the management of Grade I to V bladder injuries decreased from 84% to 5%, respectively, GS reported a significantly higher comfort level with these injuries (Grade I: 88% and Grade V: 31%, p<0.001). Despite this, the likelihood that GS would consult urology increased significantly as the injury severity increases (Grade I injury: OR 1.95, 95% CI 1.17-3.25, p<0.01; Grade V injury: OR 5.21, 95% CI 1.47-18.52, p<0.01). Contrary to urologists’ perception, the majority of GS indicated that preoperative imaging demonstrating bladder injury, presentation outside of normal working hours, and an intraoperative diagnosis did not change whether urology would be consulted (all p>0.00).

CONCLUSION: GS-reported comfort levels in the management of bladder injuries remained higher than urology-perceived comfort levels. Urologists’ perception of possible consultation did not align with GS for most scenarios.

Impact of the State-mandated Stay-at-home Order for the COVID-19 Pandemic on an Academic Level I Trauma Center with a Large Rural Catchment Area
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INTRODUCTION: The COVID-19 pandemic resulted in a mandatory state-enforced stay-at-home order during April 2020. This study aimed to determine the impact of the mandatory stay-at-home order on a level one trauma center.

METHODS: All adult trauma patients that presented to a level one trauma center during the mandatory stay-at-home order in April 2020 were compared to the same time-frame a year earlier, April 2019. Data abstracted included: demographics, injuries, and outcomes.

RESULTS: A total of 399 trauma patients met inclusion criteria out of 4,156 ED visits (2019: n=181/2467, 2020: n=218/1689). There was a significant increased rate of 7.3 to 12.9 trauma patients per 100 ED visits (p<0.01). There was no statistical difference in the following variables: percentage of patients that were transferred from another facility (31% vs. 36%, p=0.34), injury severity score (10 vs. 10, p=0.65), mechanism of injury (blunt 77% vs. 70%, p=0.14; penetrating 18% vs. 23%, p=0.21; burn 6% vs. 7%, p=0.54), admissions (81% vs. 78%, p=0.38), hospital length of stay (5.5 d vs. 5.6 d p=0.84), and mortality (4% vs. 6%, p=0.27). Interestingly, there was a 63% increase in the number of intoxicated trauma patients at presentation (33% vs. 45%, p=0.02).

CONCLUSION: During the mandatory stay-at-home order, there was a significant increase in the rate of trauma patients presenting to the ED, as well as a significantly higher number of trauma patients who were intoxicated at presentation.

Glycocalyx Degradation and the Endotheliopathy of Viral Infection
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INTRODUCTION: The endothelial glycocalyx (EGX) on the luminal surface of endothelial cells contributes to the permeability barrier of vessels. EGX damage, which occurs in numerous disease states, including sepsis and trauma, results in endotheliopathy. While influenza and other viral infections are known to cause endothelial dysfunction, its effect on the EGX has not been described. We hypothesized that the influenza virus would cause EGX degradation.

METHODS: Human umbilical vein endothelial cells were exposed to varying multiplicities of infection (MOI) of the H1N1 strain of influenza virus for 24 hours. A dose dependent effect was examined by using an MOI of 5 (n=541), 15 (n=714), 30 (n=596), and 60 (n=653) and compared to a control group (n=607). Cells were fixed and stained with FITC-labelled wheat germ agglutinin to quantify EGX.

RESULTS: There was no difference in EGX intensity after H1N1 exposure at an MOI of 5 as compared to control (6.20 vs. 6.56, p<0.001). EGX intensity was decreased at a MOI of 15 when compared to control (5.36 vs. 6.56, p<0.001). Degree of EGX degredation was worse at higher doses of the H1N1 virus, however, the decrease in EGX intensity was maximized at an MOI of 30. Injury at a MOI of 60 was not worse than 30. (4.17 vs. 4.47, p=0.13).

CONCLUSION: The H1N1 virus induces endothelial dysfunction by causing EGX degradation in a dose dependent fashion. Further studies are needed to characterize the role of EGX damage in causing clinically significant lung injury during viral infection.

