

Facial Fracture Management: Operative Trends

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Facial Fracture Management: Operative Trends

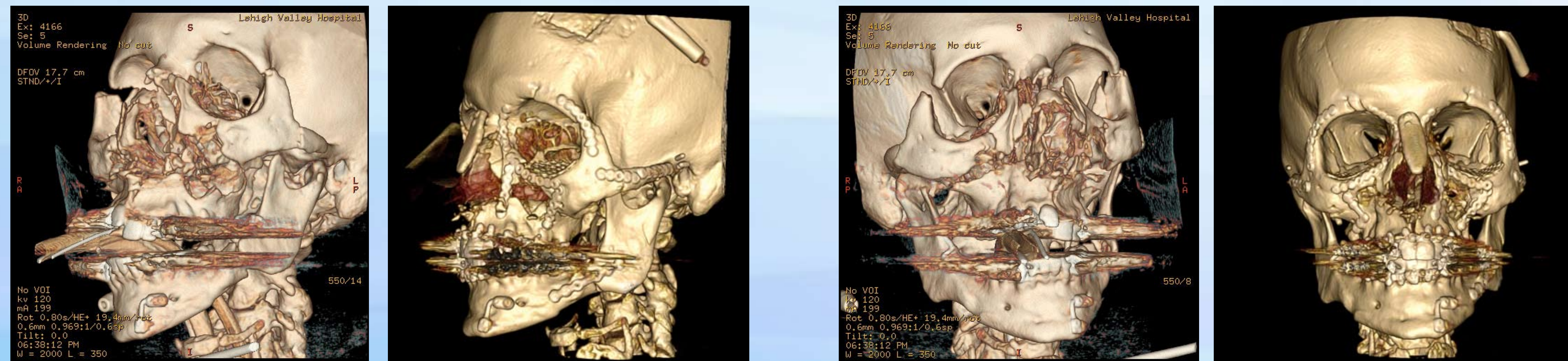
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Background:

Controversy exists in the literature regarding management of facial fractures. Indications for operative intervention can be subjective and may not reflect the clinical severity of the fracture or account for patient demographics. The objective of this study is to examine management of facial fractures at our Level 1 Trauma Center.

Methods:

- IRB-approved review of the Lehigh Valley Health Network Trauma Registry from 2000-2010
- Data Points Included: Age, gender, Injury Severity Score (ISS), Glasgow Coma Score (GCS), Facial Fractures (orbit, nasal, maxillary/malar, mandible), and Surgical Repair
- Logistic regression analysis was performed using SPSS 15.0 (SPSS Inc, Chicago, IL).



Results:

- A total 44,900 trauma patients were evaluated from 2000-2010
- 3,114 patients sustained 4,283 facial fractures
- Nasal Fractures: n = 1769 (41%)
- Malar/Maxillary Fractures: n = 1008 (24%)
- Orbital Fractures: n = 842 (20%)
- Mandible Fractures: n = 664 (15%)

Table 1. Likelihood of Operative Management of Facial Fractures (n=2938, p<0.001)

Independent Variables	p value	Adjusted OR (95% CI)
Age	<0.001	0.979 (0.975, 0.983)
Male	0.176	1.156 (0.937, 1.425)
Female		1.0 (reference)
ISS	0.394	0.996 (0.987, 1.005)
GCS	0.621	1.015 (0.982, 1.425)
Number of Fractures	<.001	2.604 (2.291, 2.960)

Figure 1. Facial Fracture Surgical Intervention (2000-2010)

