

A SAFR Transition

Enhancing Pre-Hospital
Care and Coordination

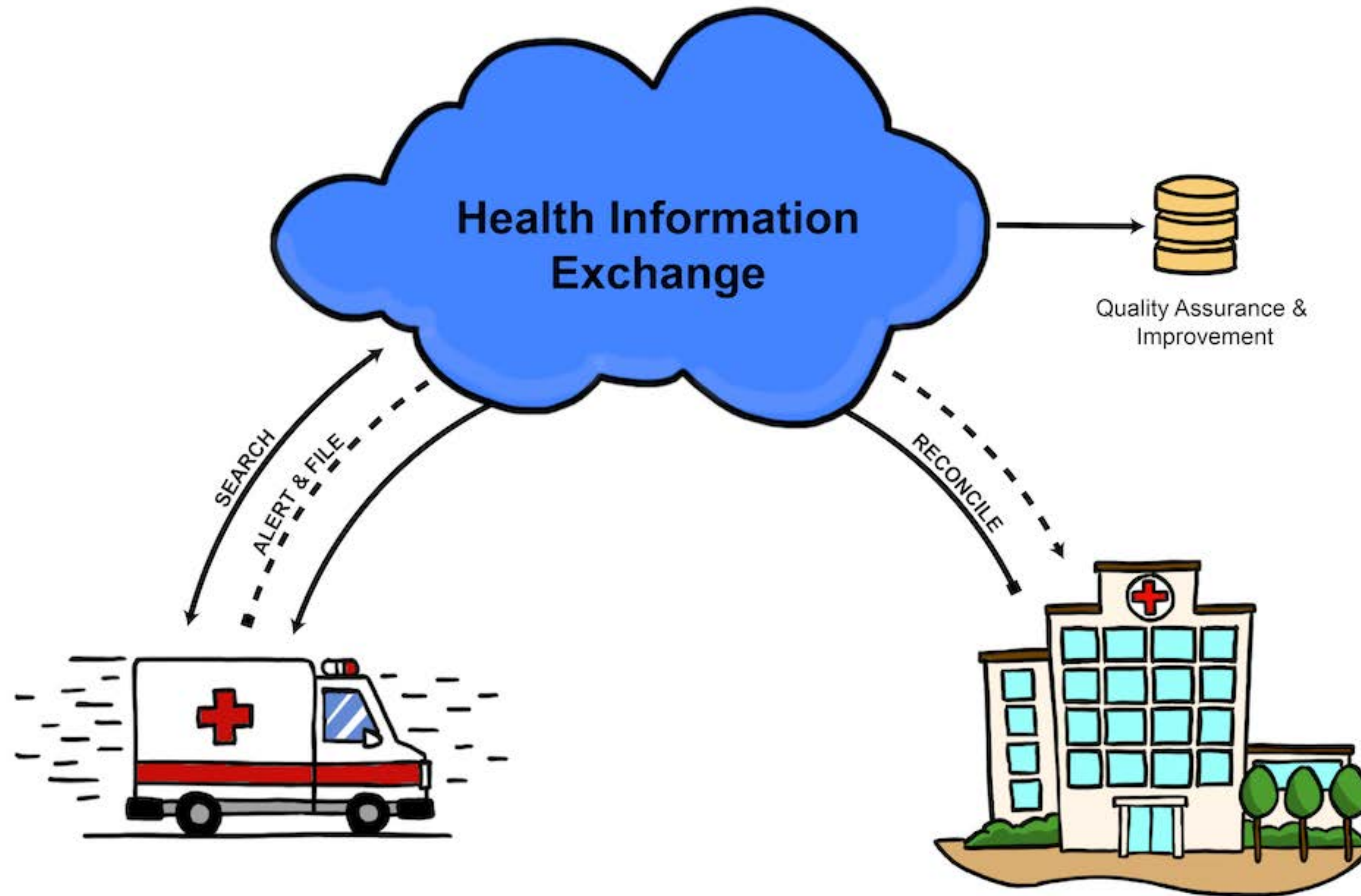
SEARCH: EMTs and Paramedics have pre-hospital access to HIE patient data

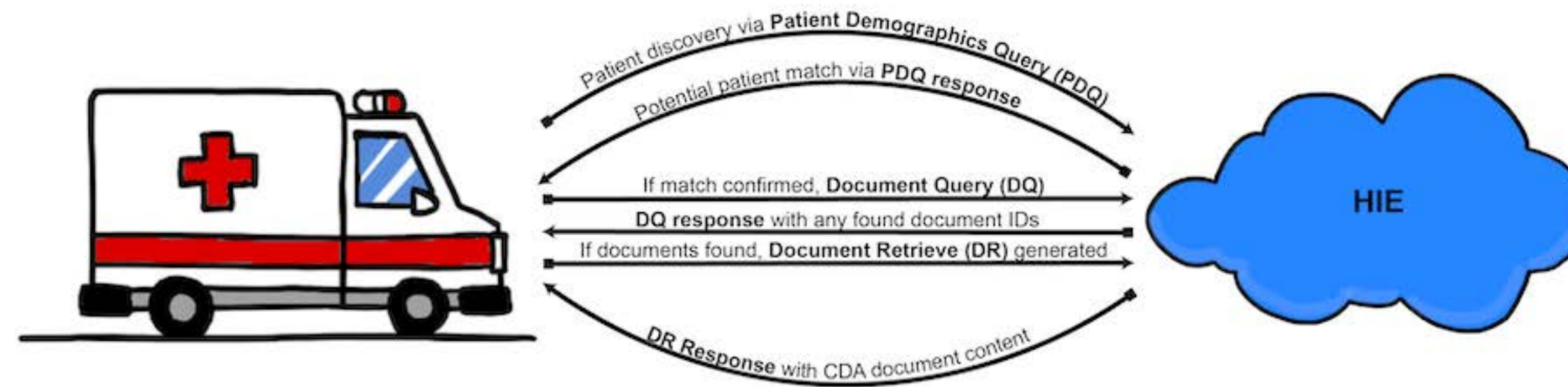
ALERT: EMS care data is sent to receiving hospital in real-time.

