

Brooke J. Arterberry, Ph.D.

Iowa State University

Gail Basch, M.D. College Drinking presentation (2013)

Revised 2018

Alcohol Medical Scholars Program

**Note: Outline contains detail that would allow someone to give the lecture. Some SLIDES contain animation that should be reviewed prior to lecturing to understand placement.**

## I. Introduction (SLIDE 1)

### A. Heavy drinking is prevalent among college stu<sup>1,2</sup> (SLIDE 2)

1. ~32%: 5+ drinks / occasion / past 2 wks
2. ~20%: ♂ d10+ drinks / occasion / past 2 wks
3. ~10%: ♀ 8+ drinks / occasion / past 2 wks

### B. Pattern → much morbidity and mortality<sup>3-5</sup> (SLIDE 3)

1. ~2,000 stu deaths / yr from alc related causes
2. ~100,000 sexual assaults / yr
3. ~2.8 million drove while intoxicated

### C. This lecture reviews: (SLIDE 4)

1. Definitions of alcohol use and problems
2. Campus drinking: risk factors & problems
3. Myths & misinformation
4. Intervention efforts

## II. Definitions

### A. Standard drink (10-12 g pure ethanol)<sup>6</sup> (SLIDE 5)

1. 12 oz beer

2. 8 oz malt liquor
3. 5 oz wine
4. 1.5 oz 80 proof liquor

B. Blood alcohol concentration (BAC)<sup>7</sup> (SLIDE 6)

1. BAC changes with

- a. ↑ drinks (e.g., 1 drink = ↑0.02)
- b. Metabolize ~1 drink/hr
- c. ♀ (women metabolize alc slower and have ↓ body water)

1'. Females have less alcohol dehydrogenase

a'. Hormone that metabolizes alcohol

b'. Found in liver

2'. Males = 60% water; Females = 55% water b/c ↑fatty tissue

- d. ↓ Weight
- e. Drink without food

2. BAC's effects<sup>8</sup> (.08 = illegal to drive in US)(SLIDE 7)

- a. .05 → well-being, ↓ inhibition
- b. .10 → sleepiness, ↓ coordination
- c. .20 → anger, moodiness, confusion
- d. .30 → difficulty awakening
- e. .45 → ↓blood pressure, ↓breathing →coma, death

III. Campus drinking: risk factors & problems (SLIDE 8)

A. Risk factors: both genes and environment (SLIDE 9)

1. Genes contribute to AUDs and other alc probs<sup>9-20</sup>

- a. Impulsivity
- b. Low sensitivity to alcohol (low level of alc response)

- 2. Environmental Risk<sup>21-23</sup>
  - a. Campus culture/campus life
  - b. Special events
  - c. Peers
  - d. Norms related to alc
- B. Impulsivity: influenced by genes<sup>9-13</sup> (SLIDE 10)
  - 1. Act without thinking
  - 2. Ignore possible conseq
  - 3. Want immediate reward
  - 4. → ↑ problems alc & drugs through
- C. Low levels of alc response genetic influence<sup>14-20</sup> (SLIDE 11)
  - 1. Need ↑drinks to feel effects
  - 2. Drink↑ to feel effects
  - 3. Expect ↑drinks → ↑fun
  - 4. Choose friends → drink↑
- D. Peer Influence<sup>21,24-28</sup> (SLIDE 12)
  - 1. Group = feel vulnerable
  - 2. Drink↑ to keep up with heaviest drinker
    - a. ~40% afraid to refuse
    - b. Lack skills to refuse
- E. 21<sup>st</sup> birthday<sup>29-31</sup> (SLIDE 13)
  - 1. ~80% drink to celebrate
  - 2. ~25% have ≥21 drinks
  - 3. 50% drinkers consume highest ever drinks
- F. Game day drinking<sup>29,32,33</sup> (SLIDE 14)

1. Tailgating
2. ↑ pre-gaming (i.e., drink before go out)
3. ↑ drinking games (e.g., beer pong)
4. ~60% drink on game day
5. ~7 drinks/game

