



# Billings Clinic

Level I Trauma Center

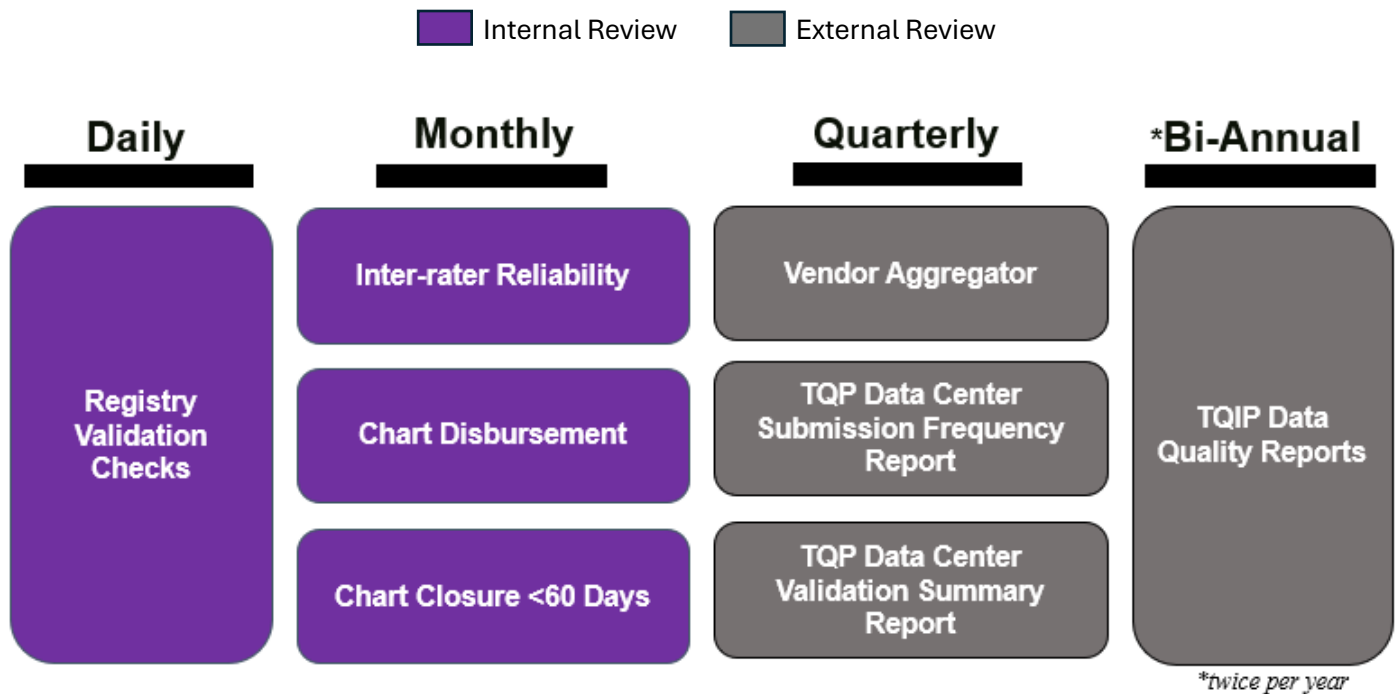
2025 *Internal* Validation Reports

## **Utilization and Tracking Manual**

## **TABLE OF CONTENTS**

I.	Registry Validation Schedule .....	3
II.	Registry Validation Checks .....	3
III.	Inter-rater Reliability (IRR).....	4
	A. IRR Procedure Overview .....	4
	B. Abstract Data .....	5
	1. IRR Validation Process Description .....	5
	2. Data Abstraction .....	6
	C. Validate Data .....	7
	1. IRR Audit Sheets.....	8
	D. Rectify & Report .....	11
	1. Fix registry entry errors .....	11
	2. Report and discuss at monthly IRR meeting .....	11
	E. Track & Trend.....	12
IV.	Chart Disbursement.....	15
V.	Chart Closure $\leq$ 60 Days.....	16

