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ANCILLARY CLINICAL SYSTEM RETIREMENT & ARCHIVING: CONSIDERATIONS & BEST PRACTICES

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INTRODUCTION

EMR replacement drives not only EMR data archiving, but also data retirement of the ancillary clinical systems that interact with the EMR. In most cases, the strategy of replacing a best-of-breed portfolio with an integrated enterprise EMR solution results in modules of the new EMR providing functionality that ancillary clinical systems previously offered. As a result, the retirement of legacy ancillary systems is pursued as part of a broader portfolio rationalization.
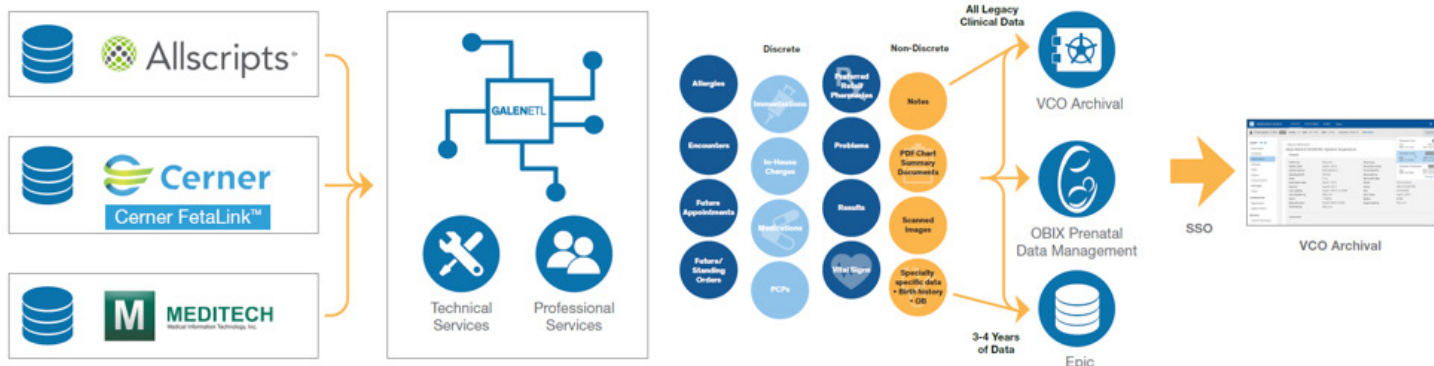
Ancillary care refers to the wide range of healthcare services provided to support the work of a physician. The systems used to support ancillary care can be separated into three main categories: diagnostic, therapeutic, and custodial. Diagnostic data includes laboratory tests, radiology, genetic testing, and imaging. Therapeutic data may include documentation for rehabilitation, or physical and occupational therapy. Custodial data refers to information from hospice, long-term acute care, nursing facilities, as well as urgent care. Typically, the systems that house this documentation are separated from the core clinical functions of an EMR. Some common example systems include laboratory, pharmacy, perinatal, document management, imaging/PACS, cardiology, and radiology.

