



STROKE DATA ABSTRACTION “CHARTING” NEW TERRITORY

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OBJECTIVES

- Stroke Case Abstraction Methods
- Implementing EMR (EPIC) Uploader to GWTG
- New Processes and Lessons Learned
- Summary



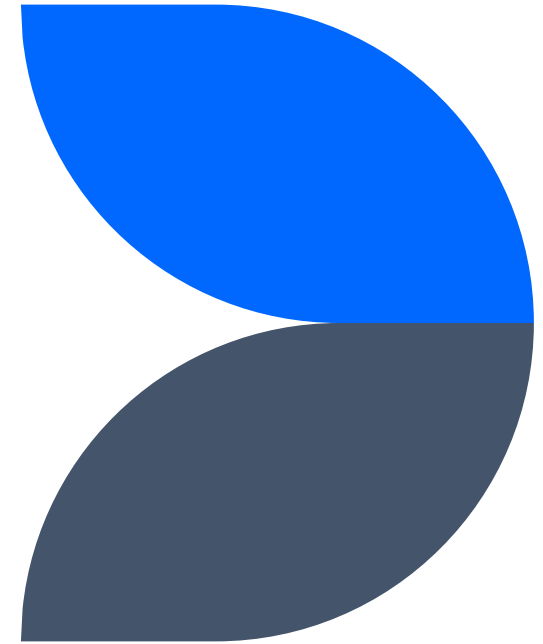
CASE ABSTRACTION METHODS: PROS/CONS

Concurrent – real time clinical analysis, can catch some Core Measure/Quality outliers, teach staff about stroke measures/documentation, and communicate timely process issues for QI. Difficult to accurately identify who is on your list, may capture case data on non-strokes(traumatic etc.) or double entry of data.

Retrospective- can “batch” entry of cases when timing is good, based on final case ICD 10 coding.

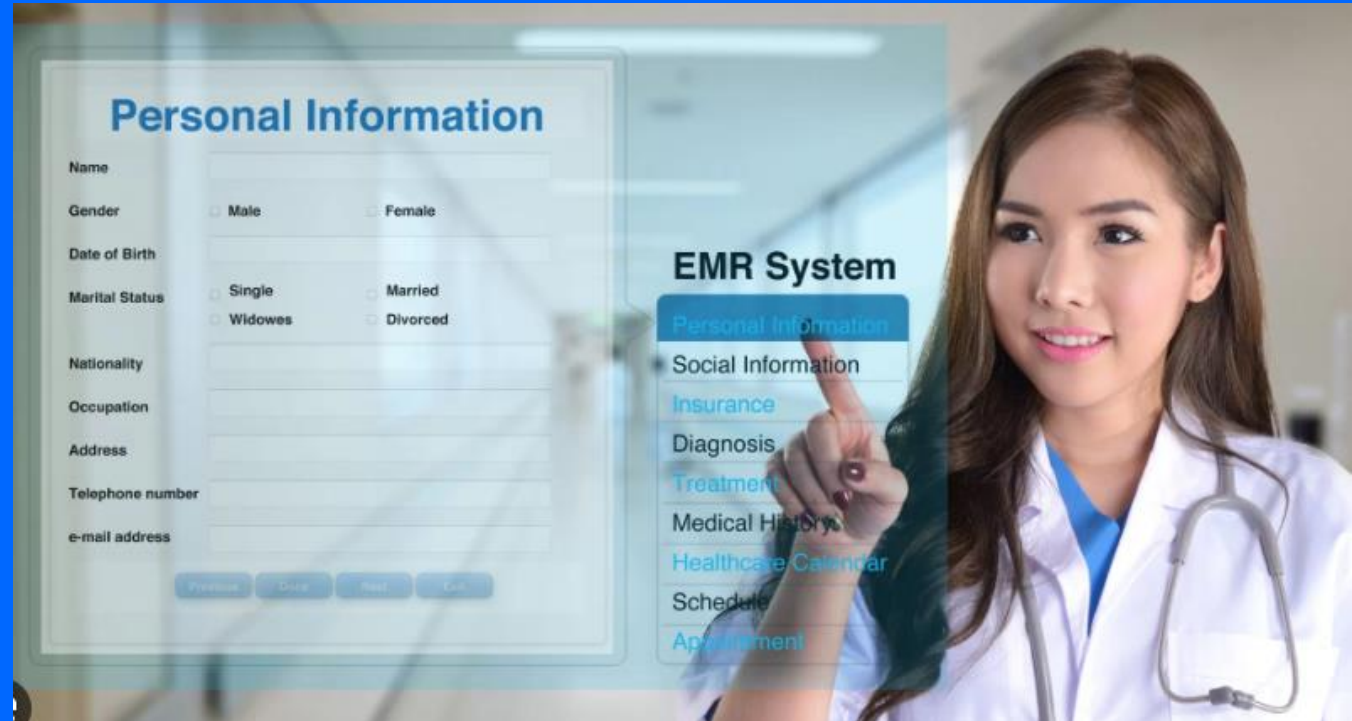
Combination – captures pros from both above, concurrent lists feed daily abstraction and review, day may carryover, monthly diagnosis report to ensure all cases captured.

