly help us realize the vision of a safer, cheaper, and higher quality healthcare system. We must also not forget that large sections of our society are not completely plugged into the digital revolution and may still lack access to computers and the Internet. As we move towards a patient-centric system where patients are empowered to take charge of their own healthcare, to the extent that access to one's own personal health information, knowledge about treatment options, and basic health literacy becomes increasingly mediated by information technology, we must be vigilant about avoiding the trap of a health digital divide.



Ritu Agarwal

Founder and Director of the CHIDS
 Professor and the Dean's Chair of Information Systems
 Robert H. Smith School of Business, University of Maryland

I am delighted to present the first CHIDS letter of this banner year. It provides an overview of our research activities and what the center has been doing to address the challenge and opportunity of health IT. As always, I welcome your input and collaboration.

"We will wield technology's wonders to raise health care's quality and lower its cost."

- President Obama's inaugurations address, Washington, January 20, 2009.

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Achievements & News

- Washington Post Sunday Business Section of February 15th, 2009 features commentary by CHIDS Director, Ritu Agarwal on the \$19B Health IT component of the Stimulus Package.
- Reuters, eHealth SmartBrief, Medical Device Daily, Fierce HealthIT and Healthcare Finance covered the CHIDS study on the cost of poor communications in US hospitals.
- CHIDS completed the first phase of multi-stakeholder contract from AHRQ, summarizing the existing knowledge in personal health information management in a background report; due to be released in June 2009.

CHIDS Study Pegs Cost of Poor Communications in US Hospitals at \$12 Billion

By Angela Toda and Kenyon Crowley

CHIDS Researchers put a price tag on the cost of poor communication in U.S. hospitals at \$12 billion per year. The research, recently released by CHIDS, is the first to quantify the economic impact of a health care system rife with communication delays and failures. Among key findings was unnecessarily long hospital stays - such as the time and resources patients squandered waiting to be discharged - account for 54 percent of total losses.

To put the \$12 billion amount into perspective, the loss equals approximately two percent of hospital revenue nationwide, a figure that is more than half of the average hospital margin of 3.6 percent.

"Simply stated, the average hospital wastes a figure that is in substantial proportion to the amount it makes," said Ritu Agarwal, director of CHIDS at the Robert H. Smith School of Business and the study's lead researcher. "The industry ramifications for recouping these losses - particularly in light of the need for health care reform in improving patient access to care and services - are tremendous."

In an article, Agarwal and CHIDS researchers say the solution to these inefficiencies rests largely in investment in information technology that would help streamline communication among hospital caregivers. Theirs is a timely observation following the \$787 billion economic stimulus bill recently signed into law by President Obama. Of that, more than \$140 billion is earmarked for health care, with \$19 billion to modernize health information technology systems. As part of his proposed \$634 billion budget to expand U.S. health care, Obama has also charged Congress to come up with the means of making it available to 46 million Americans now without medical insurance.

"An infusion of IT investment in the U.S. health care system is sorely needed as a step toward ensuring long-term sustainability," said Agarwal. "This research quantifies and supports what we've intuitively known for some time - information technology is a critical component in creating the cost efficiencies that will enable us to revamp and repair our beleaguered health care system - efficiencies that will be passed along to the consumer to significantly improve patient quality of care and access."

Agarwal points to solutions that include location-based technology that would help staff identify caregivers'

locations at all times and shared communication systems that would allow nurses to identify an attending physician. These investments would significantly reduce the amount of time and resources wasted identifying and locating attending caregivers, as well as the likelihood of hospital error. She also suggests telecommunications systems to facilitate remote consultations with specialists, thereby reducing patient travel and waiting time.

In conducting the research, Agarwal, Kenyon Crowley, CHIDS assistant director, and Jorge Diaz Schneider, CHIDS graduate research fellow, developed models for quantifying the economic burden of poor communication between doctors and nurses in U.S. hospitals. They conducted a comprehensive review of the literature and interviewed senior hospital administrators and clinical staff from seven U.S. hospitals of different types and sizes. Using this information, they were able to develop a scenario of possible outcomes and create conceptual and quantitative models to estimate inefficiency. While the situation at individual hospitals varies depending upon size and staffing, they found that the typical 500-bed facility stands to recoup an astounding \$4 million with improved caregiver communication.

Future CHIDS research will look at how process changes and applications of technology at the hospital level can alleviate these inefficiencies, including a study of pre and post-Unified Communications technology implementation planned for Q3 2009 at a leading Midwestern United States Academic Medical Center.