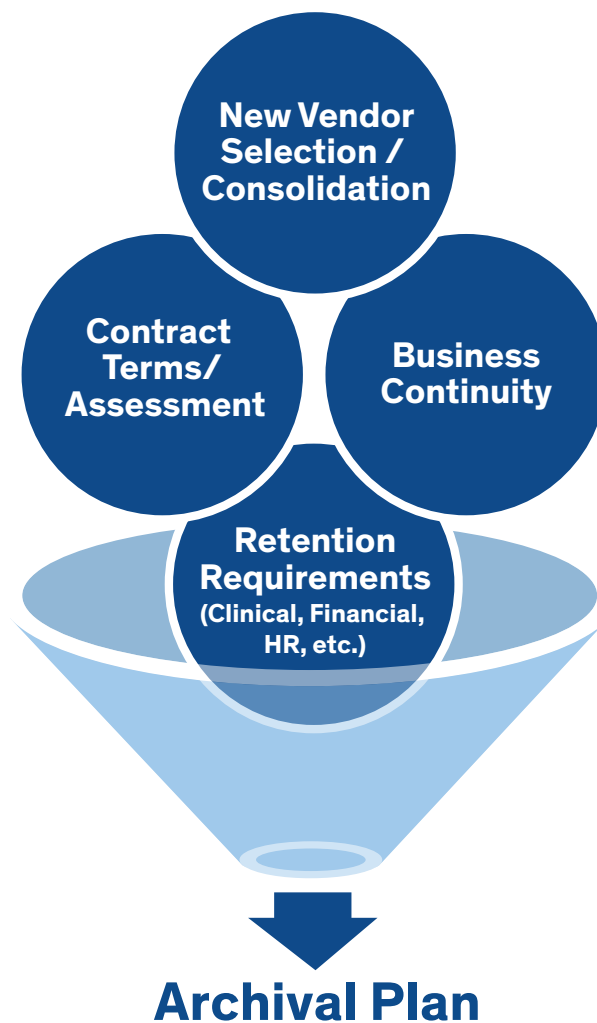The manner in which an archival system organizes data from ancillary systems, and how relationships between these systems and the primary EMR system are preserved is critical not solely for the purposes of medical continuity, but business continuity as well. A comprehensive archival solution organizes data from ancillary systems and presents it in ways that emulate the original systems' documentation workflow.

WHAT MUST BE ARCHIVED?

When considering ancillary clinical system retirement , it is essential to evaluate not only the data that must be archived; it is equally crucial to assess the workflows driving interaction between these systems. From a legal perspective, when providers use these ancillary systems, as a diagnostic reference for clinical decision making, it absolutely becomes part of the longitudinal medical record. Providers may not see a need for preservation of that particular workflow, however the HIM department should.

Preservation and access to the data used to make clinical decisions, regardless of the particular point in time, as well as any information that shows what and how care was delivered should be considered .[1]

- Legal Medical Record
  - Data supporting clinical decision making
  - Data documenting care that was delivered
  - **Must** be archived

- Designated Record Set
  - Data not directly related to patient care
  - **May** need to be archived

- Commonly missed data sets
  - Contextual audit trails
  - Referenced data in ancillary systems
    - PACS, Lab, Radiology, etc.
    - Document management systems
    - Practice management, revenue cycle systems
    - ERP, HR
    - Paper records
  - Data changes, version history
  - Infrequently used, invisible fields

New Vendor Selection / Consolidation

Contract Terms/ Assessment

Business Continuity

Retention Requirements
(Clinical, Financial, HR, etc.)

Archival Plan

1 – AHIMA, Fundamentals (http://library.ahima.org/doc?oid=104008)

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ANCILLARY SYSTEMS HAVE UNIQUE ARCHIVAL NEEDS

Perinatal documents (notes, forms, strips, etc.) must be able to be reproduced and visually rendered as they were in the original source system to maintain fidelity.

Laboratory information systems (LIS) store data such as patient management, test ordering, specimen tracking, workflow management, billing, and third-party integration. The LIS must be able to produce equipment information as part of eDiscovery.

In hospitals, the **pharmacy information system (PIS)** supports the distribution and management of drugs, shows drug and medical device inventory, and facilitates preparing needed reports. Drug lot number and expiration are examples of fields which must persist in the legal medical record.

Radiology information systems (RIS) store data such as patient scheduling, resource & material management, exam tracking & interpretation, result reporting & distribution, and billing. A RIS is typically used in conjunction with PACS (picture archiving and communication system) to manage documents and images. Radiologist interpretation is paramount to furnishing documentation of the clinical decision making.

PACS (picture archiving and communication system) offers access to images from multiple modalities (source machine types) and includes image data, demographic data, and DICOM (Digital Imaging and Communications in MEDICINE) data. PACS replaces hard-copy based means of medical image management, allowing for remote access and integration with hospital information systems (HIS), electronic medical records (EMR), practices management systems (PMS) and radiology information systems (RIS). Accessibility, specifically image retrieval time, is an important consideration for PACS legacy data access.

