



# When Danger Calls!

## Facial Trauma Resulting from Cellular Phone Use

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### ABSTRACT

**Objectives:** An increased availability of applications on modern cellular phones may potentially distract individuals, rendering users vulnerable to severe injury. We aimed to use a nationwide database to estimate incidence of facial trauma sustained from cellphones and further delineate injury patterns, as this information may potentially assist patient evaluation and counseling.

**Methods:** The Consumer Product Safety Commission’s Nationwide Electronic Injury Surveillance System was evaluated for ED visits resulting from cellphone-related injuries. Patient entries were evaluated for demographics, mechanism of injury, and clinical injury characteristics.

**Results:** From 2010-2014, there were 205 entries extrapolating to an estimated 7,448 ED visits for cellphone-induced facial trauma, with an increasing incidence. Median patient age was 23 years (13-37 IQR), 50.7% were female, and the most common diagnoses were laceration (55.1%), contusion/abrasion (33.2%), and fracture (6.8%). Common factors included being struck by the device (46.8%), being distracted (31.7%), usage causing a MVA (16.1%), bicycle-accident (5.4%), texting (15.6%), intentional assault (3.4%), and alcohol (2.9%). Adults were more likely to be distracted by usage with resultant injury. Patients involved in MVAs were more likely to sustain fractures. Texting while driving and bicycling were significant factors.

**Conclusions:** Direct injury and distraction from usage of cellphones has resulted in thousands of facial injuries, many preventable, in recent years. Distraction while driving has become a significant issue, resulting in particularly savage injuries. These sobering numbers may be used to educate patients about potentially devastating consequences. Furthermore, device manufacturers may need to do more to minimize distractibility.

### INTRODUCTION

Cellular phone usage has become ubiquitous in modern life, and with its rise has come the looming specter of distracted texters and callers wreaking havoc both behind the wheel and otherwise. Particularly concerning is the widespread usage of cellular phones among the teenage driving population, creating a deadly cocktail of daring, distraction, and inexperience.

Little study has been directed towards cellular phones as a source of facial trauma. In this study, we evaluate the incidence, causes, and patterns of cellular phone-induced facial trauma. We hope that this study may form the basis of desperately-needed public health interventions for injury prevention in high-risk populations.

### METHODS

The Consumer Product Safety Commission’s Nationwide Electronic Injury Surveillance System was evaluated for ED visits resulting from cellphone-related injuries. Patient entries were evaluated for demographics, mechanism of injury, and clinical injury characteristics. Statistical comparisons were made using chi-square test.

### CONCLUSIONS

Direct injury and distraction from usage of cellphones has resulted in thousands of facial injuries, many preventable, in recent years. Distraction while driving, particularly from texting, has become a significant issue, resulting in particularly savage injuries. These sobering numbers may be used to educate patients about potentially devastating consequences. Furthermore, device manufacturers may need to do more to minimize distractibility.

