



SBIRT in Trauma: Alcohol Attributable Injuries

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GIMC/ RMCHCS/INDIAN COUNTRY TRAUMA ROUNDS ECHO

Disclosure and Disclaimer

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Goals

- ▶ Overall review of Alcohol Key Facts.
- ▶ Review of Intentional and Unintentional injuries.
- ▶ Glasgow Coma Scale impacted by substances.
- ▶ Public Health Issues: Socio Economic, STDs, etc.
- ▶ Steps in Progress: SBIRT in Trauma; Policies.
- ▶ Suggestions and possible solutions.
- ▶ Discussion.

“Drunk” Presumptions

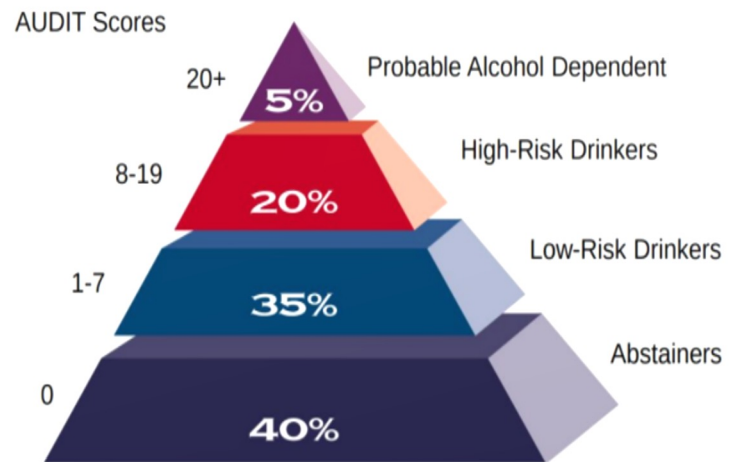


- ▶ Most people usually picture an individual after years of drinking with a sick liver or impaired brain.
- ▶ Much of person's heavy drinking impacts the individual while drinking or highly intoxicated.

“Drunk” Presumptions

Screen Review

Drinkers Pyramid



Alcohol Key Facts (World Health Organization)

- ▶ Central Nervous System (CNS) Depressant. Lowers inhibition, increases high risk behaviors.
- ▶ Is a factor in more than 200 disease and injury conditions.
- ▶ Associated with a risk of developing health problems and mental / behavioral disorders.
- ▶ Worldwide, 3 million deaths yearly.
- ▶ Gender differences global deaths: 7.7% Males ; 2.6% Females.
- ▶ Unintentional and intentional injuries, including those due to road traffic crashes, interpersonal violence, suicide, burns, drowning. Occupational injuries.
- ▶ Alcohol intoxication is present in 35% to 50% of patients with TBI.
- ▶ Fetal Alcohol Syndrome, pre term birth complications.
- ▶ Social economic status; poorer individuals experience greater health and social harms.
- ▶ Uniform Accident and Sickness Policy Provision Law 1950.

GIMC ED Level Trauma III

2022 (JAN-OCT)= 279 Registered

- ▶ #ETOH Related Trauma = 108 out of 279 ---39%
- ▶ Average ETOH = 250mg/dl
- ▶ Total # of Trauma Related Falls = 72/279 ---25%

2021 (JAN-DEC)= 439Registered

- ▶ #ETOH Related Trauma = 175/439—40%
- ▶ Average ETOH = 256mg/dl
- ▶ Total # of Trauma Related Falls (Overall) = 105/439---24%
- ▶ Appreciate LCDR Devon McCabe, MSN, RN assistance with the numbers.

Alcohol and Trauma

- ▶ **Trauma** is among the main death causes and morbidity in the world and is **often related to the use of alcohol...** considered a public health problem. – Soares-Carnerio et al. 2016.
- ▶ 42.7 % of all trauma deaths tested positive for alcohol or illicit drugs. (Digiorgio).
- ▶ Johnston Study: Alcohol related falls resulted in higher incidence of craniofacial injury with greater severity of injury. (pg. 186).
- ▶ Greater frequency of males ages 20 to 30 yrs old with injuries and intoxication.
- ▶ 83 percent of trauma surgeons believe that the trauma center is the appropriate place to provide interventions for injured patients who test positive for alcohol-



Alcohol Attributed Injuries

Facial fractures: zygoma, mandible most prevalent in Soares-Carneiro 2016 study. 78% of the cases. 44% wounds; 16% nose.

- 25% due to car accidents; 15% physical aggression.
- Role of alcohol in facial fractures seems to be underestimated. Important for alcohol screening.

- ▶ **Fall from Standing:** most common from stairs, slips. 48% with head injuries.
- ▶ **Traumatic Brain Injuries:** Subarachnoid hemorrhage most common 49.4%. Subdural 46.8%; cerebral contusions 45.7%. Skull fractures 51.3%
- ▶ **Burns:** Cigarettes, wood stove. 22% alcohol related (2015).
- ▶ **Drownings:** 70% of water recreation drownings were alcohol related (CDC).