**Electronic document management systems (EDMS)** house digital records that have been converted from physical records. This can include scans, images, and documents. These systems are electronic imaging and chart management applications used to transfer and store hard-copy written documents into electronic format, indexing to appropriate patients, and can also be used to store non-patient specific documents, such as EOBs. Within EDMS, there are several non-discrete data elements that comprise the patient's legal medical record and must stay intact.

Fundamental to archiving the data in these systems are the following principles:

1. Preserving records with high fidelity to limit liability

2. Enabling rapid retrieval of records for both clinical continuity and legal scenarios

3. Reducing costs associated with maintaining legacy systems and data

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MAINTAINING ANCILLARY CLINICAL SYSTEM INTEGRATION

Integration points to external systems must be maintained during the retirement and archiving of ancillary systems. For instance, a radiology information system may contextually link to or present an image associated to a radiology report. Single sign-on (SSO) may also be used to integrate to the ancillary system from the EMR. There may also be downstream reporting or analytics systems that rely on data feeds from these ancillary systems that must be considered and preserved.

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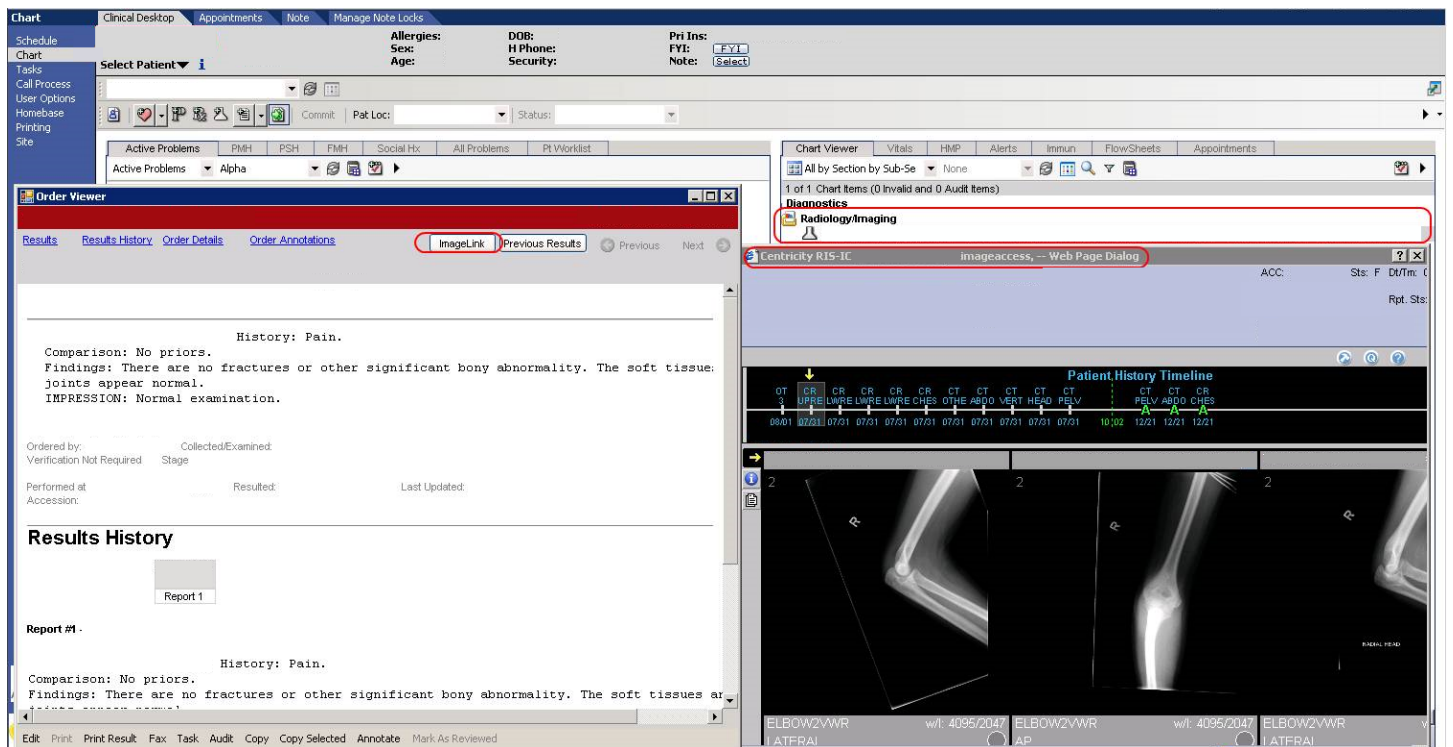
The interactions providers utilize within the EMR and ancillary clinical systems must be replicated if possible in the archival solution. In some cases, that means archiving the ancillary clinical system, but in other cases, those systems need to be maintained. As a result, an archival solution needs to potentially support similar functionality to the legacy system's integration.