## I. REGISTRY VALIDATION SCHEDULE (EXAMPLE)



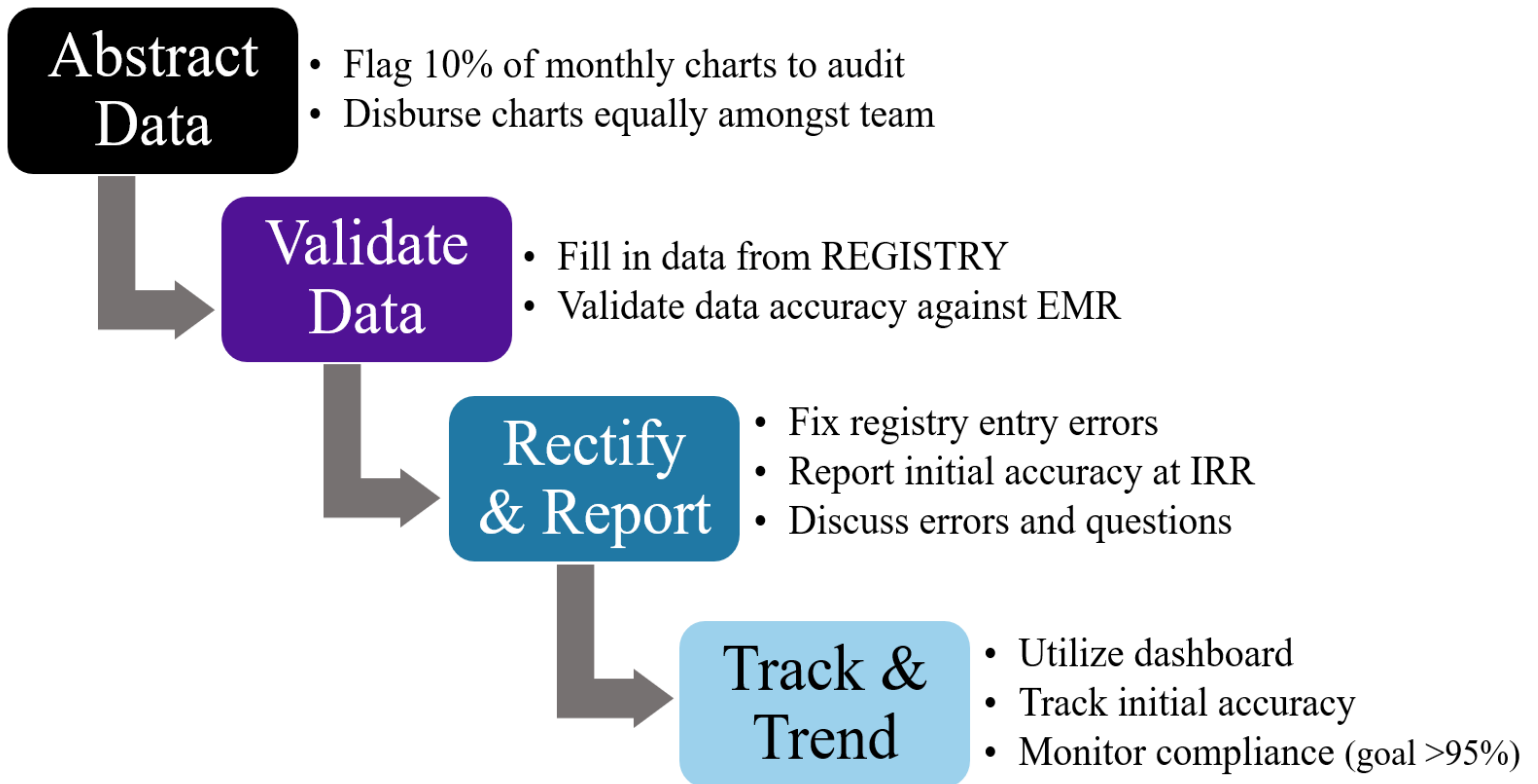
## II. REGISTRY VALIDATION CHECKS

Quick, automatic validation

- Built into trauma registry
- Flags missing and potentially inaccurate data
- Completed on every chart at time of initial closure
- Flags are evaluated and rectified (if applicable) immediately

### III. INTER-RATER RELIABILITY (IRR)

#### A. IRR PROCEDURE OVERVIEW



## **B. ABSTRACT DATA**

### **1. IRR VALIDATION PROCESS DESCRIPTION**

#### Trauma Registry Validation

Goal: To ensure trauma registry entry validity and to hold discussion with the intent to improve process and provide learning opportunities.

The following patients will be flagged for validation based on the following criteria:

1. ISS 12-15 to ensure complete capture of injuries.
2. VAPS complication
3. ED LOS > 1000"
4. No DVT prophylaxis, hospital LOS  $\geq$  3 days, & ISS  $\geq$  10
5. Massive Transfusion Protocol
6. ISS > 24 with no major complications or death
7. LOS > 15 days & no major complications
8. Motor GCS of 1 upon arrival w/ patient surviving & no complications
9.  $\geq$  65yo & no co-morbid conditions
10. ED to IR
11. Unplanned Intubation
12. Open long bone fractures
13. Craniotomies
14. ICP Monitoring
15. Transfer OUT from ED or Inpatient
- 16. Registrar/Team Member Discretion**

#### **Accuracy goal: 95%**

Patients who meet the above criteria will be flagged for review at the monthly Inter-Rater Reliability (IRR) meeting. Registry entry validation for the attached variables will be evaluated and reported for accuracy. Discussions for any questions or accuracy issues will ensue during these meetings.

Errors found during the validation process will be corrected by a trauma registrar.

The validation criteria above have been discussed and agreed upon based on historical TQIP entry errors (VAPS), experience of registrar recognizing areas at risk for having entry error, common flags for data uploads, and other recognized areas considered high risk for entry errors.

*Meeting minutes and validation paperwork will be saved for ACS review and verification.*

ACS requires 5% of all charts are validated. Our goal is to validate 10% of charts. If the above criteria do not flag 10%, or flag >10%, charts will be chosen at random to fulfill the 10% validation goal.