The complete research briefing can be found at:

<http://rhsmith.umd.edu/chids/research/researchbriefings.aspx>

This research has been featured in national press including Reuters, eHealth SmartBrief, Medical Device Daily, Fierce HealthIT and Healthcare Finance News.



The Complexity of Consumer Willingness to Disclose Personal Information: Unraveling Health Information Privacy Concerns

By Cathy Anderson, PhD Candidate

CHIDS Researchers, PhD Candidate Cathy Anderson and Dr. Ritu Agarwal explore issues of health information privacy aimed at addressing the circumstances under which individuals are willing to allow their identified personal health information to be digitized. The research draws upon data collected through a survey of a nationally representative sample of over 1,000 consumers. The following article highlights their research.

It is undeniable that today, one of the most vexing obstacles to the digitization of healthcare is consumer concerns about the privacy of health information. The specter of personal health information being compromised is alarming: a nationwide Harris poll conducted in 2006 confirms that approximately one quarter of U.S. adults have significant concerns about the use of their health information. Consequently, even as breakthrough developments in technology offer unprecedented opportunities for improved access to digitized information, greater control over one's health, and the promise of personalized healthcare, they simultaneously pose a number of serious risks to the privacy of personal health data.

The visceral nature of consumer privacy concerns related to health information is not surprising, given the potential ramifications of loss in the health information privacy context that can include financial, social and psychological risks. However, offsetting consumer privacy concerns are a number of significant benefits to be realized by the digitization of health information, including reduced medical errors, improved patient care and reduced healthcare costs. Less frequently cited benefits include improved tracking of drug safety, facilitated research and development of new drug treatments, contribution to public health research, and increased consumer control over healthcare.

Given that the social and individual benefits of collecting granular medical data are considerable, it is important to gain a detailed understanding of exactly what constitutes consumer privacy concerns. An accurate assessment of consumer privacy concerns which incorporates the appropriate situational factors and emotion is essential to facilitate the development of appropriate programs and messages to effectively educate consumers on the benefits of electronic health records and other forms of digitized medicine. Moreover, armed with the knowledge of what influences consumer decision making with regard

to health information disclosure, appropriate policies can be implemented to ensure rights are not violated when consumers are at their most vulnerable.

We conducted a study aimed to address the following question: under what circumstances are individuals willing to allow their identified personal health information to be digitized? Using a nationally representative sample of over 1,000 consumers, we measured individual willingness to disclose personal information under 27 different scenarios created by varying the type of information, the intended purpose, and the requesting stakeholder. Further, we explored the impact of emotion linked to one's health condition on willingness to disclose.

Our analyses reveal a number of intriguing findings. A particularly striking result relates to the influence of negative emotion on individual willingness to disclose personal health information (PHI). Individuals who feel sad, angry and anxious about their current health status are more willing to provide access to their PHI and are, thus, more vulnerable to opportunistic requests for their information. Individuals are also unable to fully comprehend the extent to which a negative diagnosis and the associated emotion may influence their privacy decisions. This is termed an "empathy gap". At a societal level, the findings related to emotion and the empathy gap in the health information privacy context, create difficult questions about the timing of consent which has very real policy implications. If people's judgments may vary with their emotions related to their health at a given point in time, should consent be sought at every interaction with a healthcare professional? If an individual is unduly influenced by emotion, they may make a decision which they may regret at a later point in time at which point the damage could already be done if private information has already been disclosed to an unintended entity.

Our findings also indicate that situational factors influence consumer willingness to disclose PHI. Consumers seem particularly concerned about sharing information with the government/public health agencies as opposed to hospitals and pharmaceutical companies. Relatedly, a striking finding revealed that trust in the electronic



medium is more important when a request is made for research purposes than when a request is made for marketing or patient care purposes. It is unsurprising that our findings also indicate consumers are most willing to share information with hospitals and for the purpose of patient care. However, significant benefits stand to be gained from the digitization of health information for research and it is unlikely that all of that research can be conducted by hospitals. Our findings suggest that there may need to be more assurance of privacy and trust built in governmental agencies and pharmaceutical companies before consumers become comfortable with sharing information with such stakeholders

There is little else that is as consequential to an individual as his or her own health. As healthcare becomes increasingly digitized, the promise of improvements enabled by technological advances must inevitably be traded off against any unintended negative consequences. There is much value that be realized in drug discovery, medical research, and public health policy if consumers are willing to allow their health information to be electronically stored and manipulated.

