Introduction

Before I begin, let me just say how good it is to see the strong leadership and overwhelming support in the industry. There are so many people and organizations leading this effort that there should be little doubt that real change is underway. If everyone in America came to HIMSS, they would see this remarkable progress first-hand.

We all know that health information technology has deep roots going back 30 years, but President Bush started off this current phase a little more than a year ago, and he hasn't stopped. He spoke about health information technology nearly 50 times last year, and already has done so 3 times this year. The new Secretary of Health and Human Services, Mike Leavitt, is making health information technology a major priority for the Department. He is an articulate and thoughtful leader who sees the power of information technology in healthcare.

Many factors have converged to give lift to the health information technology movement. Philanthropies such as California Health Care Foundation, Robert Wood Johnson, the Markle Foundation, and many others have provided not just funding, but leadership, expertise and passion. They are joined by two dozen leaders of federal agencies who are aligning health IT across the government – in particular, Jonathan Perlin and Rob Kolodner from the Department of Veterans Affairs, Bill Winkenwerder from the Department of Defense, Mark McClellan from CMS, Carolyn Clancy and Scott Young from the Agency for Healthcare Research and Quality (AHRQ), Elias Zerhouni from NIH, Andy Von Eschenbach from the National Cancer Institutes, and many others.

In the private sector, we have seen strong leadership from medical informatics, nursing informatics, and the medical and nursing professional societies – all of which see the promise of health IT. Scott Wallace and the Commission for Systemic Interoperability are working in a complementary manner with our efforts, and are on course to produce a report that will sharpen our focus on critical issues. Mark Leavitt and the Certification Commission for Health IT are working hard to get certification underway. So many other efforts have accelerated this year that I can't catalogue them here, but you have witnessed them at this meeting. I do have a special thanks to Steve Lieber, who invited me to speak with you all today. Thank you all for your time, passion and leadership.

Today, I want to talk about where we've been and where we – "we" as in all of us who are charged with bringing about a new healthcare industry – are going.

Context

Healthcare is a remarkable and unique industry. It is the only industry that gives days to our lives. Think about it – how many things can you buy or use that add to your time on Earth? Or that increase someone's pain-free, functional and productive days? Everyone knows the U.S. is getting older – longevity at birth has increased from 73 years in 1975 to 77 years in 2000. Some say this is a bad thing; that it's a challenge to our economy. I say this is good; it adds quality to our life and productivity to our economy. This is healthcare at its best.

Information technology plays a significant role in our progress. We know that information technology supports treatment choices for consumers and enables better and more cost-effective care. It does this by supporting and helping the caregivers and professionals who make a real difference in the lives of Americans. Health IT not only adds value to the way people lead their lives, but it gets more out of our investment in healthcare overall. Health IT can help the U.S. become more globally competitive – that is, it can increase our productivity and our standard of living at the same time.

We have not thought about health IT as a cost-effective form of therapy. Yet, the best evidence is that when it is used as intended, heath IT saves lives and saves money. A recent study showed that clinical information is frequently unavailable in primary care, and that this missing information can be harmful to patients. That study also showed that clinical information was less likely to be missing in practices that had electronic health records. This adds to the substantial evidence that health IT – such as computer-physician order entry, ePrescribing, preventative reminders, and bar code scanning to name a few – improves care, reduces wasteful and redundant treatments, and prevents medical errors. Little doubt remains about the health status benefits of health IT.

Health IT will transform the way Americans regard their health and the way they participate in healthcare. The important aspect of health IT is not software and computers – it is physicians making better treatment decisions, nurses and pharmacists delivering safer care, and consumers making better choices among treatment options. It is the way people connect together across a fragmented delivery system – from physician offices to hospitals to skilled nursing facilities and even to the consumer's home. It is putting consumers in control of their health status, and customizing care delivery to meet their needs.

The past year

We have come a long way over the past year. I'm not just talking about my office – the National Coordinator for Health Information Technology. Look around you, and you will see who I mean when I say, "*We.*" I'm talking about healthcare and

health IT leaders in particular. We have witnessed and participated in a remarkable year by any measure. Here are just a few of the highlights:

Last year, President Bush highlighted health IT as an important priority for the Administration. In the 2004 State of the Union Address, he said: "*By computerizing health records, we can avoid dangerous medical mistakes, reduce costs, and improve care.*" In his April 27th speech, he laid out the Executive Order establishing the position of the National Coordinator for Health IT and announced his goal for most Americans to have interoperable EHRs in 10 years. As you know, we released the Framework for Strategic Action on July 21 – it presented four goals and 12 strategies for how we will achieve the President's vision.

Comment [lme1]: Shouldn't the SOU go first?

