

IBM Enterprise Content Management

IBM Enterprise Content Management for Healthcare Provider

Better care and reduced cost by providing information on demand





IBM Enterprise Content Management for Healthcare Providers

- It is a priority for the Healthcare sector to improve quality of care, reduce operational cost and be regulatory compliant.
- The IBM Enterprise Content Management platform help providers to –
 - Streamline patient care by providing simultaneous, instantaneous and application independent access to patient records
 - Accelerate existing investments in key applications like EHR by completing the shift from physical to rich media electronic records
 - Interoperate and share across communities, networks and regions
 - Reduce operational cost through IT simplification and single-point-of-administration





Full and application independent life-cycle support for health records



IBM provides a platform to manage, access and integrate critical information through its full life-cycle on the clinical side as well as on the business side of patient care.

- The platform provides an application independent unified repository.
- It underpins the applications by use of open healthcare specific interfaces like DICOM, HL7 and XDS.
- It reduces operational cost of healthcare and helps sharing of information in hospital networks and Health Information Exchanges.







Medical Records Management Medical Imaging Revenue Cycle Mgmt Policy & Std. Management Administration (ERP, SCM, HR)

ECM INTERFACES



J2EE

Web Services HL7

XDS

DICOM

ECM SERVICES



Business Process Management

Content Centric BPM

Process Centric BPM

Content Services

Report Management

Image Management

Capture

Document Management

Web Content Management

Forms Management

Records Management

Federation/Integration

ECM REPOSITORIES



IBM/FileNet Repositories



Other Repositories

STORAGE



IBM Storage





EMC Centera



Other Storage



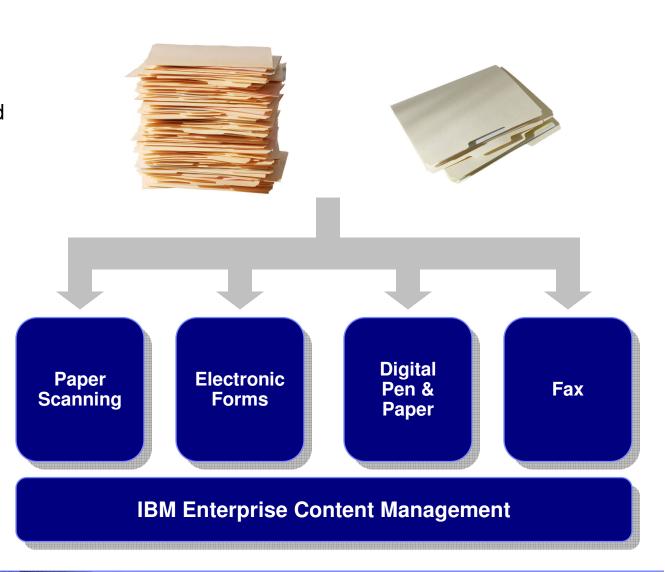
Complete the transition to electronic health record Capturing information from paper and transformation of paper records

Why?

- There is still a lot of paper in e.g. patient records management and billing
- Eliminate paper to improve care giving and reduce operational cost
- Fuel process transformation as dependency on paper goes away

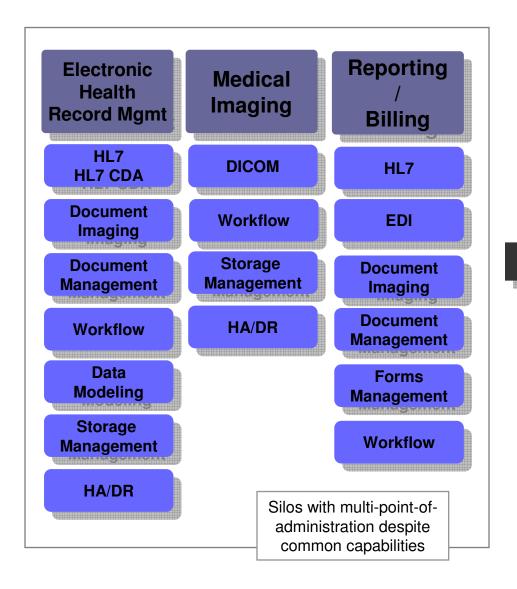
How?

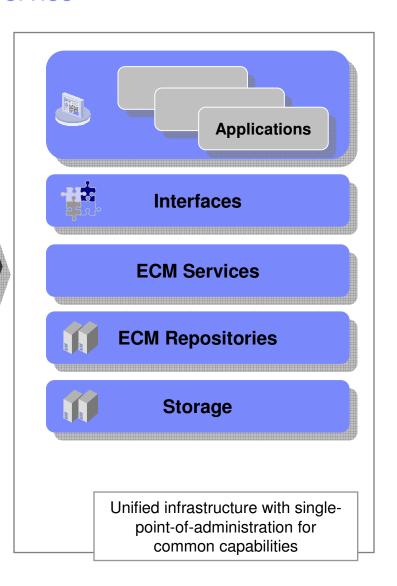
- Need more than one tool
- Manage information in a unified infrastructure
- Access and present through key applications like EHR, HIM, ERP





The transition from silos to Information as a service







Not your average application repository: Feature & Function Comparison – IBM ECM does more!

