

Working smarter, not harder: A process for trauma registry concurrent chart abstraction at a level 2 trauma center

Stephanie Vega, MBA, BSN, RN, CCRN-K, CSTR; Regina Krell, BSN, RN, CEN, TCRN; Robbie Dumond, BSN, RN, TCRN, AEMT; Kathy Hoyland, CAISS, CSTR; Lori Kennard, RHIA, CSTR, CAISS; Peggy Clark, BSN, RN; Michelle Bowers; Eve Lindemann, BSN, RN, CCRN; Andrea Mullen, BSN, RN, CCRN, TCRN; Amber Lorman, BSN, RN, TCRN

INTRODUCTION

- Trauma service department growth leads to additional personnel which over time necessitates a review of workflows to evaluate redundancies
- Abstraction requirements may vary between centers affecting productivity
- Adopting concurrent abstraction includes challenging the status quo
- Concurrent registry abstraction leads to concurrent performance improvement

OBJECTIVES

- Understand the various strategies that promote concurrent registry abstraction
- Recognize the challenges associated with concurrent abstraction
- Identify strategies to reduce redundancies in workflow processes which promotes concurrent abstraction
- How a level 2 trauma center can implement the strategies to become concurrent

INTERVENTIONS

- Pre-Intervention: The team met and agreed on the value and benefit of concurrent abstraction
- Step 1: Reduce time spent per chart
- Pared down abstracting variables that are not required
 - Reviewed State and NTDB required variables and turned off 6 fields, as well as popups, not required
 - Evaluated workflow redundancies
 - Eliminated spreadsheet redundancies by 9 data points
 - Incorporate TNCs into registry abstraction
 - TNC's began entering 18 "up-front" data points that they were reviewing for PI already
 - Data download options used
 - 16 data points download automatically from EMR to trauma registry software

- Step 2: Catch up
- Registrars assigned new patients daily
 - Continued to work on old charts (meet in the middle)

- Step 3: Continuous re-evaluation
- Implemented weekly trauma registry meetings

Estimated Time Savings			
Data Points	Seconds saved	Seconds per chart	Total Hours Saved per 1000 charts
43	5	215 (3.58m)	~60 hrs
43	10	430 (7.16m)	~119 hrs
43	15	645 (10.75m)	~ 179 hrs

ARRIVAL DATE	DC DATE	PATIENT NAME	AGE/SEX	MRN	ACCT ID	RM	DX/Mech	TNC FOLLOW UP	ADMIT SVC	ADMIT ATTENDING	TNC	ARRIVAL MEANS	TRIP W/ CHART	ABTRACTOR	Registry #	DONE IN Registry	PI/ SURVEY	65 and over isolated hip fx with same level fall
--------------	---------	--------------	---------	-----	---------	----	---------	---------------	-----------	-----------------	-----	---------------	---------------	-----------	------------	------------------	------------	--

Reduction in non-registry data capture

ARRIVAL DATE	DC DATE	PATIENT NAME	MRN	DX/Mech	TNC	Abstractor	Registry #	DONE IN Registry	Comments
2/1/2018		****	*****	fall from standing, humerus fx	EL	PC	***		
2/1/2018		****	*****	dirt bike accident, left 2-7 rib fxs, small L pulm contusion, tiny apical PTX, T5 TP fx	MA	PC	***	PC	
ALT	2/2/2018	****	*****	MVC, scaphoid fx, L knee effusion	AL	LK	***		
2/1/2018		****	*****	fall, +LOC, SAH	RVK	LK	***		
2/2/2018		****	*****	fall, R hip pain, increasing confusion/Referred In	RVK	LK	***		
ALT	2/3/18	****	*****	Stabbing	AL	PC	***		
ACT	2/3/18	Exp	****	GSW	EL	LK	***		

DISCUSSION/ NEXT STEPS

- The program hired staff throughout 2016. An FTE is dedicated to the CQS, TPM, and Director and 2.0 FTE for outreach and injury prevention taking non-registry burdens from the registry staff.
- For roughly 1400 patients meeting inclusion criteria, there are 2.5 full time employees (FTE) for TNCs and 2.5 FTE for registry staff (560 cases per registrar). The FTE dedicated to registry for our level 2 trauma center is higher than what respondents reported to Day, Fox and Cookman who's mean full-time n = 94 were 1.3 ± 0.7 and part-time n = 52 1.3 ± 0.6 for Level 2 trauma centers (2012). This was prior to American College of Surgeons (ACS) changing standards from 750-1000 to 500-750 cases per registrar (Resources for optimal care of the injured patient, 2014).
- Communication is essential to assigning the appropriate number of cases per registrar. It is important for the team to buy-in to the benefits of concurrent abstraction as it results in changes with established workflows.
- Now registrars abstract 165-211 data points, though depending on the number of procedures, diagnoses, and TQIP process measures met, it could be more.
- Our conclusion is having a fully staffed trauma program, reducing data points required for abstraction, and reduction of redundancies in processes, contributes to the success of concurrent data abstraction.

American College of Surgeons (2014) Resources for the optimal care of the injured patient. Retrieved from <https://www.facs.org/~media/files/quality%20programs/trauma/vrc%20resources/resources%20for%20optimal%20care.ashx>
 Day, S., Fox, J., & Cookman, K. (2012). A Survey of Trauma Registrars. *Journal Of Trauma Nursing*, 19(1), 38-45. doi:10.1097/JTN.0b013e31823a4512
 FitzPatrick, M., Frankel, H., McMaster, J., Heliger, L., Auerbach, S., Reilly, P., & Schwab, C. (2000). Integration of concurrent trauma registry and performance improvement programs. *Journal Of Trauma Nursing*, 7(4), 92-97.