REDUCING ABSTRACTION TIME? EPIC UPLOADER TO GWTG: BASICS AND OUR PROCESS



IMPLEMENTATION AND NEW ABSTRACTION PROCESS STEPS

- ❑ Build a Case Abstraction-”Tool” Smart Form in EPIC-identify data points to be pulled
- ❑ Create a File of all cases (with IMT)
- ❑ Upload File to INQVIA/GWTG & Check errors
- ❑ Verifying and Saving Complete
- ❑ Developing routine of Upload



PROJECT TIMELINE



CASE ABSTRACTION “TOOL” OR RECORD

- Must have IMT Support and Expertise
- Must put your IMT “hat on” and relate to a non-clinical person
- Can pre-fill or pull discrete data points from EMR (labs, date/times)
- Our design is based on old platform, same fields
- Case is started in GWTG
- Customized to give biggest help or time saver

Brain Sidebar Summary American Heart Associate Get with the...

American Heart Associate Get with the Guidelines- Stroke

Demographics Admin Admission Hospitalization Advanced Stroke Care Discharge Special Initiatives

Admin

Populate Validate

Admin

Arrival Date/Time: 10/12/... 7:16 AM

Admit Date: 10/12/...

Final clinical diagnosis related to stroke

Ischemic Stroke	Transient Ischemic Attack (<24 hours)	Subarachnoid Hemorrhage
Intracerebral Hemorrhage	Stroke not otherwise specified	No stroke related diagnosis
Elective Carotid Intervention only		

Was the Stroke etiology documented in the patient medical record? Yes No

When is the earliest documentation of comfort measures only?

Day 0 or 1 Day 2 or after Timing unclear Not Documented/UTD

Discharge Date/Time:

Not Admitted:

Yes, not admitted **No, patient admitted as inpatient**

For patients discharged on or after 04/01/2011: What was the patient's discharge disposition on the day of discharge?

Home	Hospice - Home	Hospice - Health Care Facility
Acute Care Facility	Other Health Care Facility	Expired
Left Against Medical Advice/AMA	Not Documented/UTD	

← Previous → Next

Status: New **Ready for Export (E)**

CASE ABSTRACTION “TOOL” OR RECORD

American Heart Associate Get with the Guidelines- Stroke

Demographics Admin Admission Hospitalization Advanced Stroke Care Discharge Special Initiatives

symptom onset, done at any facility

Was acute vascular or perfusion imaging (e.g. CTA, MRA, DSA) performed at your hospital? Yes No

Date/Time 1st vessel or perfusion imaging initiated at your hospital: 10/17/2023 8:00 Date/Time

If yes, type of vascular imaging (select all that apply)

<input checked="" type="checkbox"/> CTA	<input type="checkbox"/> CT Perfusion	<input type="checkbox"/> MRA
<input type="checkbox"/> MR Perfusion	<input type="checkbox"/> DSA (catheter angiography)	

Was a target lesion (large vessel occlusion) visualized? Yes No/ND

Additional Time Tracker

Date/Time Stroke Team Activated:	1... 8:00	Date/Time	<input type="text" value="Unknown"/>
Date/Time of ED Physician Assessment:	1... 8:00	Date/Time	<input type="text" value="Unknown"/>
Date/Time IV alteplase Ordered:		Date/Time	<input type="text" value="Unknown"/>
Date/Time Lab Tests Ordered:	1... 8:00	Date/Time	<input type="text" value="Unknown"/>
Date/Time Stroke Team Arrived:	1... 8:00	Date/Time	<input type="text" value="Unknown"/>
Date/Time Neurosurgical services consult:		Date/Time	<input type="text" value="Unknown"/>
Date/Time Brain Imaging Interpreted:	1... 9:00	Date/Time	<input type="text" value="Unknown"/>
Date/Time Lab Tests Completed:	1... 9:00	Date/Time	<input type="text" value="Unknown"/>
Date/Time Neurointerventional Team Activation		Date/Time	<input type="text" value="Unknown"/>
Date/Time Pt Arrival in Neurointerventional Suite		Date/Time	<input type="text" value="Unknown"/>