CONTEXTUAL AUDIT TRAILS

The archiving of clinical data is the primary process that enables system retirement, but audit data sets must also be considered. For instance, LIS must satisfy the auditing needs of hospital accreditation agencies, HIPAA, and other clinical medical practitioners. Ensuring a robust audit trail is retained and archived is paramount to ensuring the precise sequence of events is captured, and this trail provides evidence that justifies and/or explains what actions have occurred. It is also vital to satisfy electronic discovery (eDiscovery) requests.

In addition to retaining and archiving audit trails, version history must be considered as well. A common example of this is radiology reports, which can include multiple edits. Typically, each time a report is changed, a copy is saved. There is good reason for this—it shows who made which changes and what information was present in the system at a given point in time. Clinically, the most relevant data is usually the most recent, although there are certainly exceptions to this. Legally, having that "point-in-time" view is critical. .

POTENTIAL ANCILLARY SYSTEM ARCHIVAL SCENARIOS

Healthcare delivery organizations have historically designated their HIM departments as the official "custodians of medical records." Most HIM departments process and respond to subpoenas in state court, where most medical-malpractice litigation occurs. As such, it is critical to incorporate consideration of commonly missed data sets, including those in ancillary systems, into a healthcare delivery organization's eDiscovery response approach and information governance program.
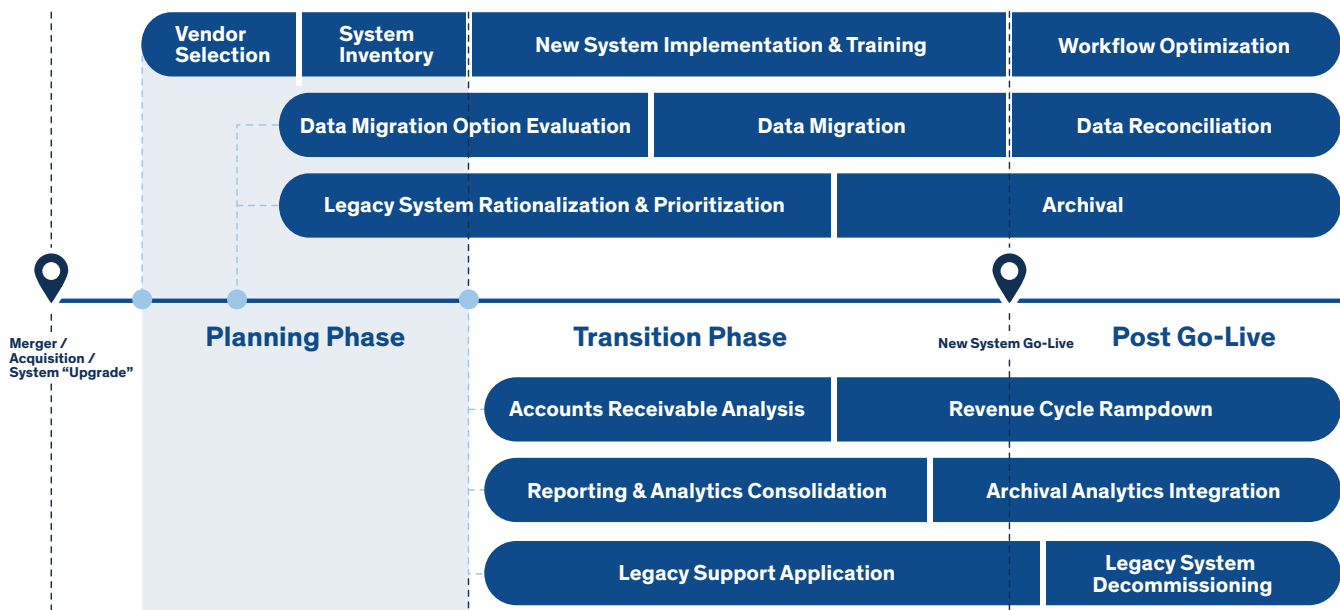
Scenario #1: Surgical Equipment Recall
A manufacturer issues a recall of equipment used for surgeries within the hospital. There is a need to determine which patients were potentially affected. In the case of archiving, the linkage between the serial number stored in the materials management system and the affected patient records located in the legacy EMR must be maintained.

