American Health Information Community
Working Breakthroughs
November 29, 2005

Numerous approaches to accelerating the adoption of health information technology applications and making them interoperable have been proposed. Many reports, conferences, and projects across the country are working toward identifying breakthroughs that would shift the market toward widespread health information technology adoption. The breakthroughs listed below are not an attempt to summarize existing efforts currently under way or to evaluate them. Rather, this listing is intended to frame the core building blocks from which the American Health Information Community can select pathways for rapid progress.

We define a breakthrough as the use of health information technology that produces a tangible and specific value to the health care consumer and that can be realized within a 2-3 year period. Three categories of potential breakthroughs are consumer empowerment, health improvement, and public health protection. Potential breakthroughs are summarized in each category below.

<u>Consumer Empowerment</u>

Consumer empowerment breakthroughs will help individuals manage their health care and advocate for themselves as they use health care services.

My Personal Health Record

A personal health record gives an individual and authorized clinician immediate access to prescriptions, lab and test results, claims data, allergies, and other vital information. For example, an individual or the parent of a child with a chronic disease such as diabetes, asthma, or cancer could monitor routine health information and findings. Likewise, a health record for seniors would help coordinate the information about them among their families, institutions, and providers, allowing them to live in a more independent and healthy manner. Regardless of when and where the data are needed, the health information will be accessible to patients and those to whom they give access.

My Medication History

Most individuals do not know the specific medications and exact dosages that have been prescribed to them, and often do not know their allergies. In addition, clinicians do not always have consistent prescription information about the same individual. Too often, this results in errors or unnecessary treatments. A medication history would have all the current data in one location, available to the individual and to each authorized healthcare provider. The need for medication history was highlighted by the high interest in the KatrinaHealth.org web tool. Having a complete electronic medication list would also prevent drug-to-drug interactions when subsequent prescriptions are written.

My Health Record Locator

An individual's health information is in a variety of locations: multiple physicians' offices, clinics, and facilities such as a diagnostic imaging center. An electronic health record locator would help patients and their clinicians locate test results, medical history, and prescription data from a variety of sources. For example, a physician could use the locator to find out which other physicians have information on a patient he is seeing. A record locator would act as a secure health information search tool.

My Registration Information

Going to the doctor or hospital often requires filling out multiple forms. These forms collect information such as name, address, insurance, medications, allergies, etc. Then, when an individual requires lab work or other testing, the same information has to be collected again. A single electronic health registration will make it easier for individuals to give their information and for clinicians to use it. Additionally, the consumer could update the information once and share it with all providers immediately as needed.

Health Improvement

Health improvement breakthroughs will help physicians and hospitals deliver safe and timely therapy and keep up with medical advances and innovation.

 E-Prescribing

E-prescribing allows a physician to send a prescription instantly to a pharmacy electronically, checking for dangerous drug-drug interactions, allergies and formulary requirements. Handwriting for prescriptions will be a thing of the past and patients will not have to wait at the pharmacy or shuttle back and forth when there is a prescribing problem.

Quality Monitoring and Reporting

Payers now routinely require quality monitoring, yet providers do not have a standardized means of collecting this information and sending it to the relevant entity. Also, consumer ratings and clinical performance measures about physicians and hospitals are difficult to find, understand, and use in decision-making. Automated quality monitoring and reporting will foster data collection and reporting that is low cost, timely, and standardized. This will lower the cost to providers of quality reporting and will enable consumers to have access to

comparative data that helps them make informed healthcare choices when choosing a health plan or hospital.

Chronic Disease Monitoring

Whether a person has diabetes, asthma, or a weight problem, automated tools that support the collection and transmission of health status information can help reduce the morbidity and consequences of chronic diseases. Information tools can help collect and report symptoms or side effects, as well as assist in understanding what mile-markers are achievable and necessary. Additionally, the doctor can monitor progress and make suggestions or adjustments as needed.

<u>Public Health Protection</u>

Public health protection breakthroughs allow for monitoring and management of public health threats that result from episodic or unexpected events that affect whole populations.

Biosurveillance and Pandemic Surveillance

While a major public health event has not occurred in the United States for decades, the threat of a broad natural or man-made health threat remains a possibility. The ability to detect these events early and then to manage them and mobilize national and local resources can save lives. Information from hospitals, other providers and ancillary facilities can be electronically reported and monitored without identifying the patient, and shared with local, state, and federal public authorities to support these national preparedness needs.

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Electronic Health Record

An electronic health record will give a clinician direct access to a person's medical history. It would allow the provider to electronically manage all aspects of patient care, enabling the provider to retrieve/capture data for treatments in an effort to support provider-patient activities such as review, encounter, and follow-up. In addition, electronic health records allow patient data to be accessible at multiple locations. Possible benefits of an electronic health record include improved health maintenance, disease management, and error reduction in clinical decision support.

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Childhood Immunization Record

A child's immunization record has to be readily available for a variety of reasons: the beginning of the school year, going to camp, or preparing for overseas travel. This often requires a special trip to the physician office, just to carry paperwork across town. Having the immunization record digitally accessible would provide the most current information with minimal hassle in retrieving the information.

Employee Empowerment Tool

Employers are trying to partner with employees to help maintain a healthy workforce and keep healthcare costs down. An employee empowerment tool would allow employees to have access to their health information and claims data to help them manage their own illness or their health savings accounts. These tools would also provide links to other relevant tools that would allow employees to educate themselves about wellness and their specific diseases.

Public Health Protection

Public health protection breakthroughs allow for monitoring and management of public health threats that result from episodic or unexpected events that affect whole populations.

Emergency Information Network

Many people arrive at emergency rooms without their medical histories. Likewise, whole populations can be displaced by disasters that require them to be treated in emergency shelters that are far from home. In both instances, it is often difficult for patients to remember their critical medical information that can save their lives. An emergency information network would ensure that relevant information follows Americans as they seek care in emergency circumstances.

Biosurveillance and Pandemic Surveillance

While a major public health event has not occurred in the United States for decades, the threat of a broad natural or man-made health threat remains a possibility. The ability to detect these events early and then to manage them and mobilize national and local resources can save lives. Information from hospitals, other providers and ancillary facilities can be electronically reported and monitored without identifying the patient, and shared with local, state, and federal public authorities to support these national preparedness needs.

Adverse Drug Event Reporting and Notification

Monitoring new drugs for adverse drug events requires significant information gathering and investigation that can be time-consuming. But, early detection and notification of physicians and consumers can prevent unnecessary illness or death from newly emerging side effects of drugs. Currently there is no system in place to collect the information needed to monitor adverse events or to notify providers or patients of a drug finding. An electronic monitoring and notification system would detect potential problems and alert federal authorities and physicians, and they could notify patients when the problem is verified. Individuals could also use this notification system to report any symptoms or side effects they may be experiencing possibly related to the recall