### RESULTS

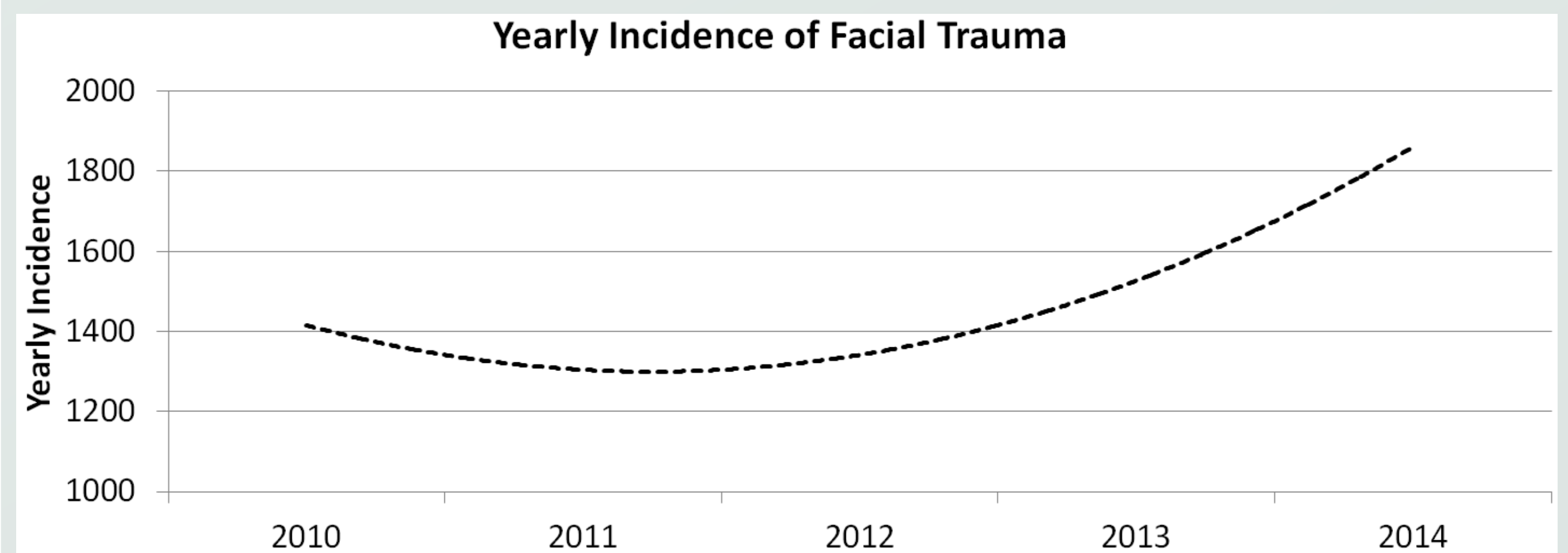


Figure 1. Yearly incidence of cell phone-induced facial trauma. From 2010-2014, there were 205 entries extrapolating to an estimated 7,448 national ED visits for cellular phone-induced facial trauma. There was a modest increase from roughly 1400 to 1800 cases over the studied time period.