## 2. DATA ABSTRACTION

### 1. Run Reports

Abstract 10% of patients to flag for validation

3. ED LOS >1000 minutes	4. No DVT prophylaxis & hospital LOS ≥ 3 days, ISS ≥10	5. Massive Transfusion Protocol	6. ISS >24 with no major complications or Death	7. LOS >15 days & no major complications	8. Motor GCS of 1 upon arrival w/ patient surviving & no complications	9. > 65yo & no co-morbid conditions	10. ED to IR	11. Unplanned Intubation	12. Open long bone fractures	13. Craniotomies	14. ICP Monitoring	15. Transfer OUT from ED or Inpatient
20240976	#CALC!	20241041	20240950	20240999	20240979	20240951	#CALC!	20241024	20240943	20241008	20240957	#CALC!
20241002		20241043	20240999	20241007	20240988	20240954			20240954		20241008	
20241035			20241027	20241065		20241025			20240980			
			20241034			20241033			20241000			

Review Month: <u>October</u>		Percentage review <u>23.0</u> %	
All Trauma Pts for review		10% Review = <u>13</u> Patients	
Audit Item Hits	Original Registrar	Assignment	PT INFO
20241070	2		
FALSE			
20241077	1		
20241081	1		
20241089	1		
20241097	1		
20241101	1		
20241104	1		
20241107	1		
20241109	1		
20241114	1		
20241118	1		
20241119	1		
20241124	2		
20241128	1		
20241132	2		
20241143	1		
20241144	2		

**Dashboard Example:** monthly data abstraction to flag IRR charts

### 2. Equally disburse charts between team members

*\*Staff should NOT audit his/her own initial chart*

## C. VALIDATE DATA

Registrars are assigned to charts and utilize the form found on page 8 for data validation following these steps:

1. Initial elements are obtained utilizing information currently IN THE TRAUMA REGISTRY
2. Data is then validated (same registrar) by comparing the data transposed to audit sheets and information in the Electronic Medical Record (EMR)
3. Each element is then marked as being correct or incorrect
4. After evaluating all elements, initial registry accuracy is calculated

\*Staff should NOT audit his/her own initial chart

# 1. IRR AUDIT SHEETS

Trauma #:	Initials:	IRR Meeting Date:	Registrar to revise:	Date:	Approved:
IRR revised accuracy:		Re-abstraction Accuracy (of all pages) /			

**Billings Clinic Registry Abstraction Tool (Inter-Rater Reliability)**

Re-Abtractor	Re-abstraction Date	Initial Abtractor	Initial Accuracy %
IRR FLAGS			
INJURY DETAILS			

‡ Elements extracted exactly from VS registry  
† Verified by re-abtractor for accuracy

DATA ELEMENT ‡	DATA ‡	CORRECT †	COMMENTS
Trauma#		Y <input type="checkbox"/> N <input type="checkbox"/>	
MRN		Y <input type="checkbox"/> N <input type="checkbox"/>	
FIN		Y <input type="checkbox"/> N <input type="checkbox"/>	
AGE		Y <input type="checkbox"/> N <input type="checkbox"/>	
Arrival Date		Y <input type="checkbox"/> N <input type="checkbox"/>	
Trauma Activation		Y <input type="checkbox"/> N <input type="checkbox"/>	
Mode of Arrival (to BC)		Y <input type="checkbox"/> N <input type="checkbox"/>	
EMS Agency (to BC)		Y <input type="checkbox"/> N <input type="checkbox"/>	
ED Arrival Time		Y <input type="checkbox"/> N <input type="checkbox"/>	
ED Discharge Time		Y <input type="checkbox"/> N <input type="checkbox"/>	
ED LOS		Y <input type="checkbox"/> N <input type="checkbox"/>	
ED Dispo		Y <input type="checkbox"/> N <input type="checkbox"/>	
Blood Tracking		Y <input type="checkbox"/> N <input type="checkbox"/>	
Massive Transfusion	Y <input type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/>	
Vent Days		Y <input type="checkbox"/> N <input type="checkbox"/>	
ICU Days		Y <input type="checkbox"/> N <input type="checkbox"/>	
ISS		Y <input type="checkbox"/> N <input type="checkbox"/>	
Admitting Services		Y <input type="checkbox"/> N <input type="checkbox"/>	
DC DATE		Y <input type="checkbox"/> N <input type="checkbox"/>	
Hospital LOS		Y <input type="checkbox"/> N <input type="checkbox"/>	
NTDB Complications	Y <input type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/>	
ACS Question Fallouts	Y <input type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/>	
Open Long Bone FX?	Y <input type="checkbox"/> N <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/>	
Temperature in ED		Y <input type="checkbox"/> N <input type="checkbox"/>	
Weight / Height	Weight: <input type="checkbox"/> <input type="checkbox"/> Height: <input type="checkbox"/> <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/>	
BMI		Y <input type="checkbox"/> N <input type="checkbox"/>	

Accuracy / 26

PROVIDER ‡	CALLED ‡	ARRIVED ‡	TIMELINESS ‡	CORRECT †	Comments
			Y <input type="checkbox"/> other <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/>	
			Y <input type="checkbox"/> other <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/>	
			Y <input type="checkbox"/> other <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/>	
			Y <input type="checkbox"/> other <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/>	
			Y <input type="checkbox"/> other <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/>	
			Y <input type="checkbox"/> other <input type="checkbox"/>	Y <input type="checkbox"/> N <input type="checkbox"/>	

1 of 3
Accuracy /
V3. Revised 11/5/2024

Validate  
Data

Billings Clinic

### Billings Clinic Registry Abstraction Tool (Inter-Rater Reliability)

‡ Elements extracted exactly from V5 registry  
† Verified by re-abstractor for accuracy

