

### Incidence of Penetrating Trauma in an Urban Level 1–Trauma Center. A Retrospective Clinical Survey of the Years 2016–2021.

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**Introduction:** Penetrating trauma is a highly visible issue in history, social media, and politics. Crime statistics showed increasing numbers of violations of the law banning assault weapons in Germany. Although these injuries have historically been rare in Germany, we have noticed increasing numbers in our hospital. Studies focusing on these injuries of penetrating trauma are lacking, hence a distinct therapy algorithm is missing.

**Method:** All penetrating injuries proximal to the wrist and ankle in the years 2016–2021 were analyzed in a retrospective survey. Isolated injuries of hand and foot were excluded. Data were gathered from the clinical information system and the protocol of the emergency medical services. For further analysis we identified three distinct groups: Patients who acquired the injury by an accident (ACCIDENT), self-inflicted (SELF-HARM) or by crime (ASSAULT). The groups were compared using Microsoft Excel® and Sigma plot® (Jandel, San Rafael, CA).

**Results:** A total of 961 cases were identified. The analysis showed an increasing number of cases with penetrating injuries from 2016 until 2019. Furthermore, major differences between the groups were revealed. The assault victims (ASSAULT n=117) were mostly male (91%) and non-German (52%). They were more likely to be accompanied by the police (13%), to be intoxicated, to require hospital admission (also to critical care) and to require surgery as compared to the cases of the ACCIDENT (n=484) and SELF-HARM (n=360) group. The SELF-HARM group cases were predominantly female, younger and had psychiatric comorbidities.

**Conclusion:** The cause of penetrating trauma injury is important and can provide information crucial to the management of the patient. The emergency treatment of assault victims is challenging due to the particular circumstances of these cases. Optimal preparation and anticipation of the accident and emergency staff are necessary to deal with these patients. In summary, assault victims had more serious injuries than the other groups.

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### Severe Trauma in Germany and Israel– Are We Speaking the Same Language? A Trauma Registry Comparison

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**Introduction:** Trauma registries are a crucial component of trauma systems, as they could be utilized to perform a benchmarking of quality of care and enable research in a critical but important area of health care. The aim of this study is to compare the performance of two national trauma systems: Germany (TraumaRegister DGU®, TR-DGU) and Israel (Israeli National Trauma Registry, INTR) in a retrospective analysis.

**Method:** Patients from both registries treated during 2015–2019 with an Injury Severity Score (ISS)  $\geq$  16 points were included. Patient demographics, pre-hospital care, hospital treatment, and outcome were compared.

**Results:** Data were available from 12,585 Israeli patients and 55,660 German patients. Age and sex distribution were comparable, and road traffic accidents were the most prevalent cause of injuries. The ISS of German patients was higher (ISS 24 versus 20), more patients were treated in an intensive care unit (92% versus 32%), and mortality was higher (19.4% versus 9.5%) as well.

**Conclusion:** Despite similar inclusion criteria (ISS  $\geq$  16), remarkable differences between the two national datasets were observed. Most likely, this was caused by different recruitment strategies of both registries like trauma team activation and the need for intensive care in TR-DGU. More detailed analyses are needed to uncover similarities and differences between both trauma systems.

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### Who Were the Most Vulnerable to the COVID-19 Pandemic? A Nationwide Panel Survey on Infection, Exercise Habits, and Weight in Japan

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**Introduction:** Behaviors to avoid infection are key to minimizing casualties of the COVID-19 pandemic. Even so, infection-avoidance behavior may also cause distant health impacts like immobility and obesity. This research aims at identifying behavioral patterns associated with SARS-CoV-2 infection, exercise habits, and being overweight in the Japanese population.

**Method:** Nationwide online questionnaires were conducted five times from October 2020 to October 2021. Individuals who answered with consistency to have been diagnosed with

SARS-CoV-2 at a medical facility were categorized into a SARS-CoV-2 group. The difference in lifestyle is compared using multiple regression and inverse probability weighing. In addition, the change in exercise habits, body mass index (BMI), and status of overweight (BMI>25kg/m<sup>2</sup>) were compared between the first questionnaire and the later ones. Risk factors of losing exercise habits or developing overweight were analyzed using multiple regression.