Capability	IBM ECM	Typical Clinical Repository
Stores audio, video, waveforms, images, DICOM, documents	Yes	Yes
Hierarchical storage management	Yes	Yes
High Availability	Yes	Yes
Open interoperability interfaces	Yes	Yes /No
Compound Document Management	Yes	No
Integrated e-Forms	Yes	No
Information Integration	Yes	No
Process Management	Yes	No
Records Management	Yes	No
Web Content Management	Yes	No



Not your average application repository: More applications supported with a unified ECM infrastructure

Application	IBM ECM	Typical Clinical Repository
Electronic Patient Record	Yes	Yes
Radiology/Medical Imaging	Yes	Yes
Physician Web Access	Yes	Yes/No
Patient Billing & Claims	Yes	Yes/No
Accounts Receivable/Payable	Yes	No
Human Resource	Yes	No
Controlled Documents	Yes	No



ECM & ILM: What does Enterprise Content Management add to ILM?

- Specific software solutions from IBM and partners for document management, health information management, patient financials, output management, search, discovery, archiving, HL7/DICOM/XDS based interoperability and document centric process management
- Not just reducing cost, but truly leveraging information to...
 - make better business decisions by providing 360 degree views
 - improve employee productivity by providing information on demand
 - transform business processes by providing content centric process management
- Not just managing bits and bytes, but understanding the information
 - e.g. in the context of patient, encounter, lab through metadata
- Advanced search, discovery and analytics
 - Storing information is of limited use if the relevant information can't be found
 - Information Integration supports managing multiple information sources
- Compliance capabilities
 - e.g. records management capabilities
 - Audit capabilities and records management
 - A content-management-based compliance platform for managing all "unstructured" content





XDS – Cross Enterprise Document Sharing

Registration, distribution and access across health enterprises of clinical documents forming a patient EHR

The Patient Identity Source is a provider of unique identifier for **Patient** each patient and maintains a The Document Registry collection of identity traits. The Identity maintains metadata about each **Patient Identify Source facilitates** registered document in a Source the validation of patient document entry. This includes a identifiers by the Registry in its link to the Document in the interactions with other actors. Repository where it is stored. Patient identity feed The Document Repository is responsible for both the persistent storage of these documents as well as for their Query **Document Document** registration with the appropriate Registry Consumer Document Registry. It assigns a 2 **URI** to documents for subsequent retrieval by a **Document Consumer.** Register **Document** Create Retrieve **Document** Repository/ Producer Repositories 1 Supports individual documents as IBM ECM with XDS adapter well as compound documents, folders and DICOMs

Source: IT Infrastructure Technical Framework - Volume 1 - (ITI TF-1) - Integration Profiles Revision 2.0 – Final Text - August 15, 2005 - Copyright © 2005: ACC/HIMSS/RSNA



Reference: Memorial Hospital, Colorado Springs

Situation

Although it used a variety of complex, cutting-edge medical technologies, Memorial had still been relying on paper patient records that made access to pertinent patient information difficult and entailed manual records-handling processes that were costly and labor-intensive.



Solution

- IBM Content Manager
- Kofax Ascent Capture
- Cerner PowerChart

Benefits

- Improved the efficiency of its health records management
- Improved care
- Reduces costs through eliminating manual paperhandling processes and mitigating the costs of potential litigation
- Helps to make the overall EMR system more complete
- Accelerates the hospital's return on investment for the new EMR system.

"In researching content management systems, we were looking for a system that was robust enough to take care of our business processing needs as well as our clinical needs. So we chose IBM Content Manager—for the financial and human resources operations of the organization as well as for the clinical operations."



Reference: Memorial Hermann, Texas

Situation

MHHS faced a significantly increased volume of patient accounting and billing documentation brought about by a merger and two acquisitions. Manual processes dramatically slowed down the processing of patient bills, causing a delay of up to 40 days in some cases. MHHS was further challenged by the fact that the eight hospitals it had acquired each had different operating platforms, none of which were the same as MHHS's existing platform.

In addition, MHHS was concerned about reducing the risk of damage to its paperbased patient records after one of its facilities experienced \$300 million in flood damage in 2001.

Solution

- CGI Sovera for Health Information Management
- CGI Sovera for Patient Financial Services
- IBM Enterprise Content Management

Benefits

- Realized 1.2 million in operational cost savings
- Streamlined core business processes
- Seamless integration with existing EMR system
- Ensured compliance with HIPAA regulations



"The CGI and IBM ECM integration with our current EMR system is very important because it will provide Memorial Hermann's physicians with one central electronic system in which to complete medical record deficiencies"





Reference: Evanston Northwestern Healthcare, Illinois

Situation

ENH's financial systems required manual, paper-based report generation and distribution. Not only was the reporting process labor intensive, but it was costing ENH in excess of US\$500,000 a year in supplies and resources - including paper, ink, printer maintenance, microfiche, courier services and the employment of four full-time staff members dedicated to collating, downloading, maintaining lists and distributing millions of pages of reports.

Solution

■ IBM Content Manager

Benefits

- •Saved the company over US\$400,000 in the first fiscal year.
- 50-ton savings in paper in the first year.
- ENH is currently decommissioning an entire room full of high-speed laser printers that are no longer needed for report generation.
- Virtually eliminating paper reports, ENH now has a single, searchable repository for reports (versus hundreds of file cabinets in various locations) that enables data mining and analysis providing management with the information needed to make more-informed business decisions.



"Located in the northern suburbs of Chicago, Evanston Northwestern Healthcare (ENH) is an academic healthcare system comprised of three hospitals - Evanston, Glenbrook and Highland Park - as well as ENH Medical Group, ENH Home Services and ENH Research Institute.

ENH has 7,500 employees working across 35 sites and claims annual revenues of almost US\$1 billion.."