ICD10 PROCEDURE CODES ‡	PROCEDURE ‡	LOCATION ‡	CORRECT †
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>

Accuracy  /

CODE ‡	CO-MORBIDS ‡	CORRECT †
		Y <input type="checkbox"/> N <input type="checkbox"/>
		Y <input type="checkbox"/> N <input type="checkbox"/>
		Y <input type="checkbox"/> N <input type="checkbox"/>
		Y <input type="checkbox"/> N <input type="checkbox"/>
		Y <input type="checkbox"/> N <input type="checkbox"/>
		Y <input type="checkbox"/> N <input type="checkbox"/>

Accuracy  /

ICD10 E CODES ‡	PreDot CODES (AIS) ‡	INJURY CODES DESCRIPTION (INJURIES SUSTAINED) ‡	CORRECT †
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>
			Y <input type="checkbox"/> N <input type="checkbox"/>

Accuracy  /

NTDB Complications & ACS Question Fallouts ‡	CORRECT †
	Y <input type="checkbox"/> N <input type="checkbox"/>
	Y <input type="checkbox"/> N <input type="checkbox"/>
	Y <input type="checkbox"/> N <input type="checkbox"/>
	Y <input type="checkbox"/> N <input type="checkbox"/>
	Y <input type="checkbox"/> N <input type="checkbox"/>
	Y <input type="checkbox"/> N <input type="checkbox"/>
	Y <input type="checkbox"/> N <input type="checkbox"/>
	Y <input type="checkbox"/> N <input type="checkbox"/>
	Y <input type="checkbox"/> N <input type="checkbox"/>

Accuracy  /

2 of 3 V3. Revised 11/5/2024

Validate  
Data

**Billings Clinic Registry Abstraction Tool (Inter-Rater Reliability)**

‡ Elements extracted exactly from V5 registry  
† Verified by re-abstractor for accuracy

TQIP CORE Questions ‡	E CODES DESCRIPTION ‡	CORRECT †
MEETS HEAD INJURY TRACKING CRITERIA?		Y <input type="checkbox"/> N <input type="checkbox"/>
MEETS OPEN FRACTURE CRITERIA?		Y <input type="checkbox"/> N <input type="checkbox"/>
TQIP Venous Thromboembolism Prophylaxis ‡	E CODES DESCRIPTION ‡	CORRECT †
TIME OF FIRST VTE PROPHYLAXIS ADMINISTERED		Y <input type="checkbox"/> N <input type="checkbox"/>
DATE OF FIRST VTE PROPHYLAXIS ADMINISTERED		Y <input type="checkbox"/> N <input type="checkbox"/>
TYPE OF FIRST VTE PROPHYLAXIS ADMINISTERED		Y <input type="checkbox"/> N <input type="checkbox"/>

Accuracy  / 5

TQIP BLOOD PRODUCTS ‡	DATA ‡	CORRECT †	TQIP WD OF LIFE SUPPORT INDICATORS ‡	DATA ‡	CORRECT †
TRANSFUSION BLOOD		Y <input type="checkbox"/> N <input type="checkbox"/>	TQIP_WD OF LIFE SUPPORT (Y/N)		Y <input type="checkbox"/> N <input type="checkbox"/>
WHOLE BLOOD		Y <input type="checkbox"/> N <input type="checkbox"/>	""TIME OF WD OF LIFE SUPPORTING TREATMENT		Y <input type="checkbox"/> N <input type="checkbox"/>
TRANSFUSION PLASMA		Y <input type="checkbox"/> N <input type="checkbox"/>	""DATE OF WD OF LIFE SUPPORTING TREATMENT		Y <input type="checkbox"/> N <input type="checkbox"/>
TRANSFUSION PLATELETS		Y <input type="checkbox"/> N <input type="checkbox"/>	**Comfort Care order date/time		
CRYOPRECIPITATE		Y <input type="checkbox"/> N <input type="checkbox"/>	TQIP OPEN FRACTURE INDICATORS ‡	DATA ‡	CORRECT †
ANGIOGRAPHY <small>for hemorrhage control only</small>		Y <input type="checkbox"/> N <input type="checkbox"/>	TQIP_OPEN_FX_PROMPT (Y/N)		Y <input type="checkbox"/> N <input type="checkbox"/>
ANGIOGRAPHY DATE		Y <input type="checkbox"/> N <input type="checkbox"/>	OPEN_FX_ANTIBIOTIC		Y <input type="checkbox"/> N <input type="checkbox"/>
ANGIOGRAPHY TIME		Y <input type="checkbox"/> N <input type="checkbox"/>	""OPEN_FX_ANTIBIOTIC_TIME		Y <input type="checkbox"/> N <input type="checkbox"/>
EMBOLIZATION SITE		Y <input type="checkbox"/> N <input type="checkbox"/>	""OPEN_FX_ANTIBIOTIC_DATE		Y <input type="checkbox"/> N <input type="checkbox"/>
SURGERY FOR HEMORRHAGE CONTROL TYPES		Y <input type="checkbox"/> N <input type="checkbox"/>	**May use dose from outside hospital, if no administration time, will use discharge time		
SURGERY FOR HEMORRHAGE CONTROL DATE		Y <input type="checkbox"/> N <input type="checkbox"/>	TQIP TBI INDICATORS ‡	DATA ‡	CORRECT †
SURGERY FOR HEMORRHAGE CONTROL TIME		Y <input type="checkbox"/> N <input type="checkbox"/>	TQIP_TBI_PROMPT (Y/N)		Y <input type="checkbox"/> N <input type="checkbox"/>
User Defined QA tracking Fields ‡	DATA ‡	CORRECT †	TBI_TOTAL_GCS <small>highest on calendar day after ICI/trauma arrival</small>		Y <input type="checkbox"/> N <input type="checkbox"/>
NSG did NOT evaluate w/in 30min per crit		Y <input type="checkbox"/> N <input type="checkbox"/>	TBI_MOTOR_GCS		Y <input type="checkbox"/> N <input type="checkbox"/>
Ortho did NOT arrive w/in 30min per crit		Y <input type="checkbox"/> N <input type="checkbox"/>	TBI_GCS_QUALIFIERS		Y <input type="checkbox"/> N <input type="checkbox"/>
Vascular did NOT arrive w/in 30min per crit		Y <input type="checkbox"/> N <input type="checkbox"/>	TBI_PUPIL_RESPONSE		Y <input type="checkbox"/> N <input type="checkbox"/>
Radiology did NOT arrive w/in 30min per crit		Y <input type="checkbox"/> N <input type="checkbox"/>	TBI_MIDLINE_SHIFT		Y <input type="checkbox"/> N <input type="checkbox"/>
Cardiothoracic did NOT arrive w/in 30min per crit		Y <input type="checkbox"/> N <input type="checkbox"/>	TBI_CEREBRAL_MONITOR		Y <input type="checkbox"/> N <input type="checkbox"/>