### Factors in Facial Trauma

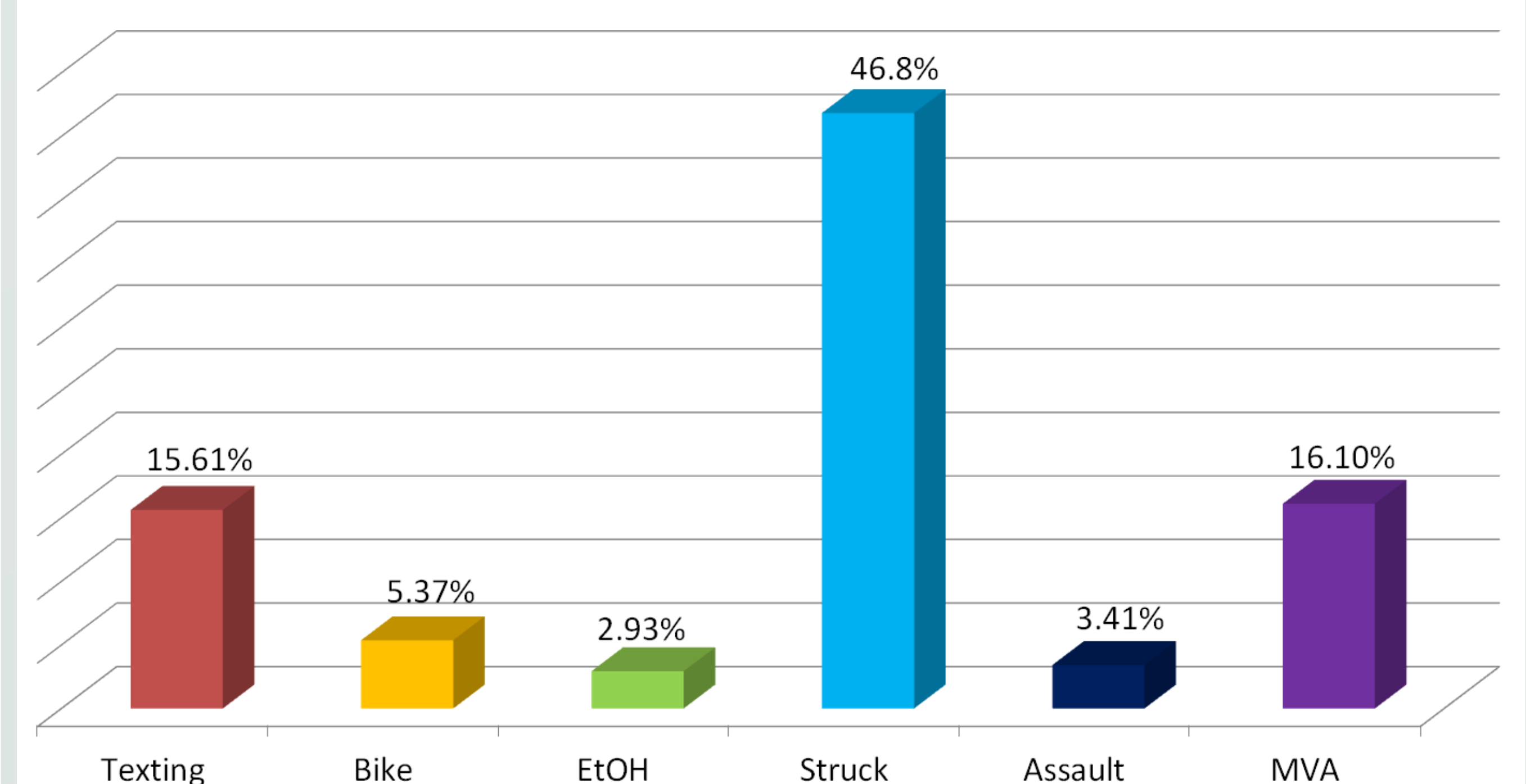


Figure 2. Causal factors of cell phone-induced facial trauma. Accidentally being struck with the device was the most common factor within facial trauma (47%). Texting (16%) and driving (16%) were also frequent factors. Alcohol (3%) and deliberate assault (3%) were rare factors.