IV Thrombolytic Therapy

IV thrombolytic initiated at this hospital? Yes No

Hospitalization Tab

American Heart Associate Get with the Guidelines- Stroke

Demographics Admin Admission Hospitalization Advanced Stroke Care Discharge Special Initiatives

Was patient treated for a urinary tract infection (UTI) during this admission? Yes No

Active bacterial or viral infection at admission or during hospitalization:

<input type="checkbox"/> Bacterial Infection
<input type="checkbox"/> Emerging Infectious Disease
<input type="checkbox"/> Other Infectious Respiratory Pathogen
<input type="checkbox"/> Seasonal Cold
<input type="checkbox"/> Influenza
<input type="checkbox"/> Other Viral Infection
<input type="checkbox"/> None/ND

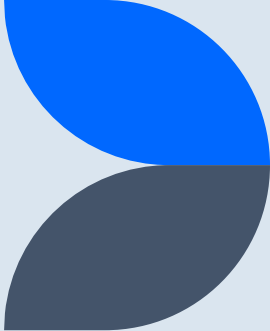
Measurements (first measurement upon presentation to your hospital)

Total chol (mg/dl):	<input type="text" value="225"/>
Triglycerides (mg/dl):	<input type="text" value="107"/>
HDL (mg/dl):	<input type="text" value="85"/>
LDL (mg/dl):	<input type="text" value="120"/>
Lipids: NC <input type="checkbox"/>	Lipids: ND <input type="checkbox"/>
A1C (%):	<input type="text" value="5.2"/>
A1C: ND <input type="checkbox"/>	
Blood Glucose (mg/dl) (required if patient received IV alteplase):	<input type="text" value="192"/>
	<input type="radio"/> ND <input type="radio"/> Too Low <input type="radio"/> Too High
Serum Creatine:	<input type="text" value="0.71"/> <input type="checkbox"/> ND
INR:	<input type="text" value="1.0"/> <input type="checkbox"/> ND <input type="checkbox"/> NC
What is the first platelet count obtained prior to or after hospital arrival?	<input type="text" value="161"/>
Is there documentation in the medical record that the INR value performed closest to hospital arrival was greater than 1.4?	<input type="radio"/> Yes <input checked="" type="radio"/> No

← Previous → Next

Status: New Ready for Export (E)

CREATING THE FILE “BUSINESS OBJECTS”



Software used to pull data into useable form for analytics

The screenshot shows a software interface with a navigation map on the left and a main data area. The main area displays the title "UPSTATE University Health System" and "GWTG Stroke". Below this, there is a "#ERROR" message and a table with columns for various patient attributes. A "Prompts" dialog box is open in the foreground, showing a "Prompts Summary" section with two entries: "Enter Start Date 4/1/2023 12:00:00 AM" and "Enter End Date 4/30/2023 12:00:00 AM". The "Enter Start Date" field is currently filled with "4/1/2023 12:00:00 AM". The dialog box also includes "OK" and "Cancel" buttons.

PAT_MRN_ID	patient_display_id	sex	patgenid	patgenidoth	patorien	patorienoth	dob	age	homeless	zip	paysource	race	asian	hawaiian	hisehni	ethnicys	stroketype	strokemimics	etio	

UPLOADING THE FILE

Errors? What to do and how to figure it out

Facility Details

Name: [Upstate Medical University](#)

ID: [35707](#)

City: [Syracuse](#)

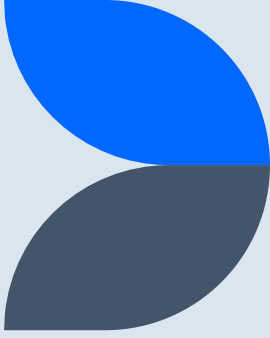
State: [New York](#)

Form Type:

[Upload File](#) [Check Mapping](#) [Format Review](#) [Validate File](#)

Drag and Drop File Here to Upload
-or-
Choose File from Computer
(Max File Size: 50 MB)

CHECKING ERRORS AND VALIDATION



Errors may be a data entry, a program error or a mapping issue when data goes from EPIC to the file.

Uploader Validation Report

File Based Issue

VALIDATION ALE...	MESSAGE
Passed	File Upload Co...