I'm was pleased that the President's first trip of the second term was to the Cleveland Clinic, where he talked to physicians and patients about the value of health IT. As you know, Secretary Leavitt came as well – he was on the job for only 15 hours when he made the trip. In Cleveland, the President reinforced his support for health IT by announcing that he was seeking an additional $50 million in FY05 and $125 million in FY06 to support projects in the National Coordinator's office.

In the 2005 State of the Union Address, the President again highlighted his commitment to health IT. The President placed health IT within an overall set of healthcare initiatives that include tax credits to help low-income workers buy insurance, community health centers in every poor county, expanded health savings accounts, and medical liability reform to reduce healthcare costs and improve access.

Over the past year, vendors have reported increased sales of EHRs, consultants have reported increasing engagements for healthcare business transformation, advocacy and research groups have produced dozens of reports on health IT, and policy organizations have sponsored countless conferences. Physicians and consumers have heightened their awareness of the value of health IT, and payers and purchasers are stepping up their efforts to support this transformation. This is a groundswell that is nation-wide, broadly supported and growing.

We have indeed come a long way this year, but there is so much more to be done if we are to realize the vision that the President and many of us have for a better healthcare industry.

Goals

As you know, we have articulated four overarching goals for health IT. Many of you have heard these, but I want to review them so that we can always keep ourselves focused on the basics.

Goal I: "Inform Clinical Practice." Informing clinical practice is fundamental to improving care and making healthcare delivery more efficient. This goal centers around efforts to bring electronic health records directly into clinical practice. These tools will reduce medical errors and duplicative work, and enable clinicians to focus their efforts more directly on improved patient care.

Last year, I visited Providence Medical Center in Portland Oregon where I saw how doctors and nurses used electronic health records. I visited a hospital ward, where I watched a hospitalist show an MRI image to a patient in traction after a car accident. He did it at the bedside using a wireless tablet computer. Another doctor showed me how he was able to prevent an unnecessary hospitalization because he could access critical information through the EHR when he was on call for his colleague.

This transformation is happening everywhere. I was walking down the hallway at HHS when a clerical person timidly approached me and asked if we could speak. She nervously said that she just visited her physician, who showed her her entire medical record on a computer, and who wrote prescriptions that went right to the pharmacy. She said "I wasn't too sure what all of you people where doing here, but now I know. Tell them upstairs that this is important stuff". We want to see a flood of experiences like this everywhere, every day and for every patient.

Goal II: "Interconnect Clinicians." Interconnecting clinicians will allow information to be portable and to move with consumers from one point of care to another. This will require an infrastructure that can help clinicians get access to critical health information when treatment decisions are being made.

I recently visited a project that is demonstrating the value of regional interoperability and health information exchange. The project is called the Central Appalachian Health Improvement Partnership (CAHIP), and is based in Kingsport, Tennessee. This region has some of the most challenging health status indicators in the nation. I visited this group and spoke with major stakeholders, including local health plans, physicians from medical groups and hospitals, local business leaders and employers, as well as consumers. The group is working toward implementing electronic health records with decision support capabilities and health information exchange across their region. They

are doing it together, and are accomplishing things that none of them could do alone.

Goal III: "Personalize Care." To personalize care, consumer-centric information is needed that can be used to manage wellness, assist with personal healthcare decisions, and choose providers.

Last December, I visited Evanston Northwestern Healthcare System in the suburbs of Chicago and spoke with consumers who were using the medical group's new patient portal. One person, a fifty-four year old male who takes a cholesterol-lowering agent, told me how he uses the portal to monitor his quarterly cholesterol and liver function tests. He told me how convenient it was for him to communicate with his doctor using secure messaging, and how he was able to get his questions answered without having to come in for an appointment. He described how it allowed him to ask the right questions and to be in control of his healthcare.

Goal IV: "Improve Population Health." Population health improvement requires the collection of anonymous, timely and standardized clinical information that can support reporting for public health monitoring, bioweapon surveillance, post-market adverse event tracking and quality benchmarking.

Urgency

There has been great progress in the past year, and many are optimistic about the future of health IT. However, there is much more to be done, and we have to work to address real issues and barriers that will halt the remarkable progress that is being made.