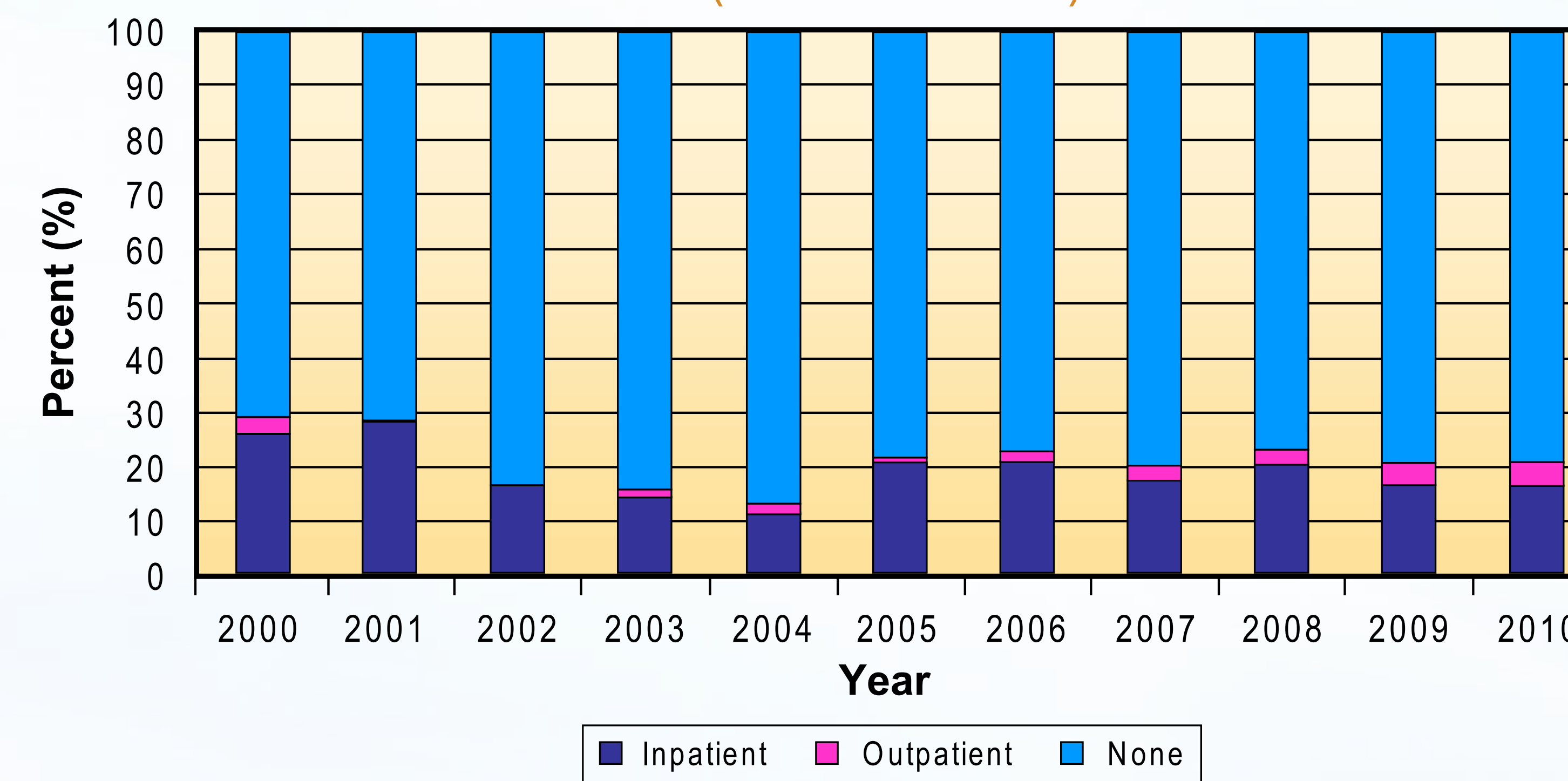


Figure 2. Facial Fracture Inpatient Surgical Intervention (2000-2010)