Scenario #2: Malpractice Case
A patient brings legal proceedings against the healthcare delivery organization, bringing into question laboratory results. To demonstrate proper protocol was followed, the complete supporting documentation for clinical decision — at the point in time the decision was made — must be reproduced. In the situation where this data is now stored in an archive, the archival system must have preserved the workflows the provider went through to document. This includes linking the subject patient record to laboratory information systems to validate that the lab equipment was properly tuned and tested.

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TIMING & ECONOMICS OF ANCILLARY CLINICAL SYSTEMS RETIREMENT

The focus of clinical systems retirement is often on the primary clinical system, and timelines are usually set to that. However, as previously mentioned, the interaction between secondary/ancillary systems and the primary system (EMR) must be considered and preserved. With best-of-breed application portfolios, the timeline will often dictate the number of displaced legacy applications that may be concurrently sunset. For instance, if the primary EMR application is sunset and data is archived, but secondary ancillary systems remain intact and linked to the new EMR, the archival system must maintain linkages, references and integration to those secondary systems in order to produce a comprehensive and complete legal medical record.

Vendor Selection	System Inventory	New System Implementation & Training	Workflow Optimization
	Data Migration Option Evaluation	Data Migration	Data Reconciliation
	Legacy System Rationalization & Prioritization		Archival

Merger / Acquisition / System "Upgrade"

Planning Phase — **Transition Phase** — New System Go-Live — **Post Go-Live**

Accounts Receivable Analysis	Revenue Cycle Rampdown
Reporting & Analytics Consolidation	Archival Analytics Integration
Legacy Support Application	Legacy System Decommissioning

Not only do ancillary clinical systems need to be considered in the scope and timeline of legacy system retirement, but the economic impact must be appreciated as well. When evaluating the return-on-investment of an archival solution, additional savings can be achieved from ancillary clinical system data retirement in terms of the IT support and licensing involved in maintaining those legacy systems.

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CONCLUSION

Retirement of secondary systems must be considered in addition to the retirement of the primary legacy EMR system, specifically ensuring preservation of the interactions of those secondary systems to the legacy EMR. Referenced data in ancillary systems represent commonly missed data sets when pursuing application portfolio rationalization and system retirement. Inventory of ancillary systems should be conducted, taking note of not only the clinical data sets, but also audit data sets, workflows and integration points, as these will need to be maintained. That said, the archiving of these systems represent a huge opportunity for both cost savings and stakeholder satisfaction.

Learn more about how VCO Archival can reliably and securely provide straightforward access to data from legacy systems by visiting **https://www.galenhealthcare.com/technical-services/vitalcenter-online-archival/** or contacting **sales@galenhealthcare.com.**

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