FILE: EMS PCR's are electronically submitted to the ED upon completion

RECONCILE: Hospitals automatically return demographics, billing, and OUTCOME data to EMS.

SAFR Overview





What is SEARCH?

- Paramedics can search HIE in during 9-1-1 events.
- Initiated after entering basic demographics: Name, Birthday, Sex
- HIE data: Past Medical History, Current Medications, Allergies, and Health System Encounters
- EMT or Paramedic can automatically integrate returned data into their care record.

Verizon 5:36 PM 55%

0 Local Records

+

Inc **Full Name** SDHCSHARED SDHCPATIENT **Hist**

Info **Date of Birth** 01/01/1956 **SSN #** **Exam**

Resp **Race** **VS**

PQRS Same as Incident Homeless **Resides in Area** **RX**

CAD **Home Address** **Proc**

Dspo **City, St, Zip** **Narr**

MdDv **County, Country** **Sig**

Att **Driver License** **Phone #s** **...**

Info **Pay** **Insu**

Verizon 5:36 PM 55%

+

1

Inc

Info

Resp

PQRS

CAD

Dspo

MdDv

Att

Full Name
SDHC SHARED SDH

Date of Birth
01/01/1956

Race

Same as Incident

Home Address

City, St, Zip

County, Country

Driver License **Phone #s**

Info **Pay** **Insu**

Messages

NEW - Select patient match

Ok

X

Hist

Exam

VS

RX

Proc

Narr

Sig

...

Verizon 5:36 PM 55%

+

Inc

Info

Resp

PQRS

CAD

Dspo

MdDv

Att

Info **Pay** **Insu**

Full Name
SDHCSHARED SDH

Date of Birth
01/01/1956

Race

Same as Incident

Home Address

City, St, Zip

County, Country

Driver License **Phone #s**

Resides in Area

Ok

✕

Hist

Exam

VS

RX

Proc

Narr

Sig

...

Possible patient matches from SD Health Connect

SDHCSHARED SDHCPATIENT
Male
01/01/1956
838 SEVA DRIVE
SAN DIEGO, CA 92103

No match

Verizon 5:36 PM 55%

0 Local Records

Inc Full Name SDHCSHARED SDHCPATIENT **Hist**

Info Date of Birth 01/01/1956 SSN # **Exam**

Resp Race **VS**

PQRS Same as Incident in Area **RX**

CAD Home Address **Proc**

Dspo City, St, Zip **Narr**

MdDv County, Country **Sig**

Att Driver License Phone #s **...**

Info **Pay** **Insu**

PATIENT HISTORY
Retrieving patient history from San Diego Health Connect. This make take a few minutes.
Ok

Verizon 5:38 PM 55%

+ 2

Inc **Full Name** SDHC SHARED SDI

Info **Date of Birth** 01/01/1956

Resp **Race**

PQRS Same as Incident **Resides in Area**

CAD **Home Address**

Dspo **City, St, Zip**

MdDv **County, Country**

Att **Driver License** **Phone #s**

Info **Pay** **Insu**

Messages

NEW - Previous Encounters
01/31/2017 17:38

NEW - Import patient history

Ok

X

Hist

Exam

VS

RX

Proc

Narr

Sig

...

Verizon 5:38 PM 55%

Messages

Previous Encounters
01/31/2017 17:38

NEW - Import patient history

PREVIOUS ENCOUNTERS

Poway Women's Care
04/21/2016
Ambulatory
Sharp Rees Stealy
08/25/2015
Outpatient
Sharp Rees Stealy
06/10/2015
Outpatient

Ok

Full Name
SDHC SHARED SDI

Date of Birth
01/01/1956

Race
 Same

Home Address

City, St, Zip

County, Country

Driver License **Phone #s**

Inc **Info** **Resp** **PQRS** **CAD** **Dspo** **MdDv** **Att**

Hist **Exam** **VS** **RX** **Proc** **Narr** **Sig** **...**

Info **Pay** **Insu**

Verizon 5:38 PM 55%

+

2

Inc

Info

Resp

PQRS

CAD

Dspo

MdDv

Att

Full Name
SDHC SHARED SDI

Date of Birth
01/01/1956

Race

Same as Incident

Home Address

City, St, Zip

County, Country

Driver License **Phone #s**

Resides in Area

Messages

NEW - Previous Encounters
01/31/2017 17:38

NEW - Import patient history

Ok

X

Hist

Exam

VS

RX

Proc

Narr

Sig

...