### Patterns of Facial Trauma

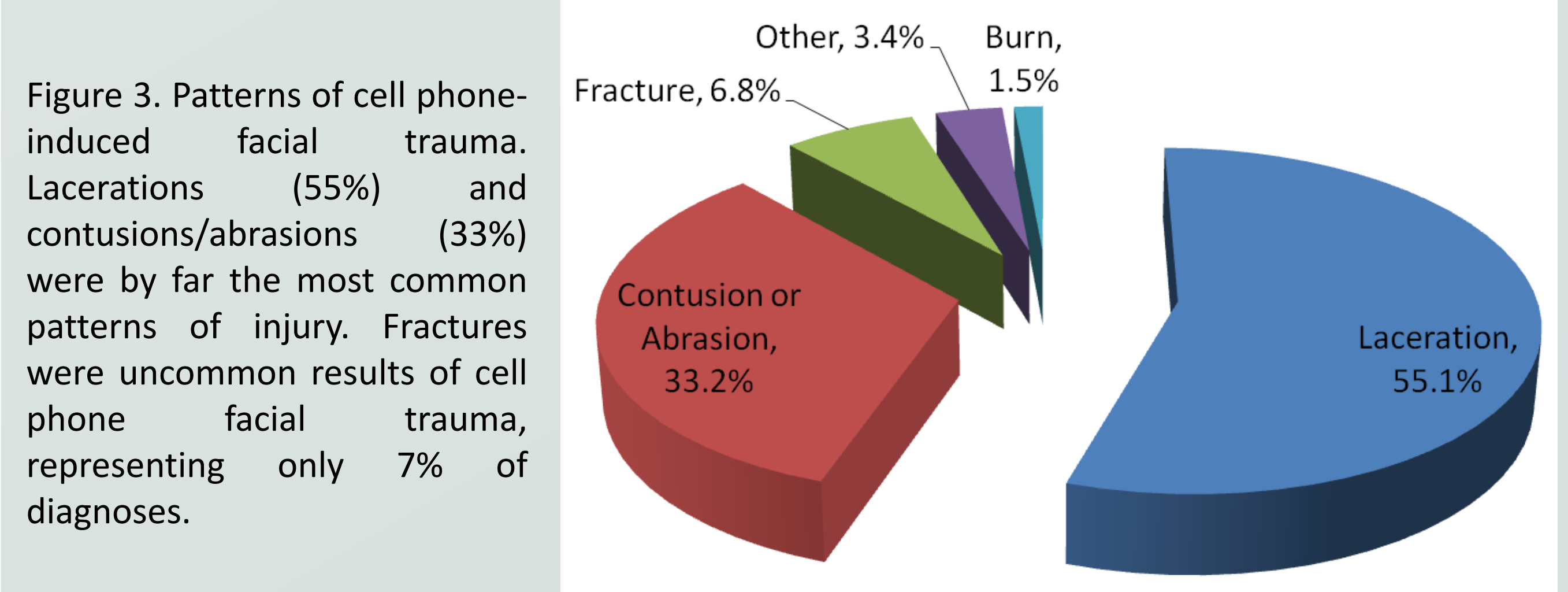


Figure 3. Patterns of cell phone-induced facial trauma. Lacerations (55%) and contusions/abrasions (33%) were by far the most common patterns of injury. Fractures were uncommon results of cell phone facial trauma, representing only 7% of diagnoses.