The complete research briefing can be found at:
<http://rhsmith.umd.edu/chids/research/researchbriefings.aspx>

CHIDS Featured Researcher, Dr. Gordon Gao

Interviewed by Kenyon Crowley

How can investment in information systems boost efficiency and quality in healthcare? What are the mechanisms needed for these investments to take maximal effect? These are the types of questions Dr. Gao is answering with his research as part of CHIDS. Why conduct research on healthcare? "Healthcare is so important ... if you look where in the next 10 years IT will have the biggest impact it is in healthcare. IT has already transformed other industries finance and manufacturing...now in healthcare there is great potential for IT to play a transformational role."



Dr. Gao began his professional career with Compaq after completing his B.S. in Electrical Engineering and Economics. He has an MBA from the MIT Sloan–Tsinghu Joint International Program, and received his PhD in Information Systems, Strategy and Economics from the Wharton School at the University of Pennsylvania. Dr. Gao

joined The Robert H. Smith School of Business in 2005.

Dr Gao's research interests include the business value of IT in healthcare and innovation. He studies how investment in information systems helps boost efficiency and quality in healthcare, and the mechanisms needed for investment to take effect. An example of this work is found in his current study working with Children's National Medical Center (CNMC). CNMC is replacing all paper-based notes with digital notes. Dr. Gao, together with Professor Ritu Agarwal and PhD candidate, JM Goh, have been conducting analysis of how daily routines have been disrupted by the new technology of Computerized Physician Clinical Documentation (CDS). The research is providing insight how hospitals can quickly adjust to new routines to make full use of investment in technology. CDS is having a big effect on the timeliness and efficiency of daily operations. It is a significant change for an organization as healthcare providers are unaccustomed to this new way of doing business. People usually treat healthcare as a "black box... you put something in and get something out..." Dr. Gao hopes to "open the black box to see what are the underlying mechanisms are and determine factors that affect your return.

Another area of Dr. Gao's research involves quality and transparency in healthcare. Asked why this interests him, Dr. Gao replied "When I moved here [Washington, DC] two years ago I did not have any information on which doctor is good or bad. "When choosing a hospital to do a surgery it is very hard to choose. I am looking for a way to resolve the information asymmetry problem in healthcare." The [federal] government has done work to make quality more transparent, such as with the Hospital Compare initiative, www.hospitalcompare.hhs.gov, however market-wide information is not complete or easy to access. His research in this area to date has focused on quality disclosure of hospitals in California and in a voluntary reporting environment, and understanding what is driving the decision to report quality data.

When asked about what do you hope will be the results of his research, "I hope the research is far-reaching and has long lasting effects. For example, looking at the business value of IT in healthcare— we look at those things that can help hospitals optimize their IT investments....turn money into tangible and intangible benefits —efficiency and quality." Also, Dr. Gao hopes the research may facilitate more competition in healthcare. "Healthcare is heavily criticized ... You cannot shop around or compare... There is no competition as we see in other industries...By figuring out how to best disclose hospital and doctor quality this will help patients make informed decisions"

However, Dr. Gao respects the differences between healthcare and traditional commercial businesses. “Healthcare is very emotional, with issues of equality and social value, We cannot just regard hospital as a profit maximizing entity — there are a lot of things to do to maximize profit but you cannot do all of these in a hospital, we must be very careful about applying business models from other industries to this very special industry.”

Regarding Dr. Gao’s future areas of interest, one area identified as being of high interest is the interaction between patients and doctors. “The Internet empowered patients with information and made patients more knowledgeable — now they do not treat doctors as gods as before but rather more like consultants. This will have some interesting implication for the relationship.” For example, how healthcare is delivered—do you get advice at the doctor office’s or do you meet doctors on social networks? Also, it is harder curing disease than preventing disease — “how do we move from disease care, which is predominantly what exists now, to health care.”

Outside of research and teaching, Dr. Gao enjoys reading books, playing the flute, taking pictures and most of all, playing with his daughter, Jennifer.

Driving Public Health in Rural India:

Arogya-CHIDS-iBharti health Collaborative Project

By Jiban Khuntia, PhD Candidate

In August 2008 CHIDS completed an assessment of a voluntary, participatory and local community driven health non-profit organization – the Arogya Foundation of India. CHIDS is working closely with this not-for-profit organization with the goal of promoting the advancement of rural health care and enabling villages to become self-dependent in health. Arogya Foundation operates through a cadre of field workers (Arogya Sevikas) who collect data related to the health status of the rural community within which they work. Arogya workers may also perform other functions such as connecting villagers in need with appropriate health care facilities. The data collected by Arogya workers is currently stored in paper-based forms and is largely utilized at the local level. The current project seeks to also understand how the local level data can be synthesized and used for disease surveillance purposes.