Info **Pay** **Insu**

Verizon 5:40 PM 54%

Confirm Current Medications

Select all that still apply

Medication: **metFORMIN hydrochloride 500 MG Oral Tablet**

Medication: **Lisinopril 30 MG Oral Tablet**

Medication: **celecoxib 200 MG Oral Capsule**

Medication: **atorvastatin 10 MG Oral Tablet**

Medication: **Lisinopril 40 MG Oral Tablet**

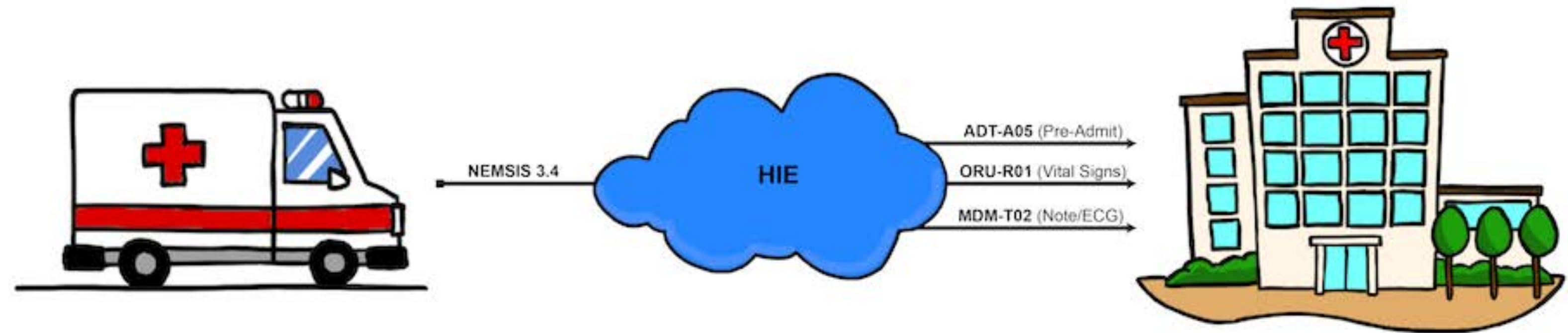
Medication: **Levothyroxine Sodium 0.088 MG Oral Tablet**

<- Prev **Next ->**

Select All **Cancel**

Integrating SEARCH into the workflow





What is ALERT?

- Patient is pre-arrived at selected receiving emergency department as ‘expected patient’
- EMS data is shared as it is entered by EMT or Paramedic (longitudinal record from HIE)
 - Discrete vital signs integrated into EMR flowsheet
 - ECGs submitted electronically.
 - PMH, medications, allergies, narrative, findings, and treatments all shared in note on EMR
- Benefits include real-time, pre-arrival data (can also update post-arrival if hospital will allow), reduced data entry for ED clinicians, higher fidelity transfer of care data, decision support for activations (e.g. Cath Lab)

Hyperspace - HC EMERGENCY DEPT - TST - ATTENDING (UCSD) EMERGENCY

ED Manager (Hillcrest Emergency) - Last Refresh Time: 7/11/2017 8:43:27 AM

Refresh Review Visit My Note Procedure Note Progress Note EKG Orders Discharge Admit Vitals/Pain Results Review A/S Sign Out Handoff Tx Team Comments Tracking Form Reprints EMS Hub Expect Tmp Pt

POD A x33018 (2 of 18 occupied)

Bed	New	Patient	CC	A	Total Time	RN	MD	Att	Tech	Re	Comment
01		Chodraw, Aka360 (U)	multiple trauma		358:09					Y	
02											
03		Events, Statusesdispos	Weakness	3	307:30	NURSE		Emerge		N	
04A											
04B											
05A											
05B											
05C											
24											
T01											
T02											
T03											
T04											
T04A											

POD B x33039 (4 of 14 occupied)

Bed	New	Patient	CC	A	Total Time	RN	MD	Att	Tech	Re	Comment
06		Test, Bonnie (F)	Cough		620:13					N	
07A											
07B		Pittman, Events (M)	Headache- New Onset	3	307:37	NURSE		Emerge		N	
08A											
08B											
09											
10		Syndromic, Test E (F)			306:31					N	
11A											
11B											
12A											
12B											
T05		Test, Incubus (M)	TEST FROM CLINIC		549:48					N	
T06											
T07											

POD C x33048 (2 of 9 occupied)

Bed	New	Patient	CC	A	Total Time	RN	MD	Att	Tech	Re	Comment
14A											
14B		Andrew, Gohappy (M)	Headache Re-evaluat		983:01					N	
15											
16A											
16B		Hillcrest, Test F (U)			16:24					N	
17											
18											
19											
20											

POD D x33063 (2 of 10 occupied)

Bed	New	Patient	CC	A	Total Time	RN	MD	Att	Tech	Re	Comment
21											
22											
23											
25		Emshubpatient, Admin			549:31					N	
26											
27											
28		Insulinfive, Donottouch	I need an insulin drip		166:49					Y	
T08											
T09											
T10											

OTF & ED to Trauma TXFR (0 of 36 occupied)

Bed	New	Patient	CC	A	Total Time	RN	MD	Att	Tech	Re	Comment
HOD											

Current Staff (11)