First… is an adoption gap. My concern is not low EHR adoption, but variable EHR adoption. Clinicians are indeed using EHRs today, but some clinicians are adopting EHRs more readily than others – creating an adoption gap based on the size of practice. This could prevent market forces and competition from improving healthcare. According to a Commonwealth study, 57% of large group practices of 50 or more physicians are using an EHR, but only 13% of solo physicians are doing so. Larger practices – by their very largeness – have more resources, more ability to acquire information technology and more capacity to mitigate risks. Their investment in EHRs is strategic, intended to shift the market toward them. I am very proud of the innovative, risk-taking early adopters who have led the way in EHRs. They should be recognized for their leadership and not faulted for their inventiveness. However, if we believe that EHRs improve health status – as evidence says they do – then we have an obligation to level the playing field so that all practices and hospitals can adopt these life-saving tools. As part of this, we need to recognize that solutions that work for large practices and hospitals, such as pay-for-performance, may not help small

physician offices in their efforts to adopt EHRs and improve practice performance. We have to develop solutions that assist EHR adoption up and down the spectrum of care delivery organizations.

Second… is proprietary data. Proprietary boundaries are growing around health information, at the same time that talk about interoperability has become commonplace. Enterprise investments in non- or semi-interoperable information systems make strategic assets of health information silos. This will limit the way health information is used to promote consumer choice and to streamline population health improvement.

American consumers understand this, and are taking matters in their own hands. A recent survey by AHRQ with the Kaiser Family Foundation and the Harvard School of Public Health found that nearly 1 in 3 people say that they or a family member have created their own set of medical records to ensure that their healthcare providers have their medical information. Interoperability must be addressed now, or else widespread adoption of stand-alone EHRs will be a fait accomplis. If interoperability is not solidified and built into EHRs, a generation of investment will be lost as will an opportunity for fundamental improvement in care delivery.

Third… is privacy and information control. Privacy is of critical importance. Everybody wants it; many fear it, whether you're talking about information technology or paper. Paper medical records are difficult to secure and keep private – records can be left unattended on people's desks, inadvertently placed in the trash, or transported among clinician offices via taxicabs or other couriers. Even when they are in secure facilities, it is not possible to restrict viewers to only the information that they need to see to do their work. We rarely can identify when privacy of paper records has been compromised.

Information technology can provide a secure environment to protect patient information. Electronic records have strict security measures in place to prevent misuse or unauthorized access by using audit trails, access permissions and viewing restrictions. But, concerns about privacy go far beyond technology. We are having a debate about privacy of health information in the United States, and we need to explain to the American people why electronic systems are preferable to paper. Beyond this, we need to be disciplined about developing the business rules, policies and protections that get consumer health information where they want it – immediately – and keep it from going where they don't – ever.

We do not have much time, and we need to address these barriers to get the kind of change that we want.

Solutions

We've looked at what is being done and where we're going. Now, let's discuss how we're going to get there. Here is what to look for from the National Coordinator during this coming year.

This year, we will release a complete Strategic Plan, as called for in the President's Executive Order. This will build upon the Framework for Strategic Action by providing detailed plans and critical steps for who, how, and what will be required to implement the President's vision. This Strategic Plan will be a guide for key stakeholders in the private and public sectors. In the short term, we are focusing our efforts on the building blocks of EHR adoption, interoperability and streamlined Federal health information systems. We have prioritized these building blocks because they enable the private sector institutions and public organizations that foster a market-based solution, and because they are foundational for downstream efforts like personal health records and state-of-the-art biosurveillance.

EHR Adoption

Let's talk first about EHR adoption. EHRs must be in physician offices, hospitals, and other clinical settings and used routinely by clinicians. Without EHRs in place, there is little chance of gaining significant improvements in quality and cost-effectiveness and of unifying the clinical process around the consumer. We are looking at how we can continue to lower the risk of EHR investments and support their adoption, particularly for smaller practices and hospitals.

The Certification Commission for Health IT (CCHIT) is on track to develop a standard for EHRs in ambulatory settings by summer 2005. This is a multi-stakeholder group that exemplifies the very best of private sector leadership – broadly supported, transparent and deliberative, yet urgent and narrowly focused. The work of the Certification Commission is critical to physician and hospital buyers who want to know what product to buy, to established vendors who want to grow their markets, to new technology innovators who want to offer a module within a broader solution, to investors who want to know where to put their capital, and to policy-makers who want to make sure that public funds are invested wisely. About the only people who don't benefit from the Certification Commission's work are pro-regulatory zealots who would rather have the government make new rules for the industry.

Interoperability

What do we do about interoperability? Stand-alone EHRs, even if widely adopted, will not deliver the error reductions, cost savings or marketplace changes that we seek, and could even shift the market toward more fragmentation. The capacity to share clinical data is not generally available in the market, and I have placed a high priority on ensuring that it does come to exist before widespread EHR adoption is underway. Ubiquitous sharing of patient-specific clinical information will require technical capacity and operational management that needs to be developed.