Incidence and Patterns of Firework-related Injuries: An Explosion in 2020
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INTRODUCTION: Approximately 10,000 Americans are treated annually for firework-related injuries. In 2020, US police organizations reported an increased number of firework-related calls. Furthermore, because of the COVID pandemic, many major
firework displays were cancelled, and celebrants shifted to smaller, distributed events. We examine if there was a concomitant increase in firework-related injuries.

**METHODS:** We performed a retrospective review of patients who presented to our urban level 1 trauma center between January 1st, 2015 and July 31st, 2020 with firework-related injuries. Patients were identified from our trauma registry and emergency department records. Charts were reviewed for patient demographics, injuries, procedures performed, and mortality. Patients were grouped by date of presentation and descriptive statistics were derived.

**RESULTS:** We identified 66 patients injured during the study period. The median age was 23 and 91% were male. The incidence was stable over the study period except for a dramatic rise in 2020, when half of all injuries occurred. The most common injuries were fingers (74%), hand and wrist (48%), burns (47%), and ocular (42%). 26% demonstrated the triad of injury to hand or fingers, eyes, and tympanic membrane rupture. 63% needed amputation of at least one digit. 18% required amputation of the hand.

**CONCLUSION:** There has been a steep increase in the number of firework-related trauma in 2020. These injuries continue to cause serious, lifelong disability. Although the recent spike may have been driven by a combination of transient social conditions, this data should inform increased efforts at prevention and research into causative factors.

**Increased Hospital Recidivism Among Marijuana Positive Trauma Patients**

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**INTRODUCTION:** With more states legalizing marijuana for recreational use, it is important to understand the effects on our healthcare utilization. Our objective was to evaluate for differences in hospital recidivism for patients positive for THC (THC+) compared to patients negative for THC (THC-).

**METHODS:** A retrospective cohort study was done from 2015-2018 at a single Level I ACS verified trauma center. Included were trauma activations in subjects greater than 16 years of age with a urine drug test performed. Variables collected included: insurance status, associated alcohol or illicit substances, procedures performed, complications and hospital recidivism defined as a return to hospital or ED within 1 year. Chi square and univariate regression analyses were used.

**RESULTS:** 2136 patients were included, 73% THC- and 26.5% THC+. The average age of THC- was 58.4±14.1, and THC+ was 75.5±10.8 years. Associated alcohol was present in THC+ and THC-. THC+ had higher percentage of interventions and higher return to the hospital. This has important considerations for health providers.

**CONCLUSION:** Despite THC+ patients being younger with similar ISS and complications compared to THC- patients, THC+ had higher percentage of interventions and higher return to the hospital. This has important considerations for health providers.

**Insurance Status Impacts Hospital Discharge for Penetrating Trauma Survivors: One Decade of Experience From an Urban Level I Trauma Center**

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**INTRODUCTION:** Despite the equalization of acute care in trauma, disparities exist in the long-term outcomes of trauma survivors. Prior studies have revealed insurance status plays a role in the discharge destination of blunt trauma survivors. This has yet to be described in patients with penetrating traumatic injury.

**METHODS:** A retrospective chart review from 2009-2019 from an urban Level I trauma center identified adult patients who survived penetrating trauma to discharge. Patients were categorized by insurance status. Patient demographics, discharge destination, and hospital length of stay (LOS) were analyzed using t-test and ANOVA.

**RESULTS:** 1,806 patients were identified with 1,410 survivors to hospital discharge. Among the survivors 26.8% were uninsured, 13.1% were privately insured, and 60.0% had Medicare/Medicaid. The uninsured patients were significantly less likely to be discharged to a rehabilitation facility or skilled nursing facility (OR = 0.49, CI95% 0.35-0.71) compared to the insured patients. Uninsured survivors had shorter LOS compared to the other groups (5.8 vs 7.3, p<0.01.) Severity of injury did not significantly influence the discharge destination nor LOS between the groups.

**CONCLUSION:** Despite attempted healthcare reform, many trauma patients remain uninsured affecting outcomes of care. Our study shows that uninsured penetrating trauma survivors are less likely to be discharged to rehabilitation and skilled nursing facilities. This may contribute to uninsured trauma survivors not receiving appropriate post-traumatic care and could lead to the accrual of undue disability, long-term complications, and increased societal burdens.