Attending

- Abbott, Joel E, DO
- Ed Stage Two, Attending Physician
- Emergency, Attending (Ucsd), MD**
- Killeen, James Patrick, MD
- Ratigan, Emmett David, MD

ED Tech

- Ed Stage Two, Tech
- Emergency, Tech (Ucsd)

ED Charge Nurse

- Boerner, Laura, RN

ED Float

- Ed Stage Two, Registered Nurse

Registered Nurse

- Aaro, Julie, RN
- Emergency, Nurse (Ucsd), RN

WAITING (1)

Patient	New	CC	A	Arrived by	Total Tim	Vitals	BP	Temp	Pulse	Resp	O2
Zzasap, Tteam (M)		Abdominal Pain	3	138:05	138:0						

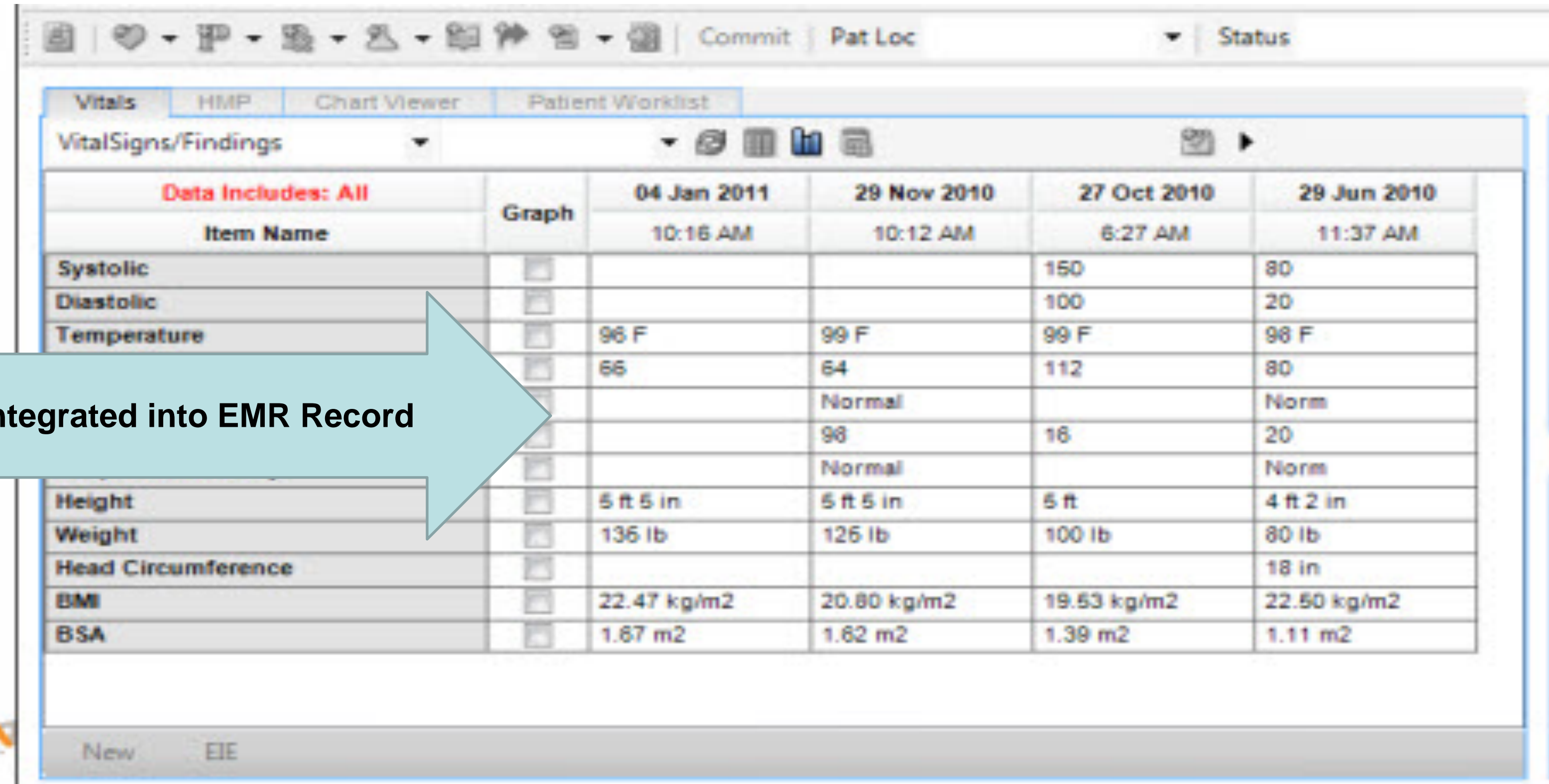
EXPECTED (5)

PATIENT	CC	Exp	Temp?	Ext Ref	Txfr from	Time in Exp.	Unit #	Flags	Run #
Emshubpatient, One (M)						306:39			77778E
Emshubpatient, Two (M)			Y			306:38			66668E
Unknown, Ems (M)			Y			00:00			20170E
Unknown, Ems (M)			Y			00:00			20170E
Unknown, Ems (U)			Y			00:00			1855E

