

The Quest for a Paperless Healthcare System

As healthcare costs continue to climb and the delivery system struggles with reducing medical errors and improving quality, an improved information system infrastructure with real time enterprise computing may be the way to simultaneously solve these problems. Healthcare as well as all the life sciences are evolving rapidly, driven by the enormous amounts of data generated in patient treatment, clinical trials and new drug discovery processes. This data serves as the foundation of modern healthcare delivery and the intellectual capital source of the life sciences enterprise.

Traditional information systems applications have been based on the long-term accumulation of data, using a passive style of information management, much based on paper records. The goal in the past has been to archive information for later use. Rarely has the process of building information systems been focused on data integration with an intensity that would facilitate using the data to influence the core business processes of the healthcare enterprise in real-time.

A truly paperless system would result in:

- ❖ Fewer untoward events and reduced professional liability costs
- ❖ Improved staff productivity
- ❖ Better allocation of internal and partner resources
- ❖ More active and satisfied patients
- ❖ Better cash flow and fewer lost transactions and payments
- ❖ Integration of the “e-environment” of employers, providers, patients and payors
- ❖ Tracking and documenting emerging clinical trends threats (risks)
- ❖ Real-time management review and iteration of decisions
- ❖ Improved clinical research and less costly discovery of new interventions
- ❖ Better compliance, safety and faster regulatory approval

Imagine a healthcare system where:

1. Clinical data is captured by a hand-held “workpad” at the point of care
2. All services are coded immediately and captured electronically as:
 - a. Transactions
 - b. Documents
 - c. Images
3. All data is moved into a central repository, security stamped for HIPAA and audited if changed
4. Linked to other administrative, clinical and financial data flow from each delivery chain partner: employer, payer, healthcare provider, facility, patient and regulator—electronically
5. All financial transactions are immediately tested against the adjudication rules of each payer—electronically
6. Auditing and security are as pervasive as in the financial services industry

7. Payment is electronic and immediate: within 7-30 days for 99% of all transactions
8. Quality of care is demonstrably improved and untoward events are drastically reduced due to rigorous error checks and the use of effective clinical protocols and evidence-based medicine.

Clinical care and research would be transformed as a result. The technology is no longer the barrier. Sufficient computing power and transmission capability are now available. Telecommunications bandwidth has increased exponentially. Transmission speeds now exceed one million bits per second, up from 19,000 five years ago. Improved connectivity means management cooperation and new methods of planning are possible for the healthcare enterprise in ways that were unimaginable ten years ago. Similarly, speeds of processing and storage capabilities have increased exponentially. The barriers to a paperless healthcare system today are human. The slow pace of standard-setting, the cultural bias to paper, the legal hurdles of a digital record, and the lack of synergistic financial incentives between providers and payors all work to frustrate the movement to a virtual healthcare system.

A renewed and thoughtful strategy to deal with each of these barriers is needed to transform healthcare. Also a coalition of forces focused on the paperless healthcare system is needed to hold all stakeholders to the one vision that will both work to lower costs and improve quality.



Clift Gaus, D.Sc., Director
Bernard P. Wess, Jr., President
(781)453-2351
bwess@perseidsoftware.com

© Bernard P. Wess, Jr. & Clifton Gaus 2002. All Rights Reserved.