The collaboration with Arogya Foundation has a multi-year objective in several areas: to work with the foundation in incorporating increased digitization in their activities, to

document and evaluate improvements in health outcomes in areas served by the Foundation; and to enable the Foundation to take advantage of recent developments in information technology to enhance their activities. The successful completion of the first phase of this project builds the collaborative capacity to proceed towards the substantial plans for the project in the future. We are also seeking funds to support this project in several areas.

Phase I Report can found at:

http://www.rhsmith.umd.edu/chids/pdfs_docs/WorkingPapers/ArogyaProjectReport-FirstPhase_9-15-08.pdf

Health 2.0 Research at CHIDS

By JM Goh, PhD Candidate

The convergence of Web 2.0 and health has created a new wave of health services known as Health 2.0, leveraging Internet-based services such as online communities, blogs, twitter and other social media applications. With an increasing number of individuals using these applications, Health 2.0 has the potential to create significant social value and perhaps alleviate a few challenges that healthcare faces.



Our Health 2.0 research agenda has been developed using a multi-level, three-pronged, stakeholder approach. The key stakeholders are patients, physicians and startups. First, from the patient’s perspective, our primary objectives are to determine the value generated through participation and to understand the mechanisms through which Health 2.0 applications can empower patients and improve patients’ health outcomes. Second, we aim to understand the impact and ways through which Health 2.0 applications such as online physician communities can be helpful to physicians. Third, startups are emerging in this area and it is critical to examine the ways to ensure sustainability in this relatively new industry.

CHIDS has embarked on several new research projects in this area. One of the recent projects in this stream of work is to examine how Health 2.0 can alleviate problems of health inequities and improve health literacy via information transfer in online communities.

CHIDS has been at the forefront of Health 2.0 development. The successful completion of our prior project affirmed CHIDS’ continued commitment to uncovering ways through which Health 2.0 technologies can be developed for improving healthcare.

What is Comparativeness Effectiveness Analysis?

By Kislaya Prasad, PhD

An integral part of the current push to reform healthcare is an emphasis on comparative effectiveness analysis. A sensible approach to cutting costs, it is argued, is to find out what treatments actually work (a departure from a mindset which assumes that newer – and, typically, more expensive – treatments are better). Comparative effectiveness analysis seeks to quantify the benefits of a therapy relative to a baseline. A closely related approach to the choice of treatments is cost effectiveness analysis. The question here is the following – relative to the baseline treatment, what are the incremental benefits that accrue from an additional dollar spent on the new treatment?



Consider, for illustration, recent studies regarding the widely used coronary stents. The COURAGE trials (NEJM, 2007) compared patients with stable coronary artery disease who were randomly assigned to receive drug therapy alone or drug therapy together with the placement of a coronary stent (percutaneous coronary intervention, or PCI). After more than four years of follow up, it was determined that there was little difference in “outcomes” for the two groups. This is definitely true if outcomes are taken to be death or heart attacks, although quality of life improved somewhat (for instance, because patients suffered milder symptoms of heart disease). In practice, it is typical to adjust life years for quality to obtain a measure of benefits of a treatment – in the jargon, QALYs. So how do we approach the question of whether stents are cost-effective? Weintraub et al. (Circulation: Cardiovascular Quality and Outcomes, 2008) examine the cost-effectiveness of PCI. The added cost of drug therapy plus PCI, relative to drug therapy alone, is approximately \$10,000, and the incremental cost of an additional QALY gained turns out to be in the range of \$168,000 to just under \$300,000. This is useful information for decision-making.

Cost-effectiveness analysis is sometimes controversial (raising in peoples’ minds the specter of bean-counters deciding treatment rather than physicians). In a world without resource constraints we might permit ourselves the indulgence of ignoring costs. When resources are scarce, the decision to use resources in one way (PCIs, say) necessarily means that we cannot use them in other ways (e.g. primary care for poor children). It is hard to imagine a sensible way of making choices between healthcare

alternatives that ignores cost-effectiveness information. A recent blog in the New York Times, by Uwe E. Reinhardt, (<http://economix.blogs.nytimes.com/2009/03/13/cost-effectiveness-analysis-and-us-health-care/>) suggests that the focus on comparative, as opposed to cost, effectiveness analysis in ARRA is a nod towards the politically charged nature of the debate.