Discussion Points: Accuracy  / 17

Resolution/Action Plan:

Revision Verification: Revision Date/Time/Signature:

## **D. RECTIFY & REPORT**

### **1. FIX REGISTRY ENTRY ERRORS**

Registrar assigned to chart will rectify data entry errors if they don't have further clarification questions.

### **2. REPORT & DISCUSS AT MONTHLY IRR MEETING**

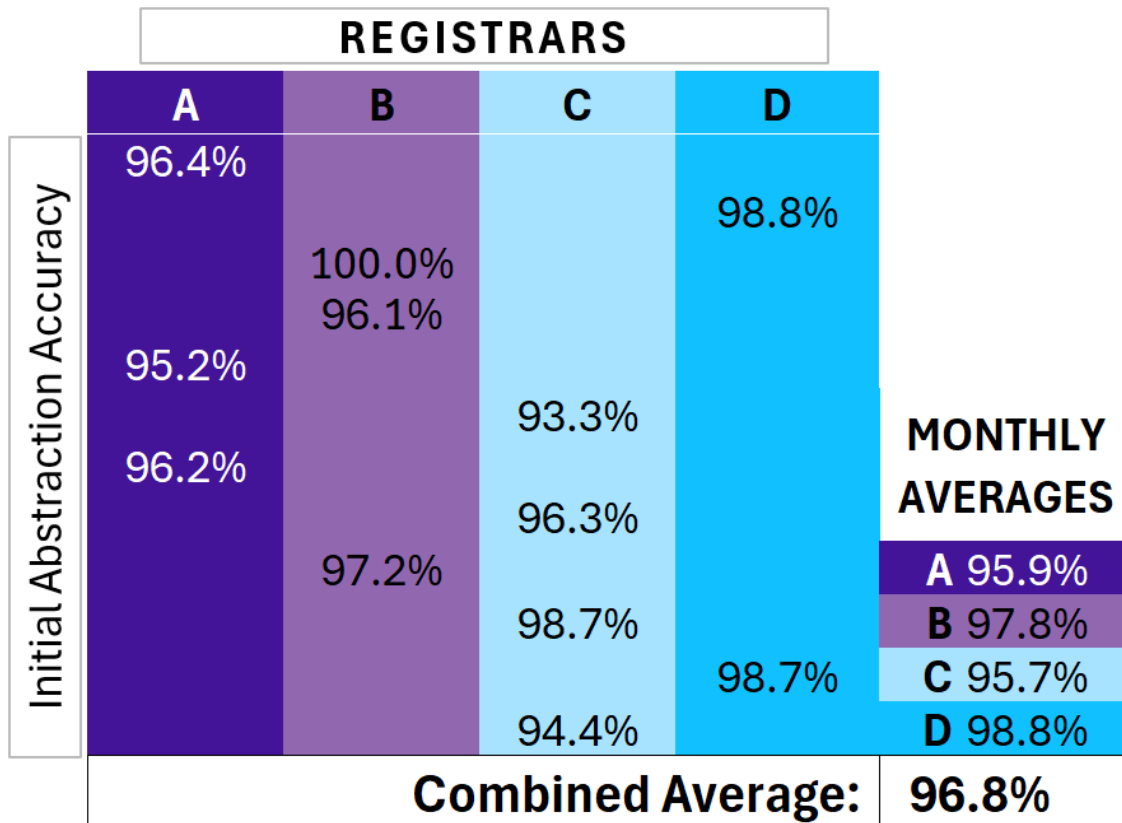
Monthly IRR Meetings Include:

1. Reporting of each chart initial accuracy
2. Describe discrepancies and the steps taken to rectify errors
3. Discuss questions and concerns from each chart
4. IRR meetings will also report out other internal validations
  - a. Chart Disbursement (details on page 15)
  - b. Chart Closure  $\leq 60$  days (details on page 16)
5. Open forum for discussion and other registry-related needs/concerns

**E. TRACK & TREND**

Utilize a dashboard to track and trend:

1. Individual registrar monthly accuracy
  - a. Individual Year to Date (YTD) average accuracy
2. Combined monthly accuracy
  - a. Combined YTD average accuracy
3. Compare combined accuracy across years
4. Compare individual accuracy across years



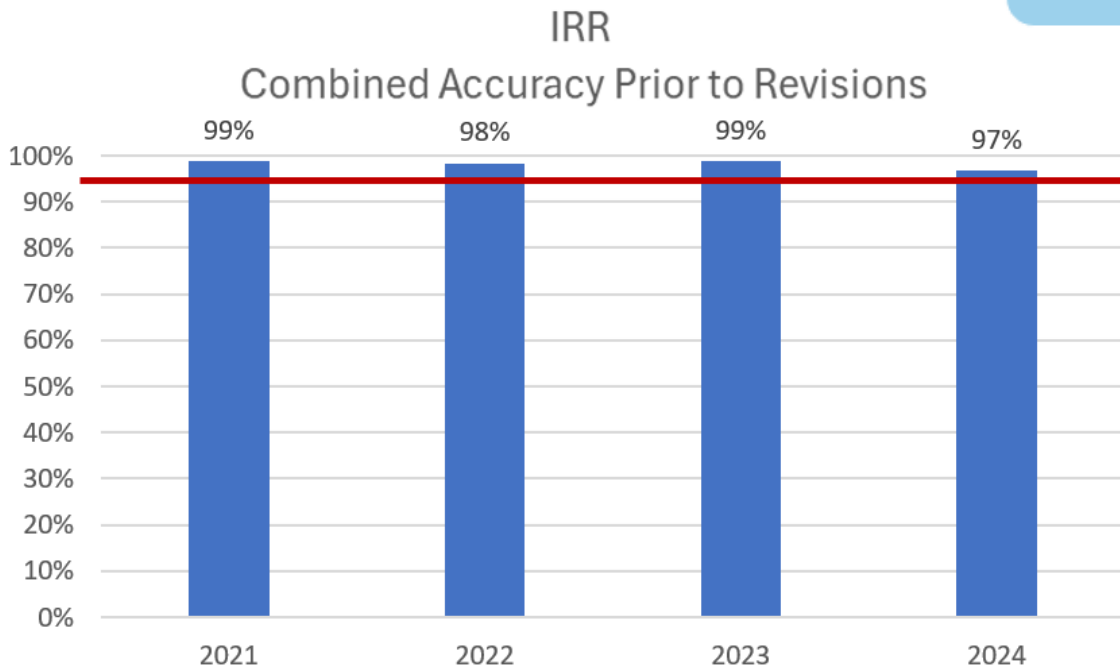
**Dashboard Example:** one month IRR initial accuracy (individual and combined)

	MONTHLY REGISTRAR Accuracy				YTD Registrar Accuracy	
	A	B	C	D	A	
January	99.0%	90.0%	99.7%	n/a	98.8%	
February	99.0%	99.0%	96.4%	n/a	96.8%	
March	98.5%	98.2%	98.6%	n/a	98.3%	
April	99.8%	98.8%	99.3%	n/a	98.8%	
May	98.0%	97.7%	98.7%	n/a		
June	n/a	97.3%	98.2%	n/a		
July	98.9%	89.0%	99.3%	n/a		
August	99.7%	97.4%	96.8%	n/a		
September	99.3%	96.0%	99.1%	n/a		
October	97.7%	97.9%	99.6%	n/a		
November	99.1%	97.1%	98.0%	n/a		
December	95.9%	97.8%	95.7%	98.8%		