Validation Alert Summary

VALIDATION ALERT

- Critical
- Error
- warning

Alerts by Uploaded Records

Record ID	Patient Display ID	Form Name	Critical
3	(Empty)		2
7	(Empty)		1
15	(Empty)		2

Records Level Validation

Validation St...	Form Name	Patient Displ...	Message	Error Type	Access Case
Critical			critical : sd1-h...	ValidationError...	
Critical			Cannot save f...	Warning/Error ...	
Critical			019141013 alr...	Warning/Error ...	
Critical			critical : sd1-fa...	ValidationError...	
Critical			Cannot save f...	Warning/Error ...	

DEVELOP A ROUTINE



A process that made sense for us and our staffing to ensure that all cases are being uploaded, and work-flow needs are met.

Process goes quick now that the kinks are worked out!

NEW PROCESS: ABSTRACTION CASE SCENARIO

Sunday evening, patient M Smith came in through the ER with L weakness, slurred speech, got TNK and was still in the ICU when the abstractor came in Monday morning. Patient was then discharged Wednesday afternoon to home.



Phase I – Monday

- ✓ **Admission** Info reviewed within EPIC and new abstraction tool started in EPIC AHA tab
- ✓ Patient added to “Stroke Follow” shared list in EPIC

Phase II- Thursday

- ✓ List shows patient Smith is **discharged**. Case assigned a GWTG ID. Case abstraction tool is re-opened in EPIC, discharge and other information is added to the case.
- ✓ Case marked “ Ready for Export”

ABSTRACTION CASE SCENARIO (cont)



Phase III – Tuesday (weekly)

- ✓ Business Objects program is run to extract all cases marked “Ready for **Export**” (from previous Monday –Sunday) and creates a very large Excel file. This file is named and saved and printed for future reference.
- ✓ Abstractor signs on to GWTG Upload section and selects the file and Uploads it
- ✓ Error reports are checked until all cases are loaded

Phase IV – Tuesday

- ✓ List of the file of exported cases is **checked** case by case in GWTG to correct any errors or add ICD10 or procedure codes as required and marked as “Complete”.

DID WE GET THEM ALL.....



- Validating that all strokes were uploaded... Compare file list to an internal database.
- Can be a report if doing retrospective. Can compare to your file lists

WORTH IT?...IS IT THOUGH?..... YES!

TIME SAVED! ~ 30% to 50% faster from old process

- From fields automatically pulled from EPIC EMR
- Upload process loads multiple cases quickly (10-12 min to run the report- 2 minutes for actual upload)
- Shifts the focus of the task to the Quality of the data/process vs correctness of the typing and data entry
- Time can be used other efforts – Quality, teaching etc.
- More streamlined – One Screen- it is like having GWTG built in

The screenshot displays the EPIC EMR interface for a patient named Tricia Lavender. The left sidebar shows patient information, including name, MRN, and primary provider (Nancy Neuron, MD). The main content area is divided into several sections: Registry Abstraction, Patient Information, Basic Information, Patient Demographics, Hospital Account, Account Information, Admission Information, and Discharge Information. A blue circle highlights the 'Results' tab in the top navigation bar. The right side of the screen shows a detailed discharge form with various fields for patient information, discharge status, and treatments.

Discharge Date/Time	Discharge Disposition	Discharge Destination	Discharge Provider	Unit
None	None	None	None	09F NEUROSCIENCE

LESSONS LEARNED

Old people can learn new things: Be open and **let it go**



We can be so invested in processes we created

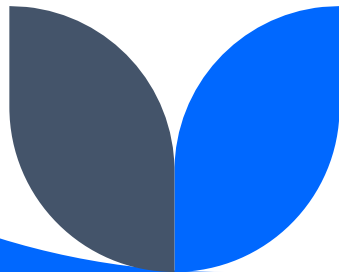
Once open new things come easier

Ask for help with the more technical pieces

Win-Win for both teams!

Trust your translation process: IMT is not healthcare but able to understand and help us make our work-flow more efficient

Establish a management framework from the inside- “you do you”. i.e. What are the biggest timesavers? Does not have to be the whole case tool



WHAT'S NEXT?

ICH Layer

Image Trend/Hospital Hub EMS data integration

TOC form follow up form

SUMMARY



Consider asking for hospital/IMT support for this project



Do analysis of time spent now vs potential savings in your pitch



Be persistent in your request-(worth it)-keep it on your list



Be aware it takes time to implement and trust your process



If you do use the Uploader- Kudos and try to maximize use

THANK YOU!



Lisa Capra- Upstate



Lindsay Bugge- Upstate