Guidelines are needed to support day-to-day operation of data access and data protection, and plans are needed that support EHR implementation, clinical improvement and sustainable financing. The federal government has supported the start up of regional organizations – you know them as RHIOs – by awarding more than $139 million dollars in grants and contracts to regional projects that support the adoption of health IT and the exchange of health information. Colorado, Indiana, Rhode Island, Tennessee and Utah all received federal funds to support statewide health information exchange efforts. More than one hundred first generation RHIOs have been developing across the country, and several of these efforts are statewide. Florida, Wyoming, New Jersey, and Minnesota have all introduced legislation to support the formation of RHIOs. I was just in West Virginia, where newly elected Governor Manchin gave his State of the State address and announced his plan for forming a statewide RHIO this year to help improve the health status of West Virginians. He asked me to tell other states, "If West Virginia can do it, so can everyone else".

EHRs must be connected and have the support systems and technical capacity to transmit and receive information from other devices and applications in a secure and intelligible manner. This means developing the security, authentication, authorization, identification and data location systems that can be cost-effectively deployed on a large-scale basis. As you may know, we published an RFI in mid-November that asked questions about whether and how a National Health Information Network could be developed. We received over 500 responses to the RFI, and have convened a government-wide RFI Review Task Force. This Task Force is comprised of over 100 people from 17 agencies, including the Departments of Homeland Security, Defence, Veterans Affairs, Treasury, Commerce, Health and Human Services, as well as multiple agencies within the departments. All of the HHS operating and staff divisions are represented on the Task Force. We even have NASA and the US Postal Service involved in this effort. The Task Force will produce a public summary and meta-analyses of the RFI responses to inform policy discussions inside and outside the government. We know that the RFI stimulated substantial and unprecedented

discussions within and across organizations about how interoperability can really work, and we want to build on this during the coming year.

In terms of the RFI responses:
- Half of the responses came from consortia of vendors, associations, RHIOs, foundations, federal agencies, state government, providers, payers, system integrators and research organizations.

- The other half came from individual entities or organizations.

- To our knowledge, 22 respondents have publicly released their responses.

We are hard at work reviewing the 5,000 pages of responses. While we won't have this done for a few weeks, the following themes have become clearly visible:

- Standards. Interoperability standards and policies for the NHIN require immediate attention from the Federal government as well as public and private sector participants.

- Governance. There is a need for governance of the NHIN that protects the public's interest, particularly the interplay between the public and private sectors.

- Privacy. Privacy was on the forefront of nearly all responses, focused on how the NHIN should ensure that patients have control over who has access to their data.

- Regionalization. A regional approach to overseeing health information exchange was a consistent theme among responses, and there was widespread belief that the Federal government should not impose a one-size-fits-all solution.

- Financing. Responses discussed a variety of financing options, including a shared investment between the Federal government and private sector.

- Architecture. Many respondents recommended that the NHIN be a virtual network that leverages the public Internet. Security to ensure protection of patient data was almost universally mentioned.

- Regulation. Many respondents raised concerns about anti-inurement and anti-kickback laws, and also about state laws that prohibit certain types of information sharing.

My office will host an interoperability meeting this year that will convene stakeholders to address RHIOs and the NHIN. Meanwhile, we will continue to identify and fund proto-type RHIOs and develop a blue print for what the minimum requirements of a RHIO should be. We will work to develop and support prototypes and other efforts to advance progress toward an NHIN.

Streamlining Federal Health IT

The federal government is a major investor in health IT and understands the importance of collaborating with the private sector and of being interoperable in its own right. Federal leaders are committed to coordinating their health IT investments in order to reduce redundancy and achieve interoperability. I am placing a high priority on accelerating and broadening the work performed under the Federal Health Architecture (FHA) program as a primary means of streamlining federal health IT investments. We will be accelerating the work of the Consolidated Health Informatics Initiative (CHI) so that standards can be put into real use. CHI will continue to select standards in the domains that were not completed in earlier work, and will guide incorporation of standards into federal systems. CHI will also work with private sector efforts to ensure that a "standardized set of standards" comes into use.

Closing

Healthcare costs continue to rise, our population continues to age and the epidemic of medical errors is unabated. We have a long road ahead, but we have real urgency. We can't wait until the end to make the tough decisions to get the results we all want – we need to attack the core issues and barriers right now.

Health IT can enable transformation of healthcare by allowing a better way to care – consumer by consumer, physician by physician, disease by disease and region by region. Health IT has shown a challenged but resilient industry that there is hope for change, and that hope doesn't have to come from the top down, but from the inside out. Health IT is not just about better treatments for the ailing and ill among us, nor just for all of us who want to prevent or limit illness in its early stages. It is ultimately about treating the industry itself so that we can have not only the best science, infrastructure and professionals in the world, but also the best value, safety and productivity.

I look forward to working with you to accomplish this vision.