EMS Expected Patients →

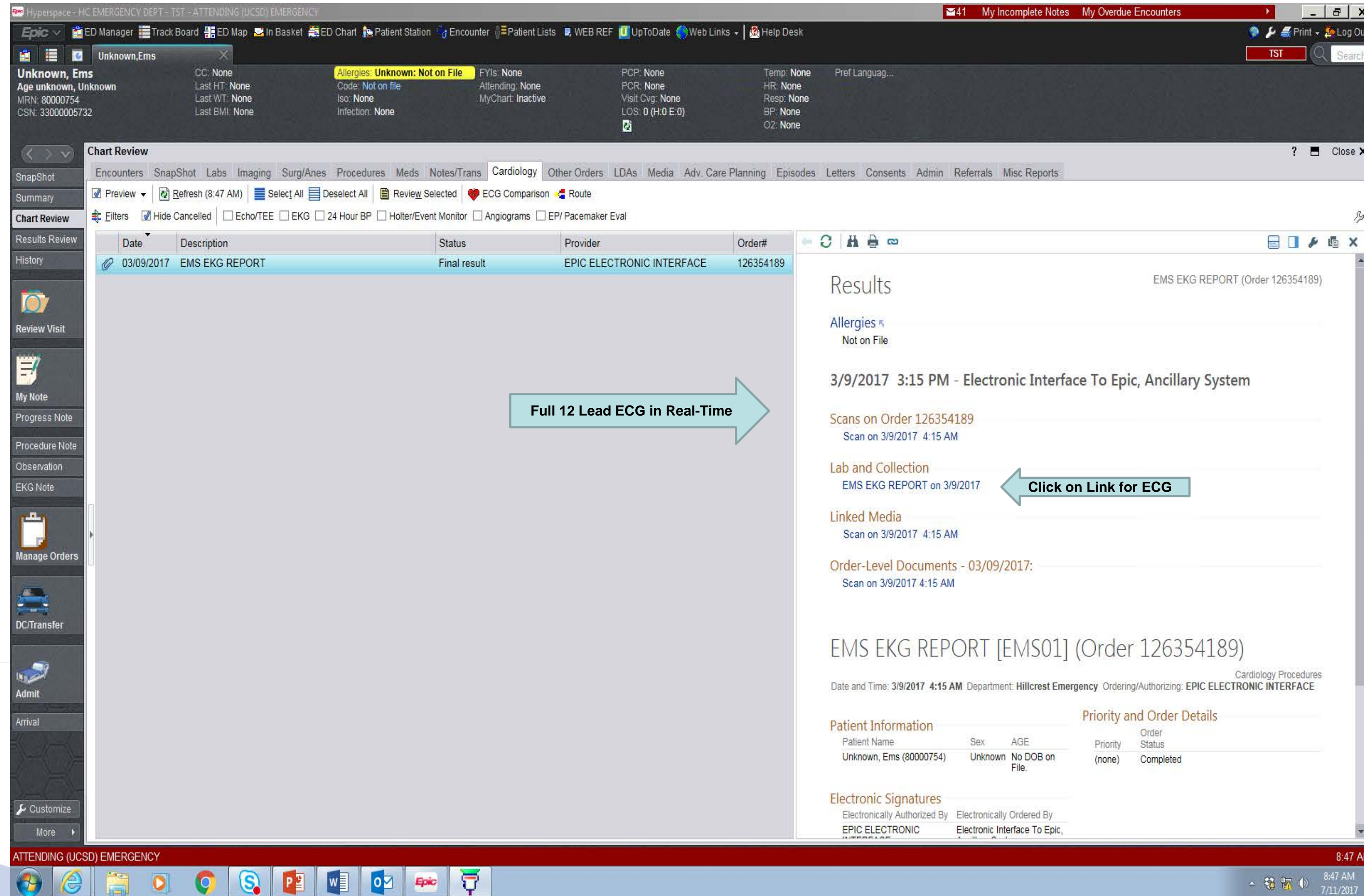
ATTENDING (UCSD) EMERGENCY 8:43 AM

8:43 AM
7/11/2017



Data Includes: All		04 Jan 2011	29 Nov 2010	27 Oct 2010	29 Jun 2010
Item Name		10:16 AM	10:12 AM	6:27 AM	11:37 AM
Systolic	<input type="checkbox"/>			150	80
Diastolic	<input type="checkbox"/>			100	20
Temperature	<input type="checkbox"/>	96 F	99 F	99 F	98 F
	<input type="checkbox"/>	66	64	112	80
	<input type="checkbox"/>		Normal		Norm
	<input type="checkbox"/>		98	16	20
	<input type="checkbox"/>		Normal		Norm
Height	<input type="checkbox"/>	5 ft 5 in	5 ft 5 in	5 ft	4 ft 2 in
Weight	<input type="checkbox"/>	135 lb	125 lb	100 lb	80 lb
Head Circumference	<input type="checkbox"/>				18 in
BMI	<input type="checkbox"/>	22.47 kg/m2	20.80 kg/m2	19.53 kg/m2	22.50 kg/m2
BSA	<input type="checkbox"/>	1.67 m2	1.62 m2	1.39 m2	1.11 m2

Discrete Vital Signs Integrated into EMR Record



Unknown, Ems
Age unknown, Unknown
MRN: 80000754
CSN: 33000005732

CC: None
Last HT: None
Last WT: None
Last BMI: None

Allergies: **Unknown: Not on File**
Code: Not on file
Iso: None
Infection: None

FYIs: None
Attending: None
MyChart: Inactive

PCP: None
PCR: None
Visit Cvg: None
LOS: 0 (H:0 E:0)

Temp: None
HR: None
Resp: None
BP: None
O2: None

Pref Langug...

