

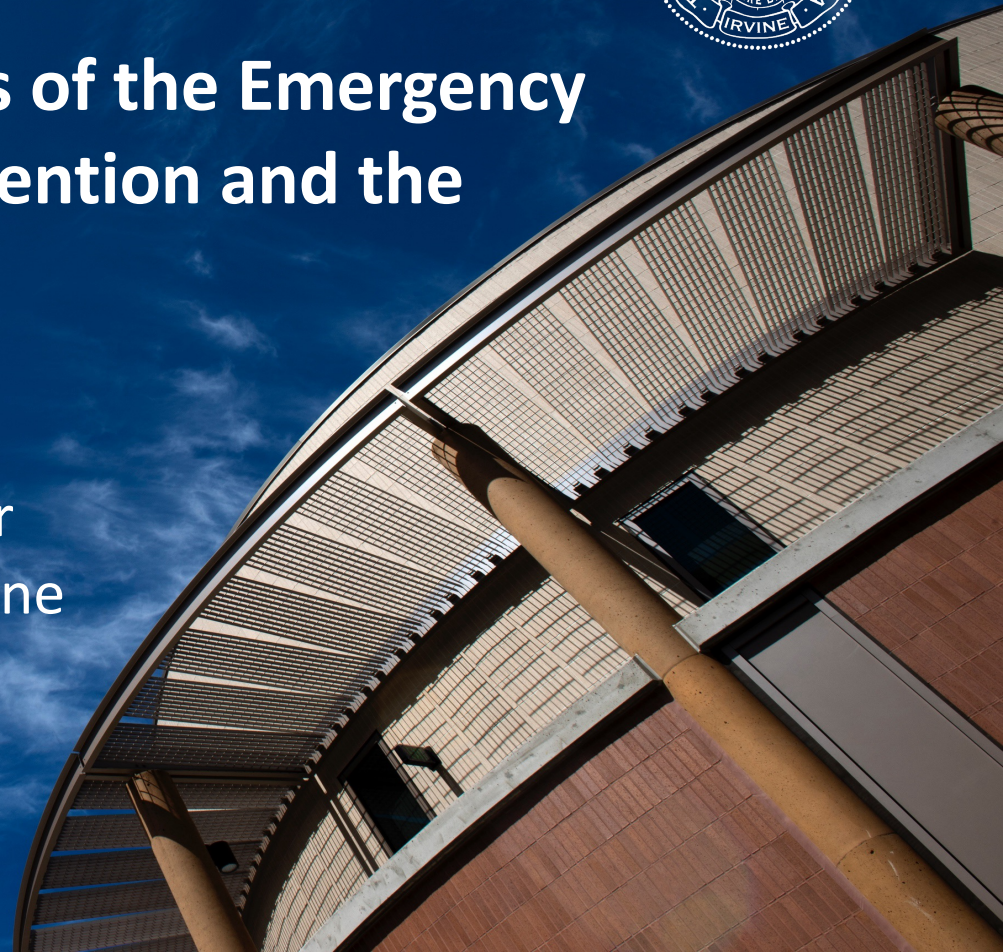
UCI University of
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A Trajectory Beyond the Doors of the Emergency Department to Engage in Prevention and the Public's Health and Safety

Federico E. Vaca, MD, MPH
Professor and Executive Vice Chair
Department of Emergency Medicine

**Research in Addiction Medicine
Scholars (RAMS) – Faculty Webinar**



Warming Up the Career and Hard Choices



- Residency and Early Faculty Years
 - Early and mid-1990s
 - Crashes – child occupant safety
 - Large vulnerable group in need
 - Cultural role and literacy in injury prevention
 - Where the “rubber meeting the road” – training, community work, NHTSA



