Integrating Emergency Room Data

ART2LINK
INTEGRATED SYSTEM SOLUTIONS

Client Profile:

A large regional healthcare organization consisting of 21 hospitals, 14 ERs, 32 rehabilitation facilities, 25 clinics, 34 long term care facilities, 26 imaging centers, and 148 individual physician practices. The organization had grown through acquisition creating a network of multiple, incompatible patient information databases.

Problem:

In an emergency room, where every second counts, outdated and incompatible databases were putting patients at risk as multiple manual steps including phone calls between facilities and physical re-entry of data were required.

Security concerns prevented the hospital network from making direct, close-coupled connections between facilities.

This lack of data exchange slowed patient admission and created human errors as data was transcribed from faxed records. The inconsistent and unorganized information increased the risk of patient treatment errors and created unneeded and unreimbursed administrative costs that were a significant financial drain on the organizaton.

Solution:

Art2Link selected an integration tool which allowed creation of an automated data transfer system compliant with HIPPA regulatory standards. Interfaces were created between the EMR systems at the parent hospitals and satellite facilities in the network, connecting the disparate data bases.

Results:

Improved Data Exchange

Data now flows smoothly between the systems which are still loosely coupled so that downtimes in one EMR do not affect the other systems. The exchanges occur in near real-time on an as-needed basis, giving staff access to critical information in minutes. The hospital has recognized improvements in patient care, and significant decreases in administrative costs since implementing the new interface systems, because the data exchange is automated and does not require additional steps or time on the part of ER personnel.

Improved patient care

- Dramatic decreases in preventable mis-treatment because of immediate availability of allergy and drug interactions
- Near immediate availability of full patient records dramatically increases the physician's ability to appropriately diagnose and treat patients presenting at the ER. , particularly in cases of unconscious or incoherent patients
- Automated data transfer decreased the incidence of patient data transcription errors and non-reimbursable administrative costs to zero
- Significant increases in the speed with which patients can be appropriately treated, and then discharged or admitted; increasing patient satisfaction with the speed of being seen and treated.

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How the process works:

Art2Link created process triggers seamlessly collect, store, and share information between the hospitals, emergency rooms, rehabilitation facilities, imaging centers and primary care physicians.

When a patient arrives at the ER - Art2link process triggers the Paragon EMR product from McKesson

As a patient is admitted to the ER a record is established within Paragon. Once the record is created a process is initiated requesting information about the patient from all associated facilities using a sophisticated multi-factor matching algorithm. The nature, location, and specifications of the request can be, and are, different for each facility

Accessing data from Rehabilitation Facilities EpicCare EMR system:

A small listener process watches for the arrival of a file requesting information from the ER. If the facility has a matching patient name, data retrieval workflow begins without the need for manual intervention.

Our system locates needed data and creates files which are encrypted and placed in a network share location. The data is then moved to the hospital's network, decrypted, parsed and transformed into the format needed for Paragon

Accessing Image data from GE's Centricity at the Imaging Center

A search is performed within the Centricity database to determine if any images exist for the patient . Using the same sophisticated matching algorithm used previously, in combination with a Paragon-based Master Patient Index, all relevant images in Centricity are located. Upon return of that information from Centricity, Art2link's application transfers that data to update Paragon's pointers.

Building a complete history from Primary Care Physician by transfer from cloud-based EMR, Medi-Touch from Health Fusion

Using an API, the system requests relevant patient information from the Primary Care Physician network systems (Medi-Touch). Medi-Touch utilizes an internal data export capability to package the data, encrypt it, and make it available via an API. When the data stream from the Medi-Touch API is recieved, it is transformed into the appropriate data format, and used to populate the Paragon ER data base. The admission process is also updated with a completed status on the data acquisition activity.

Regardless of where the data comes from, the end result is the population of the Paragon data base with new information, access to images and patient records. This information is available in near real time to allow medical professionals to do what they do best; **save lives when every second counts.**