In the end, for reasons outlined above, society can only gain from a careful and systematic application of operations research to healthcare. CHIDS has developed considerable expertise in cost-effectiveness analysis. Faculty affiliated with CHIDS have extensive research and consulting experience in the area of cost-effectiveness analysis. Stay tuned for more on the several new projects we are in the process of initiating.

For more information on CHIDS Comparative Effectiveness research, please contact us as: chids@rhsmith.umd.edu

Research Updates

This past year CHIDS researchers have been working on two projects funded by the Agency for Healthcare Research and Quality (AHRQ).

“Personal Health Information Management and the Design of Consumer Health IT” focuses on understanding the practices used by individuals as they manage their personal health information, and the challenges they face in doing so effectively. The overarching goal of the study is to establish a foundation and action agenda for the integration of patients’ personal health information management in order to influence the design of patient-centered health IT. These principles will allow designers to understand what type of health IT interventions make sense for different types of health information and for different types of consumers. CHIDS is working on this project in partnership with Insight Policy Research, Inc., and Westat, Inc. The CHIDS team has just completed an extensive background report summarizing the existing knowledge in personal health information management and the tools used to support it. This report also identified gaps in understanding and lays out an agenda for future work. The report is due to be released in June 2009.

“Impact of an Office-Based e-Prescribing System on Prescribing Processes and Outcomes” project. Electronic prescribing (eRx) has been extensively discussed as an important health IT to aid in medication management, patient safety, and practice efficiency. Yet, its diffusion into medical practices has been limited. CHIDS researchers have been working with a team from Brigham

and Women's Hospital and Harvard Medical School to understand current use of eRx technology in ambulatory settings, the barriers and obstacles faced in implementing this technology, and the changes in workflow for physicians, office managers, nurses, etc. caused by it. The research team gathered data through focus groups, interviews, and site visits to gain a detailed understanding of physicians' attitudes towards the technology and what they viewed as the benefits and drawbacks. Findings from the first phase of the study are currently under peer review.

Featured Research Partner



Over 110,000 members strong, Inspire partners with the most respected health nonprofits to provide online health and wellness communities in which patients, families, friends and caregivers connect with one another for support and information using its proprietary technology. The communities, each designed and branded for an individual nonprofit and built free of charge, offer each organization's patients and caregivers safe, secure ways to communicate with other like-minded individuals—and to access high quality information provided by the nonprofit.

Launched by Founder & CEO Brian Loew in 2005, Inspire has grown to include over 60 dozen non-profit partners that include the National Infertility Association, United Cerebral Palsy, National Osteoporosis Foundation, Lung Cancer Alliance, National Organization for Rare Disorders (NORD), ALS Association, Ovarian Cancer National Alliance, National Cervical Cancer Coalition and The Children's Inn at NIH to name a few. Inspire also partners with several for-profit organizations such as Discovery Health and U.S. News & World Report.

Inspire's proprietary technology also allows its pharmaceutical and biotechnology partners to reach individual community members who elect to take part in highly-targeted online public health and other surveys or to receive information about clinical trials. The Inspire model provides a platform on which to build long-term relationships with pharma companies across the full product lifecycle - from early research to clinical development through commercialization and marketing. Targeting in the pharmaceutical market is a huge challenge - of the approximately 50,000 clinical trials currently underway in the United States, 80 percent are delayed at

least a month because of low enrollment. Due to FDA and HIPAA regulations, recruiting precise populations of patients is expensive and time consuming. Inspire offers a scalable, customizable solution to overcome some of these barriers while maintaining privacy and connecting patients who opt-in to take part in clinical research.

CHIDS research with Inspire seeks to understand the dynamics of this emerging industry and answer how we can make health 2.0 communities more valuable for patients, clinical partners, researchers and other stakeholders – ultimately improving health outcomes. See article, "Health 2.0 Research at CHIDS" on page 6 of newsletter for more on CHIDS research interest in this domain.

More information on Inspire may be found at:

www.inspire.com

Emerging Research Focus Area: Health IT Use in Long-term care and Post-acute care

Every day, almost 6,000 Americans turn 65 and by 2030 there will be 71 million of these older adults. Approximately 80% of this population live with at least one chronic condition. Long-term care and Post-acute care (LTC/PAC) is one of the rapidly growing areas of the healthcare industry. It currently accounts for about 10% of all medical expenditures—or \$125 billion!