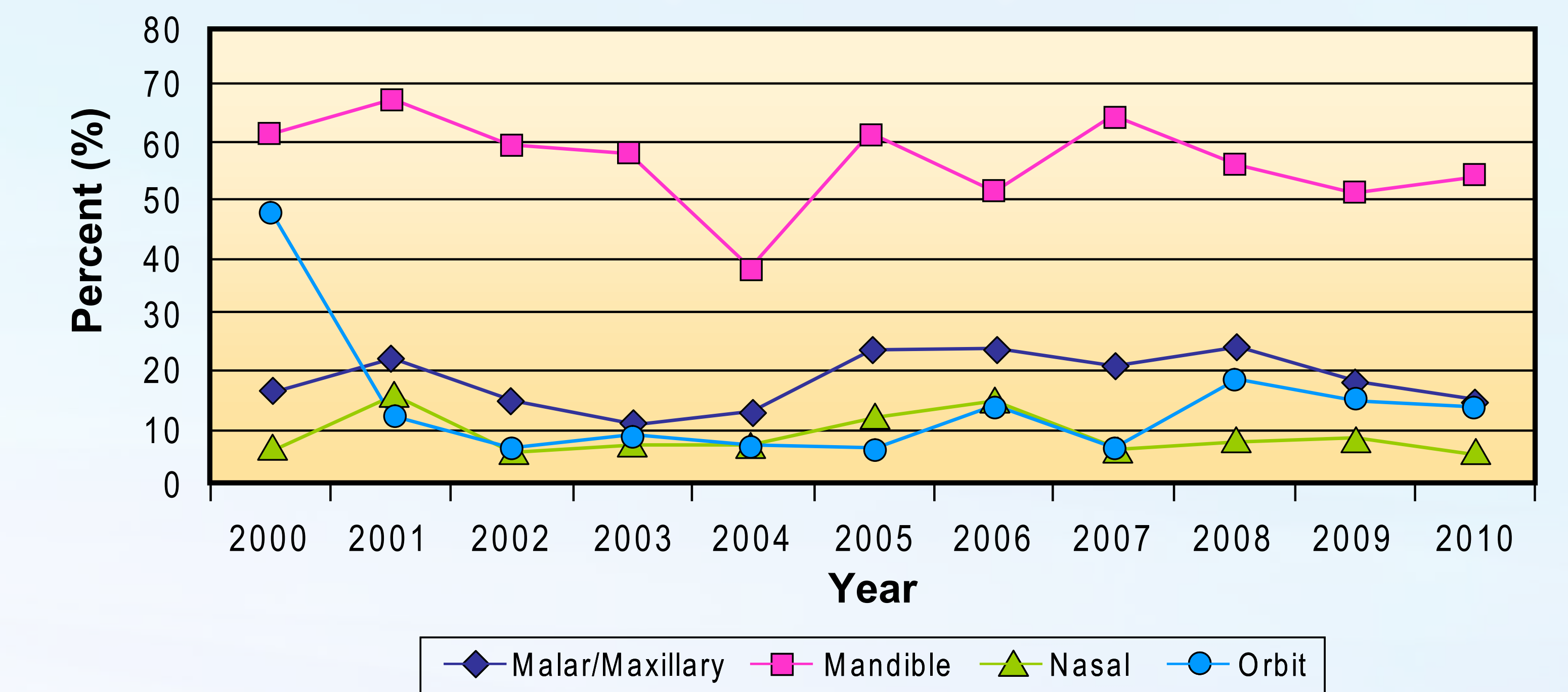
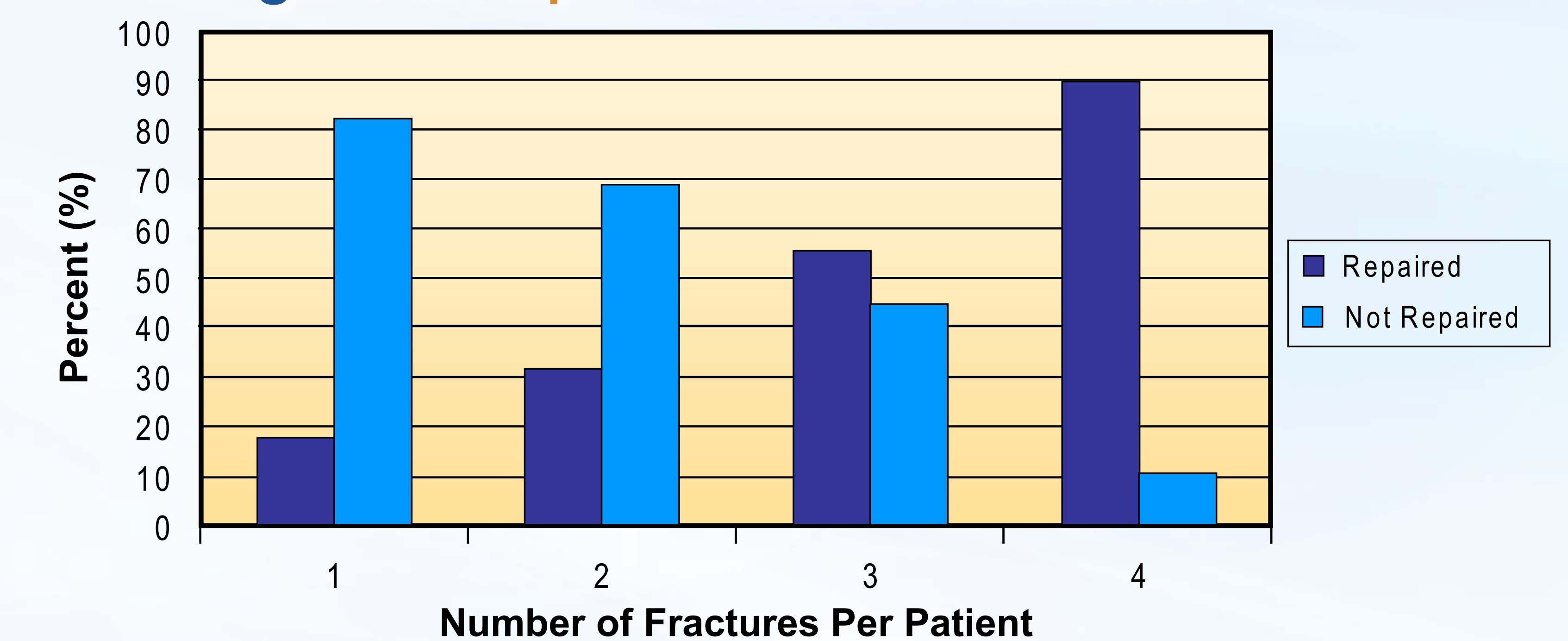


Figure 3. Repair of Facial Fractures



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Conclusion:

At our Level 1 Trauma Center, most patients with facial fractures are managed non-operatively. This trend seems to be increasing as the age of our patient population increases. Patients who have sustained multiple facial fractures, particularly involving the mandible, are more likely to undergo surgical repair. Additionally, there may be significant value to society in cost savings by non-operative management of patients with uncomplicated and clinically stable mid-facial fractures.