Chart Review

Encounters Snapshot Labs Imaging Surg/Anes Procedures Meds Notes/Trans **Cardiology** Other Orders LDAs Media Adv. Care Planning Episodes Letters Consents Admin Referrals Misc Reports

Preview Refresh (8:47 AM) Select All Deselect All Review Selected ECG Comparison Route

Filters Hide Cancelled Echo/TEE EKG 24 Hour BP Holter/Event Monitor Angiograms EP/ Pacemaker Eval

Date	Description	Status	Provider	Order#
03/09/2017	EMS EKG REPORT	Final result	EPIC ELECTRONIC INTERFACE	126354189

Results

EMS EKG REPORT (Order 126354189)

Allergies
Not on File

3/9/2017 3:15 PM - Electronic Interface To Epic, Ancillary System

Scans on Order 126354189
Scan on 3/9/2017 4:15 AM

Lab and Collection
EMS EKG REPORT on 3/9/2017 **Click on Link for ECG**

Linked Media
Scan on 3/9/2017 4:15 AM

Order-Level Documents - 03/09/2017:
Scan on 3/9/2017 4:15 AM

EMS EKG REPORT [EMS01] (Order 126354189)

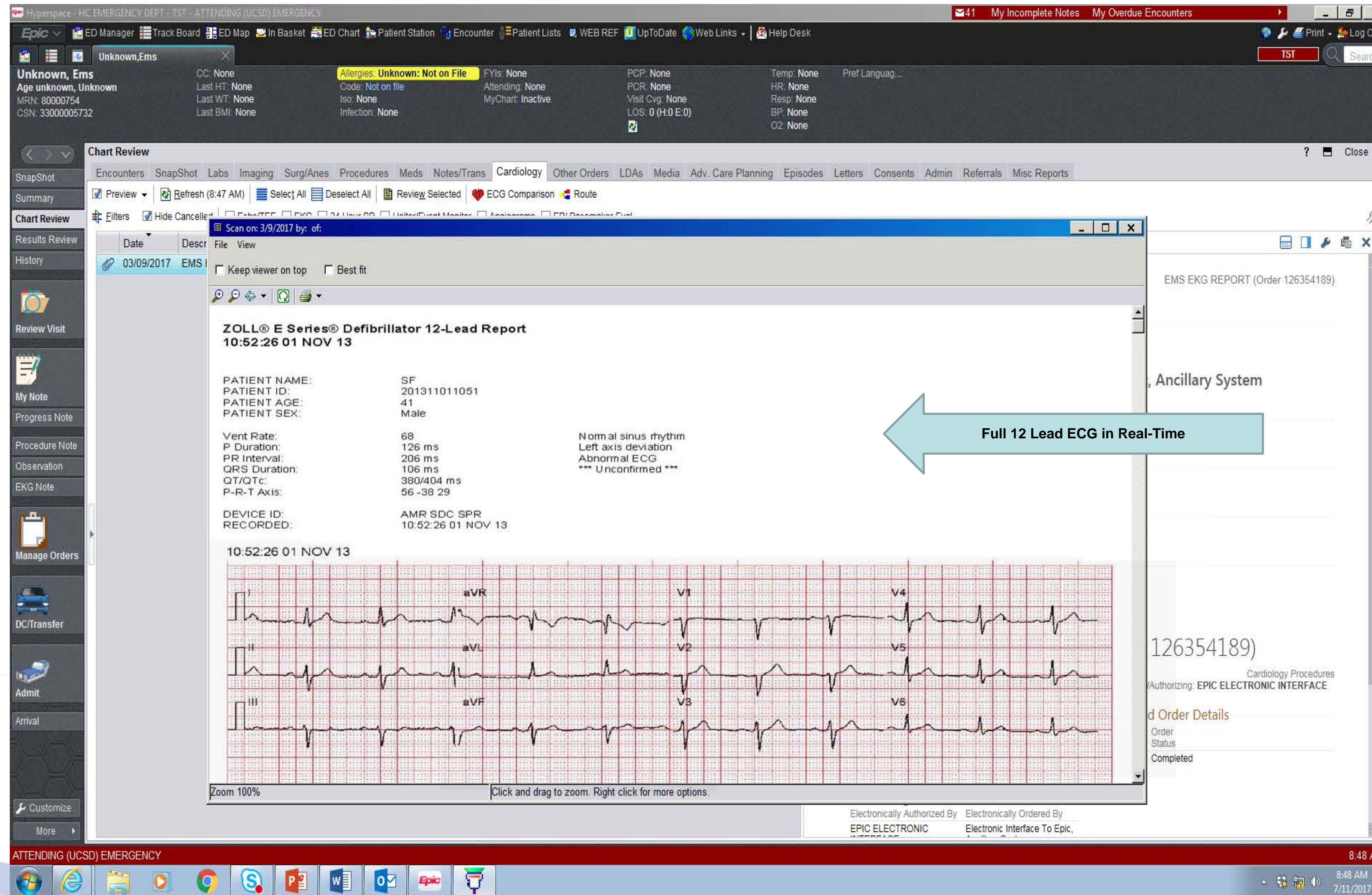
Date and Time: 3/9/2017 4:15 AM Department: Hillcrest Emergency Ordering/Authorizing: EPIC ELECTRONIC INTERFACE