**Results:** Diagnosis of SARS-CoV-2 was negatively correlated with crowd avoidance, mask wearing, hand washing behavior. On the contrary, the diagnosis was positively correlated with some behaviors that appear as preventive actions against the infection, such as changing clothes frequently, sanitizing belongings, and remote working. Regarding exercise habit and overweight, people with high income and elderly females showed higher risk of decreased exercise days. The proportion of overweight was increased from 22.2% to 26.6% in males and from 9.3% to 10.8% in females. Middle-aged males, elderly females, males who experienced SARS-CoV-2 infection were at higher risks of developing overweight.

**Conclusion:** It is important to conduct an evidence-based intervention on people's behaviors and to avoid excessive intervention that is less effective so that people can minimize indirect harm such as exhaustion, economic loss, and other chronic health impacts. Our findings suggest that high-risk groups of COVID-19 infection and immobility and/or overweight are quite different. Further research may enable us to establish more effective interventions for each group.

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### Mass Vaccination for All: Increasing Inclusivity of Point of Dispensing Plans in New Orleans.

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**Introduction:** In January 2021, the State of Louisiana approved COVID-19 vaccine distribution to elderly and immunocompromised persons. From annual hurricane planning assessments, the city of New Orleans recognized medical and transportation barriers would prevent some eligible residents from accessing vaccines at public point of dispensing (POD) sites. A new vaccine distribution system was needed for homebound individuals and their caregivers. By February, the city developed and implemented a homebound vaccination plan under the direction of New Orleans Emergency Medical Services (NOEMS) and the New Orleans Health Department. This presentation will review this vaccine distribution model and the opportunities and challenges identified in maintaining this model for future medical POD interventions.

**Method:** The City of New Orleans, along with news outlets and service providers, instructed homebound residents and

caregivers to self-identify their need for a homebound vaccine by calling 311 and adding their name to a centralized waitlist. NOEMS/NOHD staff would schedule appointments based on resident and provider availability and geography of their home residence. Two 2-person teams were deployed simultaneously to provide ten doses within a five-hour time frame to minimize waste. Each deployment team included one city employee with an EMS certification and one volunteer, along with a cooler, ancillary supplies, registration form, and educational sheet to complete the appointment.

**Results:** 350 homebound residents and caregivers were vaccinated with the COVID-19 vaccine from February 2021 to January 2022. Vaccine doses were rarely wasted due to the availability of a centralized city-wide vaccine request list.

**Conclusion:** The COVID-19 pandemic exposed gaps in mass dispensing plans and procedures. This local plan, created in haste to meet community need, became a model practice for other Parishes within the State of Louisiana and nationwide. This distribution modality needs to be maintained and tested, in addition to traditional POD sites, to be utilized in future dispensing events.

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### Border Measures Taken in Japan Against COVID-19 (Focusing on the Response to the Large Number of People Entering Japan when the Omicron Variant Emerged)

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**Introduction:** Various COVID-19 countermeasures were taken at Japan border control policy, especially, the return mission of Japanese nationals from Wuhan and the response to the Diamond Princess are considered to be cases that have stood out worldwide attention.

On the other hand, in response to the variants after December 2020, strict measures were taken, such as testing all those who entered Japan, quarantining those who tested positive, and requiring those who entered from certain regions to wait at some hotels even if they tested negative.

**Method:** Report the response of quarantine in Japan.

**Results:** In particular, for the Omicron variant in December 2021, the government took measures such as limiting the total number of people entering Japan, securing a maximum of over 20,000 rooms in a very short period of time, and providing domestic air transportation when necessary. The results of measures will be reported in this study.

**Conclusion:** Various countermeasures taken as border control against COVID-19 in Japan were reported.

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