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Electronic Medical Records: Report of the 13 February 2003 Forum on Technology & Innovation

An emerging technology is rapidly capturing the attention of stakeholders in the U.S. healthcare system as a promising way to improve care while diminishing costs. Electronic medical records (EMRs) hold great promise in simplifying the maintenance and sharing of medical information while granting patients greater control over and familiarity with their personal medical information.

However, before EMRs can effectively permeate mainstream practice and fully benefit U.S. healthcare, the nation's policymakers must tackle a set of key issues. On 13 February 2003, four distinguished guest speakers—each related to some aspect of EMR development and deployment—came together to debate some of these issues before a group of congressional staffers on Capitol Hill at the **Forum on Technology and Innovation**, an initiative of the **Council on Competitiveness** chaired by **Senator Ron Wyden** of Oregon and **Senator John Ensign** of Nevada. This report summarizes these key issues and highlights important topics policymakers need to address.

Background

While the development and use of EMRs have coincided with the evolution of the personal computer, recent advances in database technology and augmented efforts to streamline and improve healthcare have resulted in increased attention paid to EMRs within the health policy arena. While not yet in widespread use, the few active systems currently in existence, such as that in use by the Department of Veterans Affairs, highlight the general benefits of EMRs.

More rapid and accurate diagnoses of conditions, along with fewer repetitive and costly exams, are just some of the benefits that can flow to doctors and patients having immediate, comprehensive knowledge of

13 February 2003 Tech Forum Speakers

Dr. Ross Fletcher, Chief of Staff of the Veterans Affairs Medical Center in Washington, DC, explained the beneficial uses of EMR technology and provided a demonstration of his Center's own system—one of the leading systems in use today.

Dr. William Stead, Director of the Informatics Center and Associate Vice Chancellor for Health Affairs at Vanderbilt University, showed a video demonstrating the potential of EMRs to engage patients in their own care and discussed leading technologies involved in the EMR development.

Peter Swire, Professor of Law at Ohio State University and former Chief Counselor of Privacy with the Office of Management and Budget, explained the legal structure underlying EMR privacy, and the importance of achieving and securing data flow within and between EMR systems.

Dr. Paul Ellwood, President of the Jackson Hole Group, discussed the promise of EMRs within the broader context of U.S. healthcare reform. Further, he described the Jackson Hole Group's health reform proposal, "Pathways to Healthy Outcomes."



medical histories. Additionally, use of EMRs can alert physicians to potential problems and automatically provide the latest evidence-based medical information on multiple conditions. On a broader level, EMRs can improve healthcare by introducing a new degree of accountability regarding physicians and institutions such as medical centers and pharmacies, as well as feeding cumulative databases that can be used by health researchers to examine disorder patterns and the effects of various treatment methods.

Key Issues

Despite the benefits of EMRs, Forum speakers discussed a range of critical issues that require resolution before the technology can roll out on a grander scale: privacy, economic incentives, technological challenges, and a regional vs. national rollout.

Privacy

Arguably the most important of these issues to the general public is the question of patient privacy. The use of EMRs raises concerns regarding who should have access to such records and whether the patient or care provider should be responsible for maintaining and transmitting records. The four guest speakers agreed that for the general public to trust this technology, the patient must be directly involved in regulating who has access to records.

Conversely, they also agreed that a successful EMR system must ensure a “perfect flow” of data. This concept essentially entails protecting the free flow of data from doctor to doctor or hospital to hospital in order to improve treatment and the overall public health system. This is consistent with the 1996 Health Insurance Portability and Accountability Act, as is the notion of closely guarding against data dissemination to other outlets without prior consent from the patient.

In addition to privacy protections addressed through legislation, the panel concurred on the imperative for EMR software to embed security and confidentiality protections from the ground up—as opposed to adding them in after basic software development, an option that Peter Swire argued may be too costly and could jeopardize overall EMRs utility. Along a similar line, the panelists expressed the importance of building into the software the capabilities to obtain de-identified data that can be useful in pattern research of aggregate databases. As the panelists discussed, maintaining personal privacy while using EMRs to evaluate broader issues (such as the nationwide effectiveness of treatments and programs) is possible under HIPAA guidelines—as long as EMR developers build in certain capabilities from the ground up, with support from tight legislation to guard against misuse.

Economic Incentives

Beyond the issue of patient privacy, the February panel also discussed the economic challenges of encouraging care providers to use EMRs. Citing the fact that EMRs use can reduce doctor visits by 50 percent, Dr. Ellwood argued that physicians using EMRs should receive compensation. He also supported the inclusion of clauses mandating the adoption of the technology within future drug or Medicare legislation. Admitting that such actions would involve the government becoming directly involved in the overhaul of U.S. medical care, Dr. Ellwood commented it may be very difficult to persuade providers to adopt EMRs if the decision is left solely to the marketplace—particularly at the individual practitioner level.

Technological Challenges—and the Rollout Strategy

Another key issue addressed at the February forum is system compatibility and whether EMRs systems should roll out regionally or nationally. Regarding this issue, Dr. William Stead noted commercially available software is not yet able to work well across different facilities. Therefore, as a first step, he recommended promoting regional demonstration projects—such as Dr. Fletcher’s system at the Veterans’ Affairs Medical Center. From the development of these regional systems, research undertaken to automate the data creation and link data from multiple providers could, in about three years, progress into a “next generation” of EMR systems compatible at a national level and reliant on automatic development technology that is more uniform and less influenced by differences between physicians or systems.

Conclusion

The development and deployment of EMR technology has the potential to improve health care while reducing health care costs. With close attention paid to privacy concerns, system compatibility, and incentives to adopt the technology, health policymakers can facilitate the expansion of EMR use in the United States and allow it to meet its potential.