Geriatric Falls (65 and older)

- ▶ Alcohol is risk factor for older adults. Metabolize and eliminate alcohol at slower rates. Impairs gait and balance.
- ▶ Alcohol under reported.
- ▶ Interacts with certain medication.
- ▶ Older men more likely to indicate alcohol use than women in ED visit.
- ▶ 2/3 of visits were to the head and face.
- ▶ Reduced self protective reflexes.
- ▶ Increased risk for subdural hematoma TBI.
- ▶ TBI in older adults result in high mortality and morbidity.
- ▶ Hip fractures less likely among alcohol use.
- ▶ 3 million ED visits; 950,000 hospitalizations per year.

Glasgow Coma Scale

- ▶ Teasdale and Jennett in 1974.
- ▶ Objectively assessing for TBI, neurological status. Guides diagnosis and management of TBI.
- ▶ GCS can be confounded by BAC. Confounded by anesthesia; sedation needed for ICU procedures, intracranial pressure control.
- ▶ Vital signs, lab work, neurological examination, initial CT of the head.
- ▶ BAC testing was not 100% compliant.

TABLE 38-2

Glasgow Coma Scale

| BEHAVIOR | RESPONSE | SCORE |
|----------------------|-------------------------------------|-----------|
| Eye opening response | Spontaneously | 4 |
| | To speech | 3 |
| | To pain | 2 |
| | No response | 1 |
| Best verbal response | Oriented to time, place, and person | 5 |
| | Confused | 4 |
| | Inappropriate words | 3 |
| | Incomprehensible sounds | 2 |
| | No response | 1 |
| Best motor response | Obeys commands | 6 |
| | Moves to localized pain | 5 |
| | Flexion withdrawal from pain | 4 |
| | Abnormal flexion (decorticate) | 3 |
| | Abnormal extension (decerebrate) | 2 |
| | No response | 1 |
| Total score: | <i>Best response</i> | 15 |
| | <i>Comatose client</i> | 8 or less |
| | <i>Totally unresponsive</i> | 3 |

Sexual Assaults

- ▶ 300,000 to 700,000 sexual assaults annually. 94% female. 1 in 33 males.
- ▶ Rape associated with non-genital trauma 40-81%, 5% requiring hospitalization.
- ▶ Half of all acquaintance sexual assaults involve alcohol consumption by perpetrator, victim or both.
- ▶ Providing resources for safe location, STIs, follow up for trauma, addictions.
- ▶ Training on misconceptions and judgements
- ▶ Sexual Assault Nurse Examiner (SANE): importance of evidence collection in timely manner for legal prosecution.
- ▶ Many times patients will decline.
- ▶ emDocs.net

Sexually Transmitted Diseases

High Risk Behaviors

- ▶ Alcohol lowers inhibition and increases confidence for many men and women. This often leads to riskier choices such as unprotected sex.
- ▶ Completing STI testing (with patient consent) in ER for patients with high risk alcohol use?? Intersection of Public Health.

Types

- ▶ Human Papillomavirus (HPV)
- ▶ Chlamydia
- ▶ Gonorrhea
- ▶ Syphilis
- ▶ Herpes
- ▶ Trichomoniasis
- ▶ Bacterial Vaginosis
- ▶ Human Immunodeficiency Virus (HIV)
- ▶ Acquired Immunodeficiency Syndrome (AIDS)

Harborview Trauma Center Seattle: Case Study by Douglas Zatsick, MD

Stepped Care



- ▶ 15 yr. old female, assaulted with knife to face. Left VII cranial nerve injury. BAC (+). (Post Trauma Support- SBIRT).
- ▶ “Of all the things that have happened to you since you were injured, what concerns you the most?”
 - “My smile might not be back no more and um my face might be scared for life.”

SBIRT: Continued Care and Screenings

2 – 4 wks Post Injury

- ▶ “my face being back the way it used to be. I think they cut a nerve, so they said it takes 4 to 6 mos for my smile to come back or not”. Continue with SBIRT / MI to encourage sobriety or harm reduction.

4 wks post injury

- ▶ “I’m kinda traumatized cause like, when it happened, I thought I was going to die and stuff. So I don’t know, basically just hanging and stuff. It was just a total shock I guess”.
- ▶ Evidenced Based PTSD TX: Symptoms and Function Therapy and Medications. CBT and MEDS

Solutions

- ▶ Trauma Informed Care; Motivational Interviewing trainings.
- ▶ AUDIT vs CAGE: SBIRT Clinician, Peer Support Worker can complete full screenings. (pg. 548).
- ▶ Alcohol tax increase. Research in England and Wales showed increase of 1% could reduce violence related emergency department attendances by 6,000 a year.
- ▶ Geriatric ED Accreditation; Dr. Simonis. Screenings can encompass SBIRT for alcohol abuse, mental health needs.
- ▶ Continued diplomatic advocacy from organizations like American College of Emergency Physicians, American College of Surgeons, American Counseling Association etc.

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Thank You