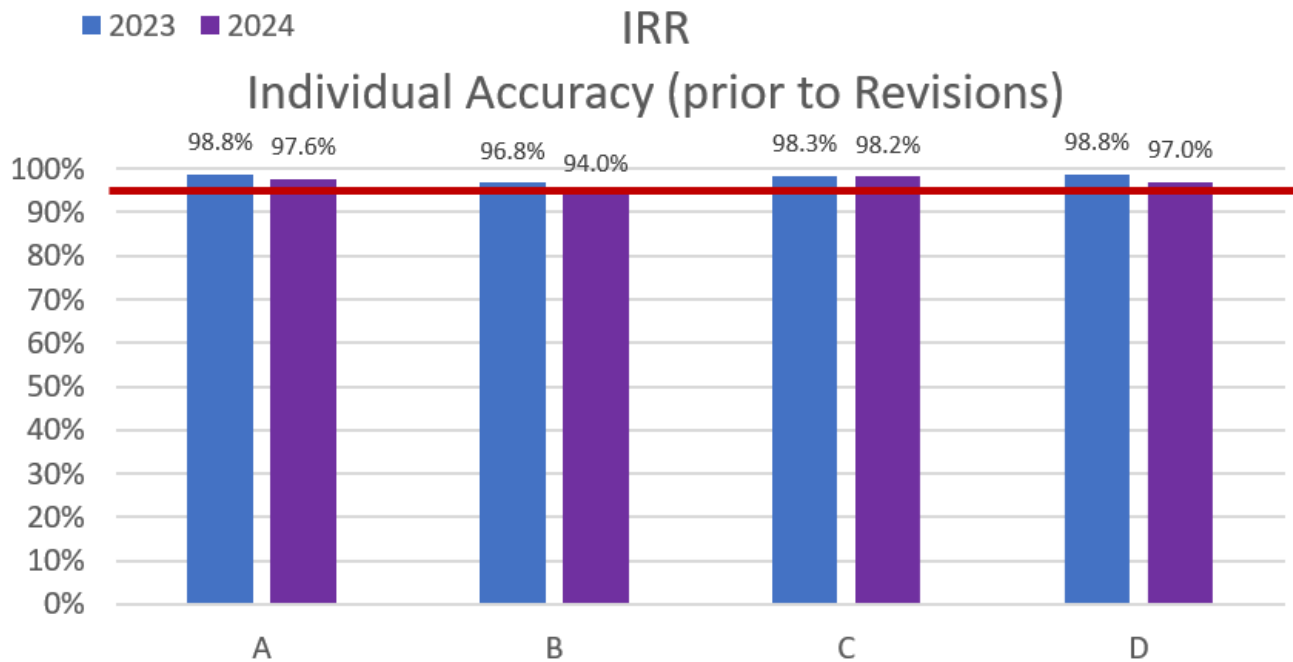


Month	Average % of Accuracy PRIOR to revisions	% accurate after revisions	2023	Month	% of charts validated
February	98.3%	100%	February	10%	
March	98.5%	100%	March	10%	
April	99.5%	100%	April	10%	
May	98.2%	100%	May	10%	
June	97.7%	100%	June	10%	
July	97.6%	100%	July	10%	
August	98.3%	100%	August	10%	
September	98.7%	100%	September	10%	
October	98.4%	100%	October	10%	
November	98.2%	100%	November	10%	
December	96.8%	100%	December	10%	
		98.19%	YTD % of reviewed charts:	10%	

**Dashboard Example:** one year IRR initial accuracy (individual and combined)



**Data Example:** combined accuracy, yearly comparison



**Data Example:** individual accuracy, yearly comparison

### IV. CHART DISBURSEMENT

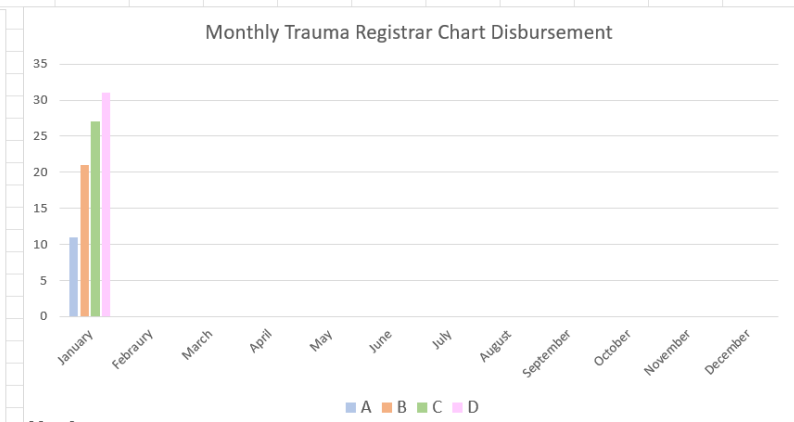
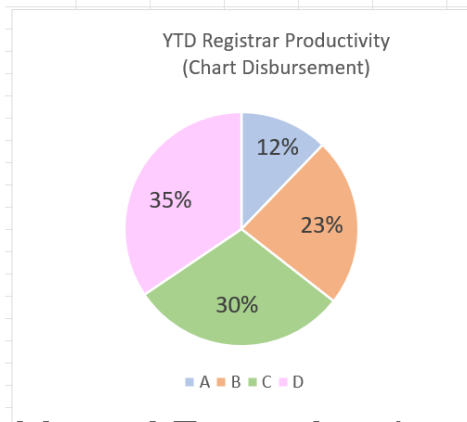
Productivity review to promote equal work disbursement.

Reported monthly at IRR.

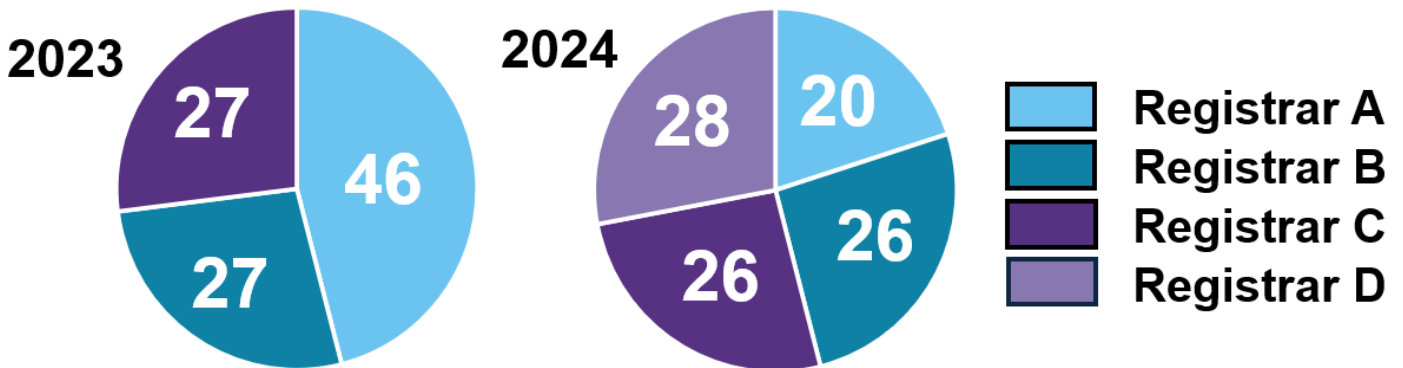
1. Run data (monthly) and enter onto dashboard
2. Report at monthly IRR
3. Track & trend data
4. Address issues as necessary