Discussions of health IT to date have tended to focus on acute-care and practice settings and have largely ignored the Long Term Care industry. In recognition of the importance of this domain and the fact that it contributes significantly to the national healthcare bill, there is a groundswell of interest in this domain. AHIC published the Long-term care assessment gap at the end of 2008 and the Certification Commission for Health IT launched a Long-term care spectrum task force in April 2009.

CHIDS has initiated research to understand the role of HIT and its value potential in the long term care segment of the healthcare system. Our research agenda includes investigation of the state of adoption of HIT in LTC/PAC and the development of a methodology for evaluating the progress, utilization, and impact of information technology systems in the LTC/PAC environment. A baseline assessment of HIT in LTC/PAC will enable Phase II in which we plan to test the relative clinical effectiveness of HIT in LTC/PAC. We foresee a wide range of interesting avenues for research, including potential development of a specialized network.



CHIDS Mission

To improve the practice and delivery of healthcare by offering researched solutions surrounding the introduction and integration of information and decision technologies into the healthcare system. CHIDS' research focuses on applications and processes that impact safety, quality, access, efficiency and return on investment.

Overview

The Center for Health Information and Decision Systems (CHIDS) at the Robert H. Smith School of Business, University of Maryland is an academia-led effort with collaboration from industry and government affiliates, designed to research, analyze, and recommend solutions to challenges surrounding the introduction and integration of information and decision technologies into the health care system.

Through mutually-beneficial partnerships, CHIDS is structured as a research and development center with the goal of conducting rigorous research, disseminating information, managing knowledge, and coordinating collaborations among concerned stakeholders. In addition, CHIDS serves as a focal point for thought leadership around the topic of health information and decision systems. Since its inception in 2005, CHIDS has been creating thought leadership around the implementation of information and decision technologies in the healthcare domain. CHIDS is designed to research, analyze and recommend solutions to challenges surrounding the introduction and integration of information and decision technologies into the healthcare system.

CHIDS draws on the expertise of the Decision, Operations and Information Technologies (DO&IT) department at the Smith School, the University of Maryland Medical Center, University Hospital, and other assets in the University of Maryland network. CHIDS offers the benefit of a world-class staff with hundreds of published manuscripts related to technology implementation, adoption, assimilation, workflow design, decision sciences, and value of IT. The DO&IT department includes Information Systems, Operations Management and Management Science disciplines and is staffed with over 30 professors and more than 30 PhD students and research assistants. The pool of talent, knowledge and expertise in DO&IT is acknowledged by several publications as a Top-5 performer in research production worldwide. The Information Systems group is ranked in the top-10 worldwide in *Business Week* and *U.S. News and World Report*.

Thank you for reading our newsletter! Forward it to a friend or colleague!!

CHIDS summary of major healthcare provisions in the ARRA of 2009 ("stimulus bill") can be found at:
http://www.rhsmith.umd.edu/chids/pdfs_docs/news/Major_Healthcare_Provisions_ARRA_3-13-2009.pdf

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- ★ Quarterly updates on key HIT activities
- ★ Participation in bi-annual conferences

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Upcoming Event



UNIVERSITY OF
MARYLAND

ROBERT H. SMITH
SCHOOL OF BUSINESS

10th Annual CIO Forum

Web 2.0 and Beyond: Where will the Internet Take us Next?

The new generation of Web 2.0 technologies such as social networking and online communities is now squarely entrenched in the mainstream. These technologies are rapidly transforming the face of business and commerce, how the government and public institutions engage with the citizenry, and how healthcare is managed, accessed, and delivered. From peer-to-peer lending, to online product reviews, to political campaigns being orchestrated on the Internet, to virtual patient communities that allow consumers to manage their own health and well-being, examples of this transformation can be seen in every sector of the economy. The American Recovery and Reinvestment Act of 2009 has allocated significant investments for a techno-centric economy of the future. However, despite their promise, these technologies are not without risk. Businesses and policy makers have to manage them wisely to leverage their value and avoid pitfalls. How do technology and strategy executives navigate this new landscape? What does Web 2.0 mean for consumers and society? Join leaders from government, the healthcare industry, and other sectors of the economy to discuss Web 2.0, its evolution, impact, and the future.

Friday, November 6, 2009

8:30 a.m. to 4 p.m.

Van Munching Hall

<http://www.smith.umd.edu/cioforum/>

Hosts

Center for Health Information and Decision Systems (CHIDS)

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