10 Leading Causes of Death, United States
2020, All Races, Both Sexes

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Congenital Anomalies 4,043	Unintentional Injury 1,153	Unintentional Injury 685	Unintentional Injury 881	Unintentional Injury 15,117	Unintentional Injury 31,315	Unintentional Injury 31,057	Malignant Neoplasms 34,589	Malignant Neoplasms 110,243	Heart Disease 556,665	Heart Disease 696,962
2	Short Gestation 3,141	Congenital Anomalies 382	Malignant Neoplasms 382	Suicide 581	Homicide 6,466	Suicide 8,454	Heart Disease 12,177	Heart Disease 34,169	Heart Disease 88,551	Malignant Neoplasms 440,753	Malignant Neoplasms 602,350
3	SIDS 1,389	Homicide 311	Congenital Anomalies 171	Malignant Neoplasms 410	Suicide 6,062	Homicide 7,125	Malignant Neoplasms 10,730	Unintentional Injury 27,819	COVID-19 42,090	COVID-19 282,836	COVID-19 350,831
4	Unintentional Injury 1,194	Malignant Neoplasms 307	Homicide 169	Homicide 285	Malignant Neoplasms 1,306	Heart Disease 3,984	Suicide 7,314	COVID-19 16,964	Unintentional Injury 28,915	Cerebro-vascular 137,392	Unintentional Injury 200,955
5	Maternal Pregnancy Comp. 1,116	Heart Disease 112	Heart Disease 56	Congenital Anomalies 150	Heart Disease 870	Malignant Neoplasms 3,573	COVID-19 6,079	Liver Disease 9,503	Chronic Low. Respiratory Disease 18,816	Alzheimer's Disease 132,741	Cerebro-vascular 160,264
6	Placenta Cord Membranes 700	Influenza & Pneumonia 84	Influenza & Pneumonia 55	Heart Disease 111	COVID-19 501	COVID-19 2,254	Liver Disease 4,938	Diabetes Mellitus 7,546	Diabetes Mellitus 18,002	Chronic Low. Respiratory Disease 128,712	Chronic Low. Respiratory Disease 152,657
7	Bacterial Sepsis 542	Cerebro-vascular 55	Chronic Low. Respiratory Disease 54	Chronic Low. Respiratory Disease 93	Congenital Anomalies 384	Liver Disease 1,631	Homicide 4,482	Suicide 7,249	Liver Disease 16,151	Diabetes Mellitus 72,194	Alzheimer's Disease 134,242
8	Respiratory Distress 388	Perinatal Period 54	Cerebro-vascular 32	Diabetes Mellitus 50	Diabetes Mellitus 312	Diabetes Mellitus 1,168	Diabetes Mellitus 2,904	Cerebro-vascular 5,686	Cerebro-vascular 14,153	Unintentional Injury 62,796	Diabetes Mellitus 102,188
9	Circulatory System Disease 386	Septicemia 43	Benign Neoplasms 28	Influenza & Pneumonia 50	Chronic Low. Respiratory Disease 220	Cerebro-vascular 600	Cerebro-vascular 2,008	Chronic Low. Respiratory Disease 3,538	Suicide 7,160	Nephritis 42,675	Influenza & Pneumonia 53,544
10	Neonatal Hemorrhage 317	Benign Neoplasms 35	Suicide 20	Cerebro-vascular 44	Complicated Pregnancy 191	Complicated Pregnancy 594	Influenza & Pneumonia 1,148	Homicide 2,542	Influenza & Pneumonia 6,295	Influenza & Pneumonia 42,511	Nephritis 52,547

