



Characteristics Driving “Inappropriate” Transfer of Pediatric Mandibular Fracture Patients

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Background

- Pediatric mandible fractures are common (40-70% of pediatric facial trauma cases)
- Conservative treatment** (i.e., jaw rest, chewing gum) is often indicated provided there is no deformation, malocclusion or displacement
- Pediatric facial trauma patients are often **”inappropriately” transferred** to specialized children’s hospitals despite capacity for referring hospital to manage care
- Inappropriate transfers, defined in this study as a patient receiving **conservative treatment** post-transfer, are **costly for patients, their families, and hospital systems**

Objective

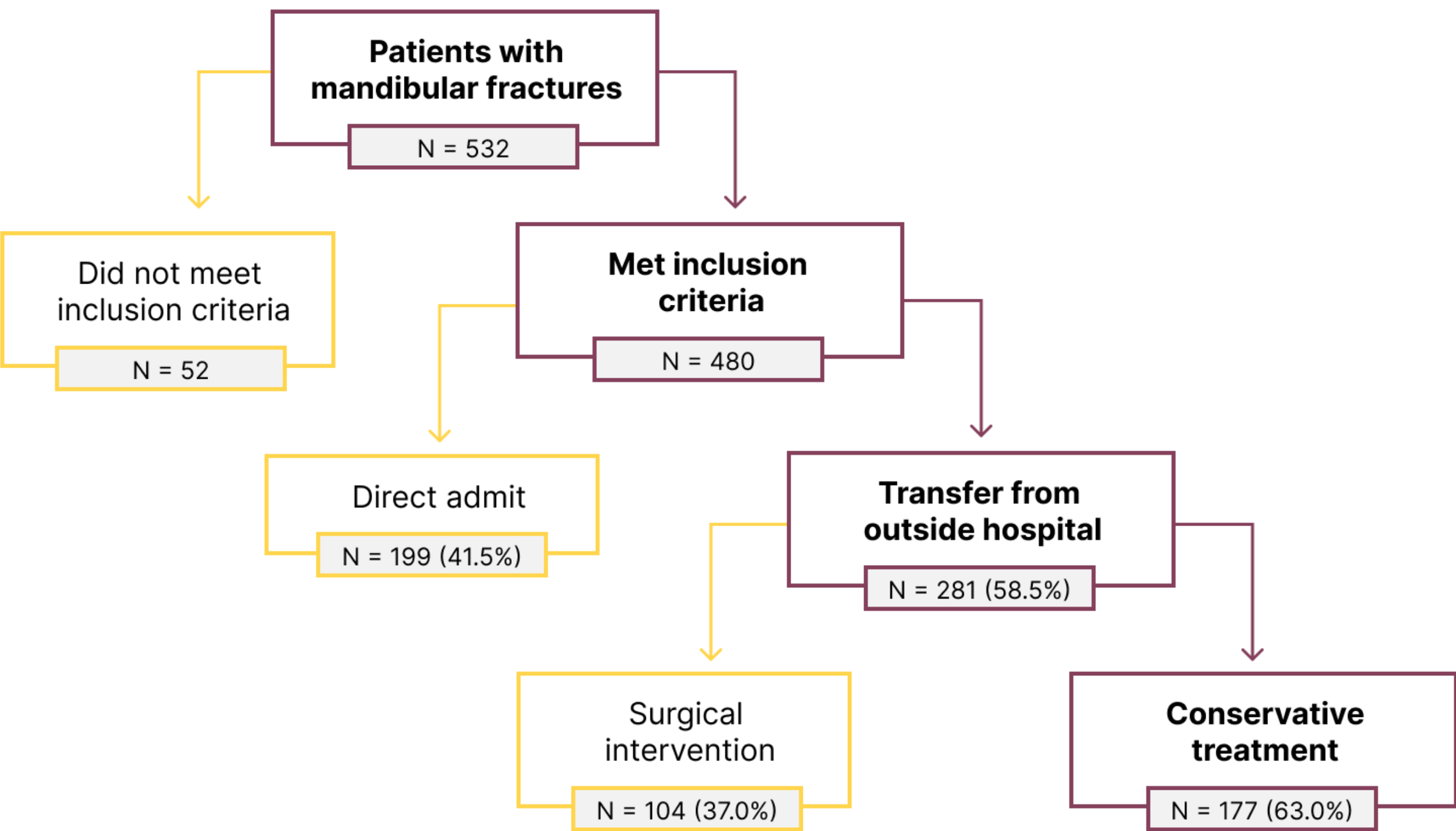
Identify factors influencing “inappropriate” transfers of pediatric mandible fracture patients in one of the largest single-institution pediatric facial fracture cohorts to date

Methods

- Retrospective review of 3,334 patients 18 years old or younger who presented to the Children’s Hospital of Pittsburgh from 2006-2021
- Patients categorized as “inappropriate” transfer if they met the following criteria: (1) complete GCS score = 15, (2) no high-speed motor vehicle involvement, (3) no penetrating injuries, and (4) received conservative treatment post-transfer (jaw rest, chewing gum, physical therapy, and/or external stabilization)
- Chi squared, linear regression and Welch’s t-test performed with STATA SE

Results

Figure 1. Flow chart documenting inclusion criteria.



		“Inappropriate transfer”		Not an “inappropriate” transfer		p- value
		No.	%	No.	%	
Total		177		303		
Age, mean (SE)		10.5 (0.34)		12.0 (0.27)		0.001
	<6 years old	35	19.7%	41	13.6%	
	6-12 years old	79	44.4%	98	32.5%	
	12+ years old	64	36.0%	163	54.0%	
Male	Male	125	70.6%	234	77.3%	0.077
Race						0.000
	White	155	87.1%	214	70.7%	
	Black	16	8.99%	74	24.5%	
	Other	7	3.93%	14	4.64%	
Insurance						0.038
	Private	66	55.0%	134	64.4%	
	Public	36	30.0%	37	17.8%	
Cause of injury	Self-pay	18	15.0%	37	17.8%	0.052

Figure 2. Evaluating factors influencing “inappropriate” transfer. Patients undergoing an “inappropriate” transfer were those who those who received conservative treatment after arriving at the specialized children’s hospital, compared those who were neither transferred nor received conservative care.

Conclusions

Of 480 total patients,

37%

Of 281 total transfers,

63%

were deemed “inappropriate” transfers (received conservative treatment received post-transfer)

Patient’s insurance status and race significantly influenced the likelihood of “inappropriate” transfer”.

How might we reduce “inappropriate” transfers?

- Potential future interventions include:
- Developing more robust transfer protocols
 - Improving training at presenting hospitals
 - Increasing access to pediatric subspecialty consults (i.e. through telemedicine)

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