

Elucidating Gaps in Post-Discharge Care for Pediatric Trauma Patients

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Problem

- **Traumatic injury** is the leading cause of death for youth aged 1-19 years old.
- At Comer Children's Hospital, known **follow-up rates were 53%** for the first 6 months of 2021, with many patients not attending post-discharge appointments due to cancellation, no-showing, or becoming lost to follow-up.
- Studies show that not following up leads to adverse clinical outcomes and increased rates of recidivism. With follow-up, we have the potential to improve 30-day mortality and decrease rates of readmission.

Goals

- To **conduct a chart review** of pediatric trauma patients seen in 2021 and to **delineate trends** between follow-up instructions for post-discharge care and completed follow-up
- To inform and **enable a targeted approach** to potential prospective needs assessments
- To **create a novel discharge tool** to enhance the accessibility of obtaining post-discharge care for our patients

Strategy

- We identified **641 pediatric patients** treated for traumatic injury at our quaternary level 1 trauma children's hospital in 2021.
- We performed a **RETROSPECTIVE CHART REVIEW** to determine any factors related to likelihood of follow-up. Basic demographics, comorbidities, injury types, specialty referrals, PCP information, and rates of readmission were analyzed.
- Of note, we are also reviewing information such as **social work interventions** to determine common needs in our patient population. This data is continuing to be collected and reviewed.
- With this information, we will develop a **NOVEL DISCHARGE TOOL** to enable access to follow-up care for our pediatric trauma patients.

Results To Date

- To date, **324 of the 641** eligible pediatric trauma patient charts have been reviewed for baseline demographic and traumatic injury characteristics.
- Of these 324 charts, **200** have been studied for data pertaining to follow-up (which includes statistics regarding referrals, rates of follow-up, and potential adverse outcomes).

Table 1: Baseline Patient Demographics (n=324)

Age, n (%)	
0-1 years old	58 (17.9%)
2-4 years old	66 (20.4%)
5-9 years old	84 (25.9%)
10-12 years old	43 (13.3%)
13-15 years old	73 (22.5%)
Male gender, n (%)	197 (60.8%)
Race, n (%)	
Asian	2 (0.6%)
Black/African American	222 (68.5%)
White/Caucasian	58 (17.9%)
Other/More Than One Race	39 (12.0%)

Table 2: Pediatric Traumatic Injury Characteristics

Mechanism of Injury (n=324)	
Assault	8 (2.5%)
GSW	26 (8.0%)
MVC	95 (29.3%)
Fall	104 (32.1%)
Other (including Burns, Stabbings, Dog Bites, and Other Blunt Mechanisms)	97 (29.9%)
Injury Types (n=324)**	
Fracture	168 (51.9%)
Laceration	108 (33.3%)
Contusion	81 (25.0%)
Concussion	37 (11.4%)
Hemorrhage	24 (7.4%)

**Any one patient may have more than one injury type

- Patients with **GSW injuries (9.5%)** were most likely to return for follow-up (**57.9%**) despite being amongst the smallest proportions of traumatic injury.
- **Falls** accounted for the greatest ratio of traumatic injuries (37%) and had **54.1% of patients return for care.**
- Approximately **12.5%** of our patients had suffered a **prior traumatic injury.**
- **5% of patients experienced an additional traumatic injury** despite 80% of these individuals having returned for post-discharge care.

How Many Patients Were Advised Follow-Up?

- Of 200 patients, 195 were advised to complete follow-up visits. (**97.5%**)
- Of these 195 patients, 99 were referred to more than one specialty. (**50.8%**)

To Whom Were Patients Referred?

- PCP (74.4%) --Ortho Surg (30.8%)
- Neurosurgery (13.3%) --Peds Surg (11.3%)
- Phys. Therapy (12.3%) --Plastic Surg (9.7%)

Of these referrals, **106 patients (53%) returned for at least one follow-up appointment**, 34 did not return for any (17%), and 60 were lost to follow-up (30%).

Those who returned primarily saw:

- Orthopedic Surgery (47.2%)
- Neurosurgery (16.0%)
- Physical Therapy (16.0%)

Most patients were advised follow-up with PCPs (74.3%); however, **55.2% of these patients did not have a PCP recorded in their chart.** Only 9% of those recommended to see their PCP had verified PCP follow-up.

Notably, 40.3% of individuals with documented comorbidities did not have a PCP in their documentation.

Conclusions and Next Steps

Families of pediatric trauma patients may potentially benefit from:

- **Continued correspondence**, especially if patients have outside providers
- **Improved chart documentation**, including that of patients' PCP information
- **Community resources**, particularly for in-network PCPs

Limitations:

- N=200 for follow-up data and N=324 for baseline demographic and traumatic injury information. This is being supplemented as we complete our work.

Next Steps:

- **Continuation of chart review and further data analysis** to investigate any correlations between MOIs, injury types, number of follow-up referrals, and rates of follow-up.
- **Creation of novel discharge tool**

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