\*Consider instances that would affect disbursement (vacation, medical leave, FTE, other responsibilities, etc.)

	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
A	11												11
B	21												21
C	27												27
D	31												31
<b>Total Charts</b>	<b>90</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>90</b>



**Dashboard Example: chart disbursement** \*Registrar A in this example is per diem



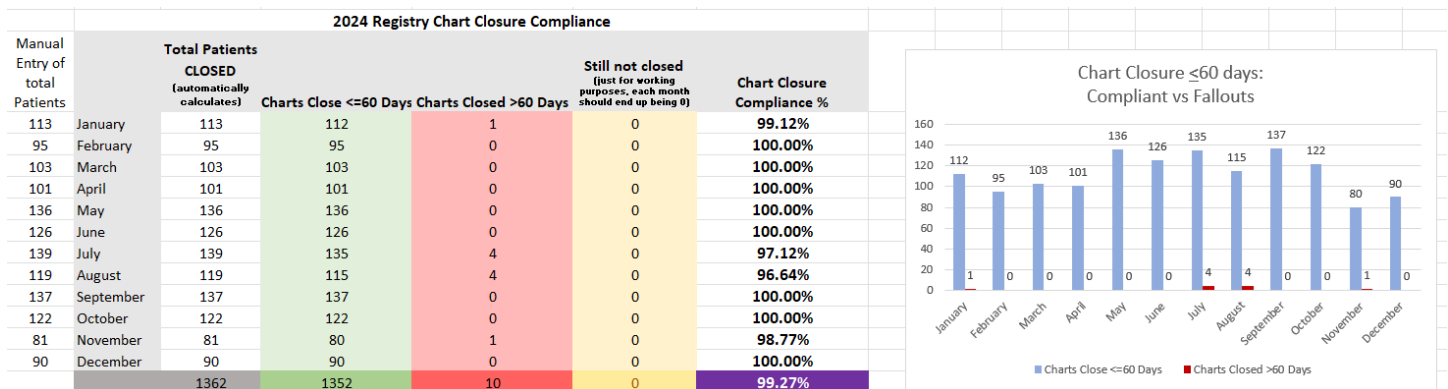
**Data Example: chart disbursement comparison 2023 - 2024**

## V. CHART CLOSURE ≤60 DAYS

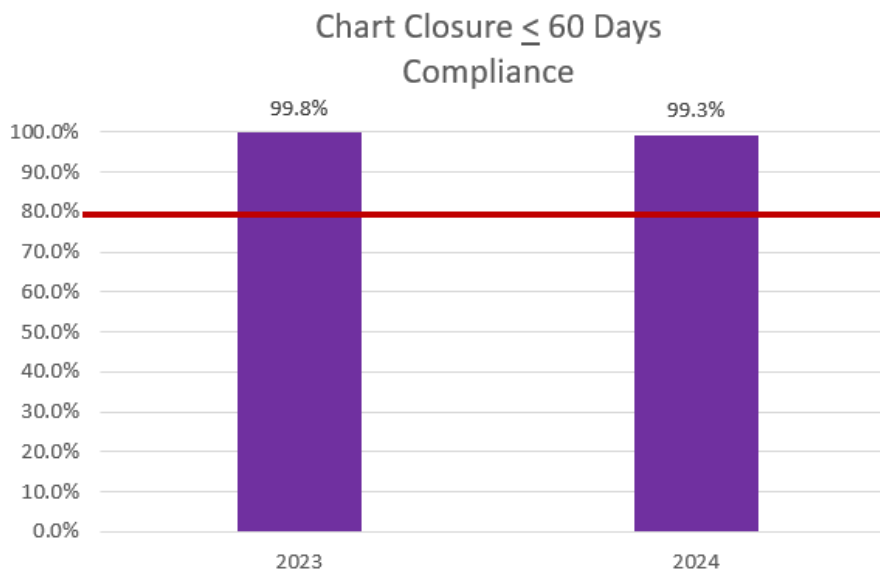
Ensures compliance as outlined by the ACS:  
*At least 80% of charts must be closed out within 60 days*

Reported monthly at IRR.

1. Run data (monthly) and enter onto dashboard
2. Report at monthly IRR
3. Track & trend data
4. Address issues as necessary



**Dashboard Example:** chart closure compliance (monthly and YTD comparison)



**Data Example:** chart closure compliance (2023 – 2024 comparison)