Patient Information			Priority and Order Details	
Patient Name	Sex	AGE	Priority	Order Status
Unknown, Ems (80000754)	Unknown	No DOB on File.	(none)	Completed

Electronic Signatures
Electronically Authorized By: EPIC ELECTRONIC
Electronically Ordered By: Electronic Interface To Epic,

ATTENDING (UCSD) EMERGENCY 8:47 AM

8:47 AM 7/11/2017



The screenshot displays the Epic EMR interface for a patient named "Unknown, Ems". The main window is titled "Chart Review" and shows a "ZOLL® E Series® Defibrillator 12-Lead Report" from 10:52:26 01 NOV 13. The report includes patient information (SF, 201311011051, 41, Male) and ECG parameters (Normal sinus rhythm, Left axis deviation, Abnormal ECG, *** Unconfirmed ***). Below the text is a 12-lead ECG waveform showing leads I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, and V6. A blue arrow points to the waveform with the text "Full 12 Lead ECG in Real-Time". The interface also shows a sidebar with navigation options like "Review Visit", "My Note", and "Manage Orders". The bottom status bar indicates the user is "ATTENDING (UCSD) EMERGENCY" and the time is 8:48 AM on 7/11/2017.

Unknown, Ems
Age unknown, Unknown
MRN: 80000754
CSN: 33000005732

CC: None
Last HT: None
Last WT: None
Last BMI: None

Allergies: Unknown: Not on file
Code: Not on file
Iso: None
Infection: None

FYIs: None
Attending: None
MyChart: Inactive

PCP: None
PCR: None
Visit Cvg: None
LOS: 0 (H.O.E.O)

Temp: None
HR: None
Resp: None
BP: None
O2: None

Pref Langug...

Chart Review
Encounters Snapshot Labs Imaging Surg/Anes Procedures Meds Notes/Trans Cardiology Other Orders LDAs Media Adv. Care Planning Episodes Letters Consents Admin Referrals Misc Reports

Preview Refresh (8:47 AM) Select All Deselect All Review Selected ECG Comparison Route

Filters Hide Cancelled

Scan on: 3/9/2017 by: of:

Date	Descr	File	View
03/09/2017	EMS		

Keep viewer on top Best fit

ZOLL® E Series® Defibrillator 12-Lead Report
10:52:26 01 NOV 13

PATIENT NAME: SF
PATIENT ID: 201311011051
PATIENT AGE: 41
PATIENT SEX: Male

Vent Rate: 68
P Duration: 126 ms
PR Interval: 206 ms
QRS Duration: 106 ms
QT/QTc: 380/404 ms
P-R-T Axis: 56 -38 29

Normal sinus rhythm
Left axis deviation
Abnormal ECG
*** Unconfirmed ***

DEVICE ID: AMR SDC SPR
RECORDED: 10:52:26 01 NOV 13

10:52:26 01 NOV 13

Zoom 100% Click and drag to zoom. Right click for more options.

Electronically Authorized By EPIC ELECTRONIC
Electronically Ordered By Electronic Interface To Epic,

EMS EKG REPORT (Order 126354189)

Ancillary System

Full 12 Lead ECG in Real-Time

126354189)
Cardiology Procedures
Authorizing: EPIC ELECTRONIC INTERFACE

Order Details
Order Status Completed

ATTENDING (UCSD) EMERGENCY 8:48 AM
7/11/2017

Ems Provider EMS Narrative Date of Service: 1/6/2021 3:17 PM
Other Signed

Alert:
2390366
FS21003056
0009
M9
ALS-Paramedic
Incident Location Type: Y92.00
[REDACTED]
1661377
92101

Patient Demographics:
Last Name: [REDACTED]
First Name: [REDACTED]
Patient's Home Address: [REDACTED]
Patient's Home City: 1661377
Patient's Home County: 06073
Patient's Home State: 06
Patient's Home ZIP Code: 92101
Patient's Country of Residence: US
Gender: Male
Race: Hispanic or Latino
Age: 14
Age Units: Years

CC:
2021-01-06T14:07:00.000-08:00

Impression:
Provider's Primary Impression: G40.909 - Epilepsy, unspecified, not intractable,
without status epilepticus
Lower Acuity (Green)

HPI:Pt Age: 14 Years; Gender: Male; Is there any reason to suspect patient may HAVE or may have been EXPOSED to COVID-19: No; Provide specific details for suspecting patient may HAVE or have been EXPOSED to COVID-19: ;Primary Impression: Seizure - Single/Postictal;M9 AOS to find a M sitting on his bed C/O SeizureMom states pt was walking and fell on his bed and had a 30 sec full bodied tonic clonic seizure. First time seizure due to a birth defectDate/Time: 01/06/2021 14:20:39; Mental Status: Normal Baseline for Patient; Neuro: Normal Baseline for Patient; Eye Lt: 3-mm, PERRL; Eye Rt: 3-mm, PERRL; Pt is A&O x3 MAE x4 VS as noted. Pt is postictal, no trauma or oral traumaNo Rx Base Called: Scripps MercyTo Childrenâ€™s

Medical History:

Allergies to Medications:

Environmental and Food Allergies:

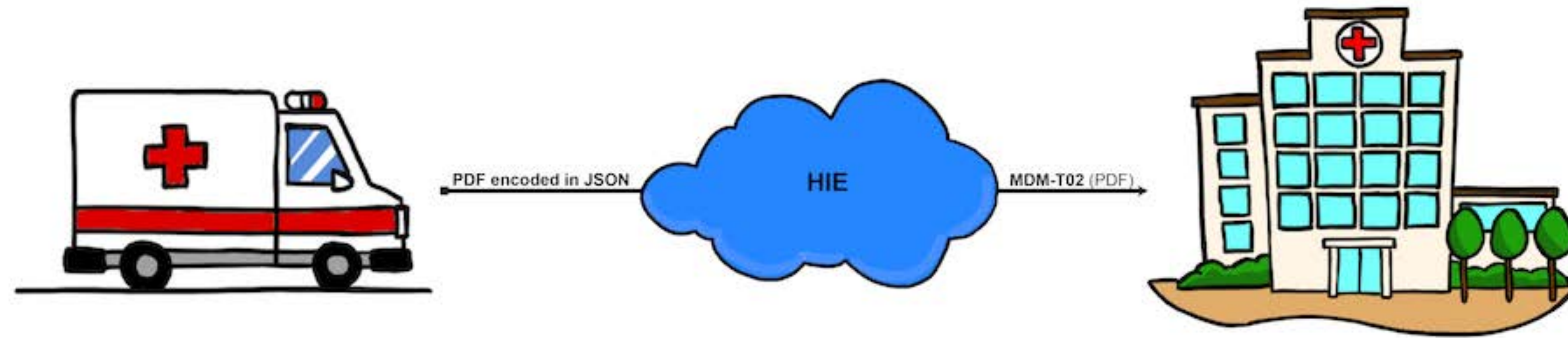
Current Medications:

Assessment:
Normal
Normal Baseline for Patient

Cardiac Arrest:
No

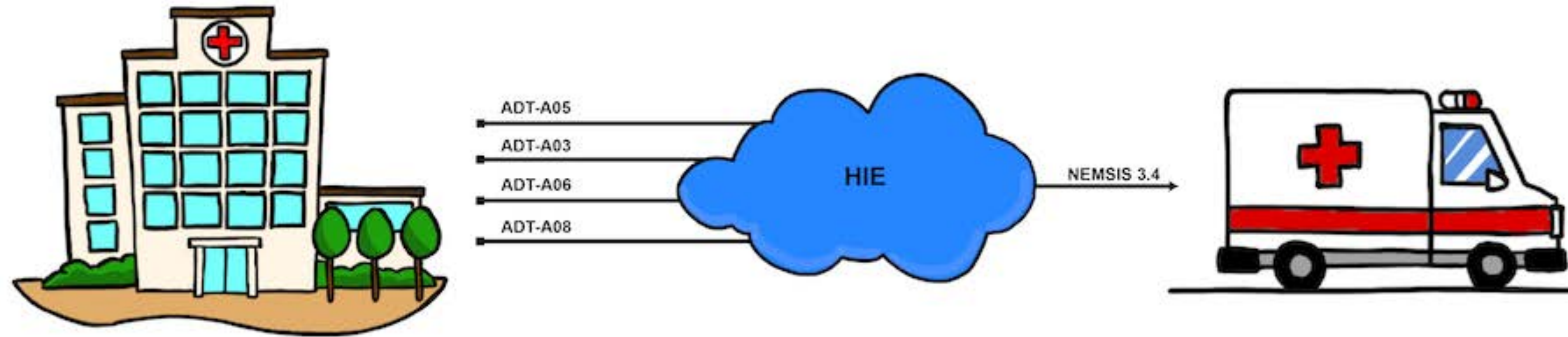
EMS Airway:

EMS Medications:



What is File?

- Completed PCRs are automatically, electronically filed with receiving ED.
- No printing, faxing, scanning, uploading
- No lost charts
- Protects EMS providers from liability
- Supports hospital based-care
- Supports hospital reimbursement



What is RECONCILE?

- Admission, Demographic Updates, and Discharge triggers generate messages back to EMS ePCR backend
- NEMSIS eOutcome data fields (e.g., insurance information, discharge diagnosis, and length of stay)

Comparison of ALERT and RECONCILE data is a dramatic step forward in QA/QI both at the agency level and at the LEMSA/CAEMSA level.

eOutcome.01	Emergency Department Disposition
eOutcome.02	Hospital Disposition
eOutcome.09	Emergency Department Procedures
eOutcome.10	Emergency Department Diagnosis
eOutcome.11	Date/Time of Hospital Admission
eOutcome.12	Hospital Procedures
eOutcome.13	Hospital Diagnosis
eOutcome.14	Total ICU Length of Stay
eOutcome.15	Total Ventilator Days
eOutcome.17	Outcome at Hospital Discharge
eOutcome.16	Date/Time of Hospital Discharge
eOutcome.06	Emergency Department Chief Complaint
eOutcome.07	First ED Systolic Blood Pressure
eOutcome.08	Emergency Department Recorded Cause of Injury
eOutcome.05	Other Report Registry Type
eOutcome.04	External Report ID/Number
eOutcome.03	External Report ID/Number Type

Q/A