## II. Student myths & misinformation (SLIDE 15)

### A. Inaccurate beliefs (1)<sup>34,35</sup> (SLIDE 16)

1. Overestimate peer drinking
2. Drink to match overestimation
3. Think heavy drinking needed to be accepted

### B. Inaccurate beliefs (2) (SLIDE 17)

1. Heavy drinking has benefits
  - a. ~65% believe heavy drink → more fun
  - b. ~55% believe heavy drink → better sex
2. Alc → better sleep
  - a. Interferes w/ sleep cycle
  - b. Wake 2-3 hours after sleep onset
  - c. ↓ dream sleep early in night → nightmares later in night
3. Lite beer → ↓ alc
4. Caffeine, exercise, shower → help sober-up ↓ effects of hangover

### C. Inaccurate beliefs (3) (SLIDE 18)

1. Believe can guess BAC
  - a. But underestimate # std drinks
  - b. e.g., mixed drink with 2-3 shots = 1 beer
2. Immune to alc dangers (e.g., “Won’t happen to me”)

- a. Overdose (death with high BAC a major death cause in US)
  - b. DWI (think can drive fine after drinking)
  - c. Injury
3. Combining alc + other drugs not dangerous
- a. Alc+cannabis=alc ↑ THC (psychoactive compound in cannabis) in body
  - b. Alc + anxiolytic Rx (e.g., Valium/Librium) = exponentially ↑ effect of alc
  - c. → ↑ risk for conseq (e.g., blackout) w/ less alc than alc use only

### III. Intervention efforts (SLIDE 19)

#### A. Prevention campaigns<sup>56,57</sup> (SLIDE 20)

- 1. National alc screening
  - a. Occurs in April
  - b. Campus-wide alc screens ↑ personal awareness of drinking
- 2. Social norms marketing
  - a. Intervention to ↓ risky alc use on campus
  - b. Correct misperceptions
    - 1'.70% of peers drink fewer than 4 drinks on Fri
    - 2'.~20% of stu never drank

#### 3. Policy & Campaign effectiveness<sup>38-43</sup> (SLIDE 21)

- a. Campus alcohol policy
  - 1'. ↓ ~1 day
  - 2'. ↓ ~1 drink/occasion
- b. Campus alcohol-free = ↓~1 drink/occasion
- c. Social Norms Marketing
  - 1'.Reduce ~1 drink & ~.02 BAC/occasion
  - 2'.↑Alc density = no change in alc use

## B. Intervention approaches<sup>34,36-40</sup> (SLIDE 22)

1. Tailoring prevention to risk → ↓ heavy drinking/problems
2. Programs = edu & feedback re: stu actual alc use and beliefs

- a. Video (series of 5)
- b. Web-based (1 time)
- c. In-person (2 times)

### 3. Intervention content<sup>34,36-40</sup> (SLIDE 23)

- a. Educate about alc & effects
- b. Correct misperceived self vs peer alc use
- c. Correct false beliefs about alc (e.g., can't guess BAC)
- d. Teach healthy coping skills (e.g., exercise to ↓ stress)
- e. Strategies for safer drinking
  - 1'. Discourage pre-gaming (i.e., drink before go out)
  - 2'. Discourage drinking games (e.g., beer pong)
  - 3'. Preset # drinks before going out and/or count drinks
  - 4'. Alternate alc and non-alc drinks

### 4. Intervention Effectiveness<sup>44</sup> (SLIDE 24)

- a. Web-based less effective than in-person
- b. Small, positive effects
- c. ↓ alc use & ↓ alc probs
- d. ~26 weeks post intervention
- e. Less effective for Greek & athletes

## II. Conclusion

### A. This lecture reviewed: (SLIDE 25)

1. Definitions of alc use and problems

2. Campus drinking: risk factors & problems
3. Myths & misinformation
4. Intervention efforts

#### B. Four Takeaways (SLIDE 26)

1. College stus: ↑ risk of ↑ drinking & alc probs
2. Genetics, peers, special events: ↑ risk of alc/probs
3. Inaccurate beliefs of alc and peer drinking: ↑ risk
4. Prevention efforts can ↓ heavy drinking

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