

EnhancedAlliance

The business technology ecosystem

Factsheet

Enterprise Content Management for Hospitals

Nobody can fault the aspiration for joined-up Electronic Medical Records in our hospitals. From admissions through to clinicians, from radiology to administration – the quality of care depends on the quality of information and communication.

In reality, creating and maintaining a unified, comprehensive and accessible view for every patient, remains a challenge for even the most advanced hospitals. This is part cultural and part technological. Perhaps most of all, it is down to the wide diversity of hospital systems and processes in both clinical and administrative use.

In a 1000 bed teaching hospital, it is not unusual to have over 300 independent systems supporting clinical and administrative processes. Some of these may be more or less "off-the-shelf". Others, especially the older heritage systems, may be highly customized.

This diversity is mirrored in the media supported too. Documents can now exist in any media format, with hand-written paper notes at one extreme and video and voice files at the other.

And even where content is already digital, hospital staff still need to manage multiple interfaces for the different systems on which they rely. Although the Hospital Information System provides the centralized and coordinating workflow for all activities, members of the hospital team still need to assemble their own view of the individual patient – and this takes time, costs money, adds stress and increases risk.

Thinking differently

As members of the Enhanced Alliance, Atos and EMC asked how they could help hospitals establish and maintain a comprehensive digital profile for every patient. Dialog with our many healthcare and hospital clients helped us define the characteristics which would underpin our proposition.

Extensible

Although the immediate focus is on what is needed in the individual hospital, we understand that the hospital itself is part of a wider healthcare eco-system. It must be possible for the patient's digital hospital record to be readily integrated in a wider e-health profile.

Compliance and security

Not only would our approach need to meet all relevant standards for healthcare data exchange, we would need to do so in a way in which patient data is always governed by the highest respect for confidentiality.

Ergonomics and sustainability

Patient profiles must be easy to access and explore. Workflows and interfaces must be crafted to suit the way hospital staff work. The whole system must be sustainable too – with underlying data management remaining unaffected by future changes to peripheral or core systems.

Open to new operating models

Hospitals are used to working in partnerships. We wanted to ensure that our patient-focused content management proposition could be delivered not just as a solution, but also as a service. For a patient profile system to succeed, it must be possible to adopt without massive capital expenditure on technology – and increasingly, that's going to mean cloud-delivery as-a-service.

The Enhanced Alliance is expertly positioned to help you achieve joined-up digital profiles for your patients. Atos and EMC are the primary contributors to this initiative – Atos with its deep process knowledge of healthcare process and EMC with its highly-regarded Documentum document management and workflow technologies.

As operating models shift towards virtual and cloud-based delivery, Enhanced Alliance member VMware is also set to make an increasingly important contribution.

Atos

EMC²

vmware®



Document consolidation and workflow

The volume and type of patient data is increasing dramatically. But straight capture is not the challenge. To create effective and comprehensive patient profiles, you must address pure digitization and workflow together.

This is critical. The conditions associated with each captured document, whatever the format, determine how it can be used and by whom. And this is where the combined value of Atos and EMC shines through. Whenever a paper document is captured, for example, patient numbers and machine readable codes are added at source.

Atos is an experienced systems integrator with around 16,000 healthcare specialists in its global team of over 76,000 business technologists. With an exceptionally experienced Enterprise Content Management practice, Atos is one of the few companies able to manage the complex document workflows which exist in hospitals today.

This is made even more challenging by the rise in unstructured data. If, for example, a patient arrives in hospital with paper prescriptions of current medication, it is important that this data from outside the hospital becomes part of the newly created hospital digital record.

This industry and process expertise is perfectly complemented by the Healthcare Integration Portfolio (HIP) from EMC. HIP is a new suite of EMC products specifically designed to help simplify the management and sharing of all forms of patient-related content. HIP builds directly on the content management services of Documentum, which are already extensively used in hospitals worldwide.

Continuity and change

Your Hospital Information System will continue to operate autonomously. What does change, are its multiple interfaces with other hospital systems.

EMC HIP now establishes a single and rationalized interface between the Hospital Information System for all:

- ▶ Picture Archiving and Communications Systems
- ▶ DICOM and non-DICOM archives
- ▶ Scanned hospital and external paper documents
- ▶ E-mails

The data registry, with all associated meta-data, is now managed by the new HIP. This decouples the data from the Hospital Information System and also allows specialist sub-systems for radiology, pharmacy, admissions and so on, to continue working as normal.

This translates directly into value for clinical and administrative staff, for the hospital IT service and procurements teams, and most importantly, for patients.

Clinical and administrative staff	All structured and unstructured data for each individual patient can be accessed directly in one hit - displayed according to professional need, preference and authorization.
IT service and procurement teams	Hospital Information Systems typically have a life-span of 10-15 years. By decoupling data and meta-data, the need for widespread and costly migration in the face of system change is eliminated.
Patients	When all authorized medical professionals can access your profile, the risk of error or of decisions made on insufficient evidence is greatly reduced.

Future-ready

As in every other area of life, healthcare is becoming increasingly information-intensive. When patients themselves expect a joined-up view from their banks, retailers and entertainment providers, they will inevitably expect the same from their healthcare providers.

But hospitals are not just facing an information deluge. As the range of possible medical intervention increases, hospitals need to make increasingly tough budget decisions: all resources are finite.

Large scale capital-intensive IT projects will give way to new, service-based partnerships with specialist providers. There are now few technical barriers in the way of cloud-based content management. Private and hybrid cloud models can, after all, be deployed with confidence where security and confidentiality are critical.

The Enhanced Alliance proposition for patient-related content management can already be deployed as a virtual solution. Not only does this eliminate the need for capital investment. It also makes it possible to carry out meaningful trials with relatively little investment.

Most importantly, the Enhanced Alliance approach provides a platform which will allow you to use growing volumes of structured and unstructured patient data long into the future - irrespective of changes to either the Hospital Information System or to ancillary business and clinical systems.

Next steps

Enhanced Alliance members EMC and Atos have invested significantly in content management systems designed for the specific conditions and needs of hospitals.

Our competencies do not end at the limit of the hospital campus. Just as primary and secondary healthcare systems must achieve coordination to deliver quality of care at acceptable cost, so must the information systems that support them. Atos and EMC are also working in this broader context, with emphasis on Health Information Exchange for secure regional and national access to digital patient information and healthcare analytics.

We do understand that even though medical data exchange standards are now achieving a high-level of international adoption, actual practice differs widely from country to country, and indeed, from hospital to hospital.

The way you manage patient information systems will make a dramatic difference to the quality and cost-effectiveness of patient care in your hospital. Spend time with us now to ensure that the future of patient records is affordable, secure and sustainable.

For more information, contact: enhanced-alliance@atos.net