### Distraction in Cell Phone Facial Trauma

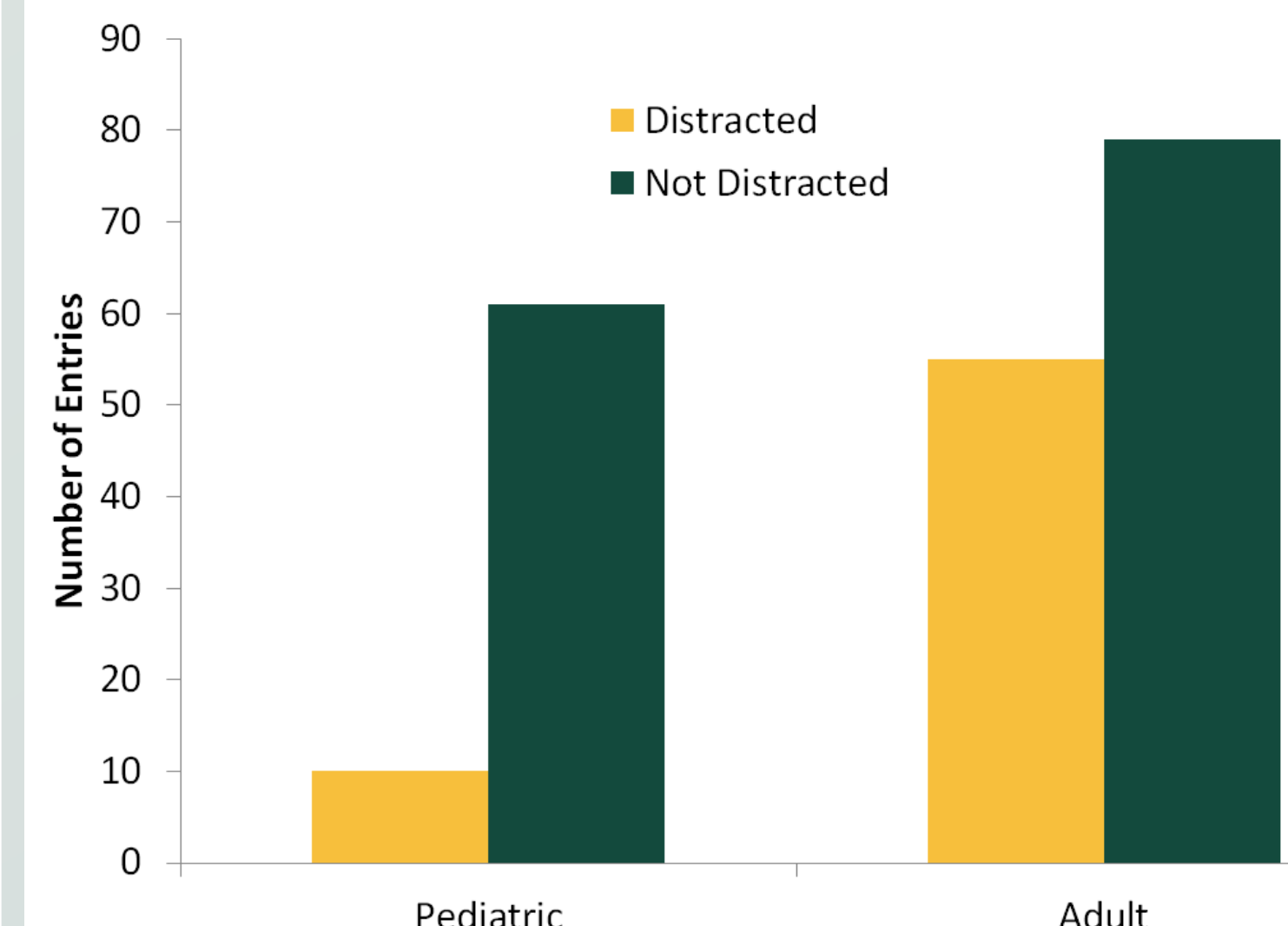


Figure 4. Distraction in cell phone-induced facial trauma. Ten of 71 pediatric patients were identified as distracted (14%) while 55 of 135 adult patients (41%) were identified as distracted at the time of their insult. Overall, the increased prevalence of distraction in adults was statistically significant (P = 0.004).

### Facial Fractures in Cell Phone Trauma

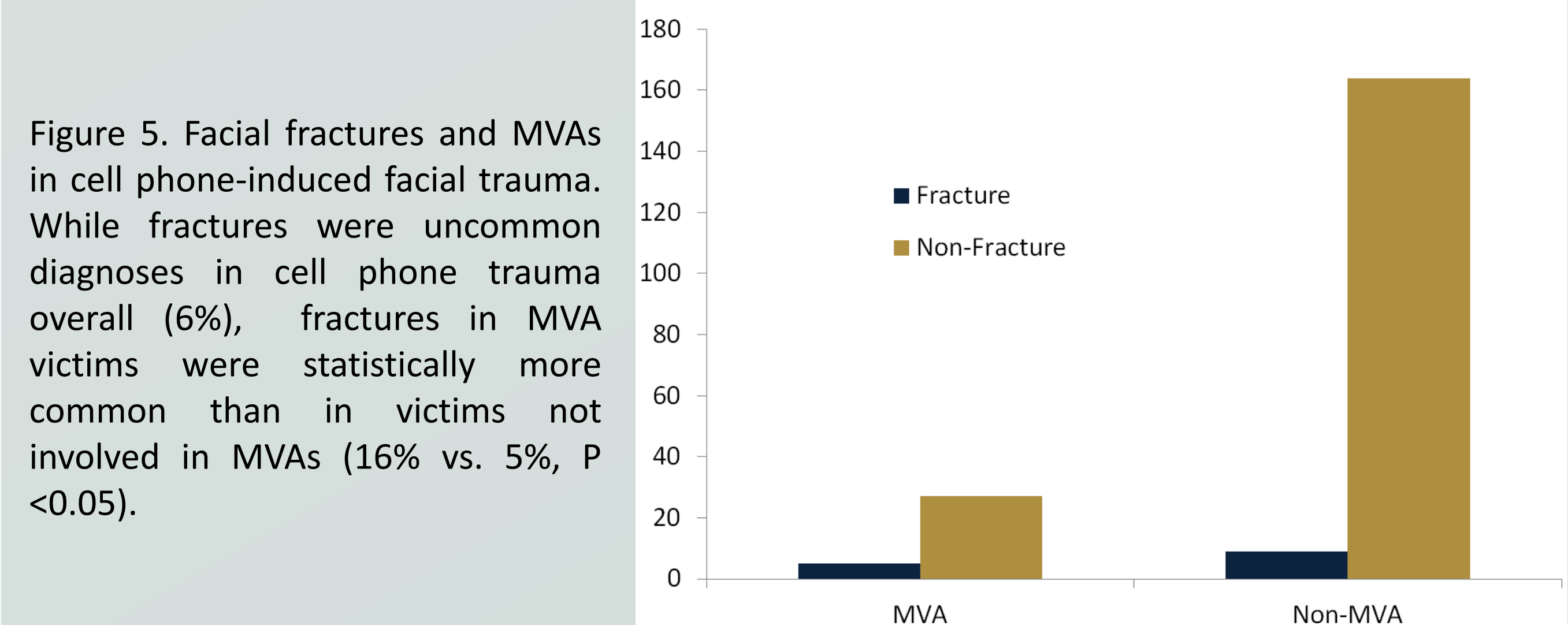


Figure 5. Facial fractures and MVAs in cell phone-induced facial trauma. While fractures were uncommon diagnoses in cell phone trauma overall (6%), fractures in MVA victims were statistically more common than in victims not involved in MVAs (16% vs. 5%, P <0.05).