Produced By: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention

Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System

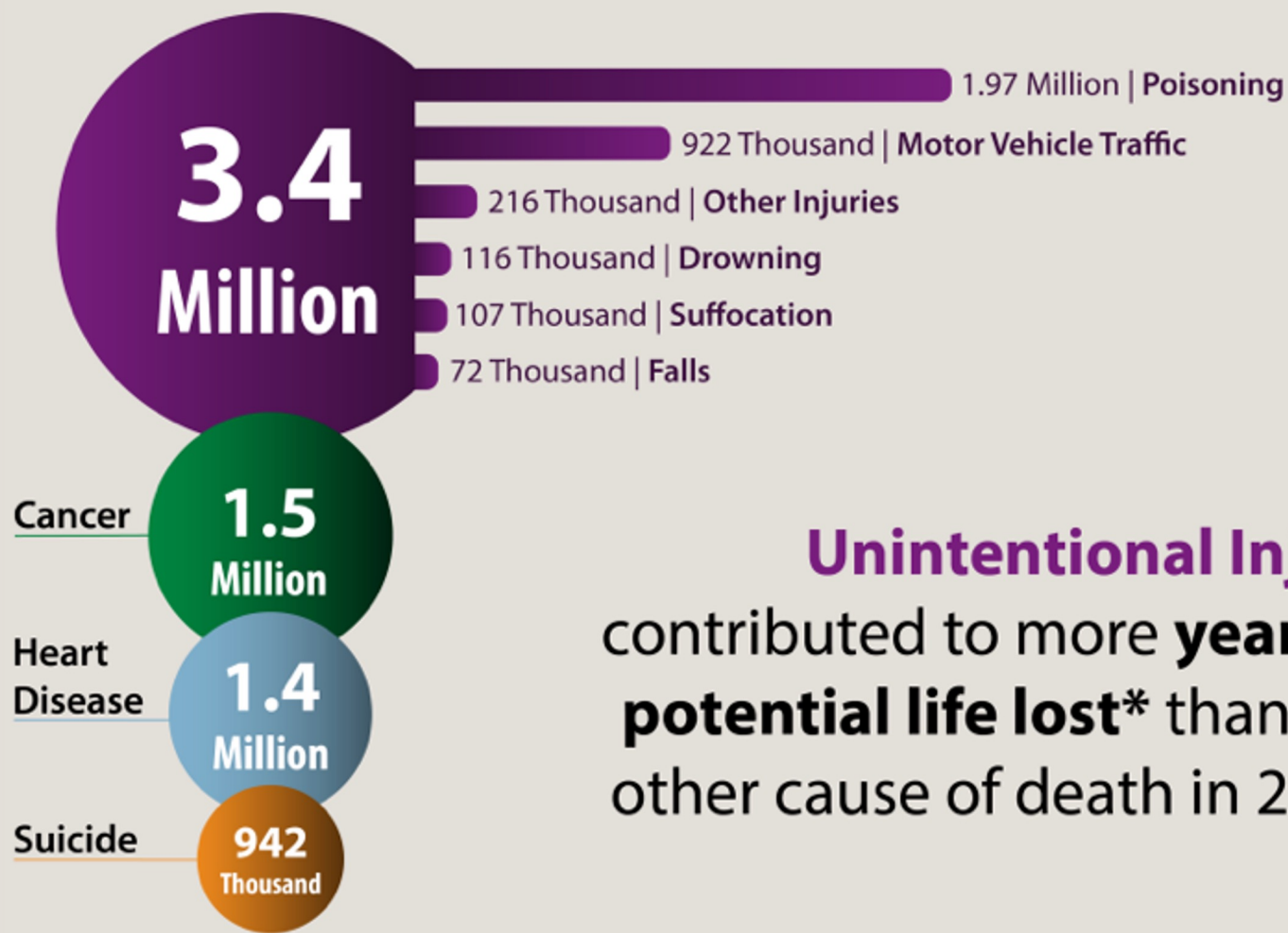
10 Leading Causes of Injury Deaths by Age Group Highlighting Unintentional Injury Deaths, United States – 2018

Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	Total
1	Unintentional Suffocation 977	Unintentional Drowning 443	Unintentional MV Traffic 341	Suicide Suffocation 361	Unintentional MV Traffic 6,308	Unintentional Poisoning 15,353	Unintentional Poisoning 14,978	Unintentional Poisoning 13,620	Unintentional Poisoning 10,854	Unintentional Fall 32,522	Unintentional Poisoning 62,399
2	Homicide Unspecified 125	Unintentional MV Traffic 292	Unintentional Drowning 130	Unintentional MV Traffic 360	Unintentional Poisoning 4,245	Unintentional MV Traffic 6,886	Unintentional MV Traffic 5,068	Unintentional MV Traffic 5,328	Unintentional MV Traffic 5,629	Unintentional MV Traffic 7,697	Unintentional MV Traffic 37,991
3	Unintentional MV Traffic 80	Homicide Unspecified 152	Unintentional Fire/Burn 99	Suicide Firearm 202	Homicide Firearm 4,107	Homicide Firearm 4,348	Suicide Firearm 3,222	Suicide Firearm 3,787	Suicide Firearm 4,421	Suicide Firearm 6,375	Unintentional Fall 37,455
4	Homicide Other Spec., Classifiable 68	Unintentional Fire/Burn 123	Homicide Firearm 57	Homicide Firearm 134	Suicide Firearm 2,995	Suicide Firearm 3,429	Suicide Suffocation 2,688	Suicide Suffocation 2,481	Unintentional Fall 2,766	Unintentional Unspecified 4,607	Suicide Firearm 24,432
5	Undetermined Suffocation 45	Unintentional Suffocation 112	Unintentional Suffocation 30	Unintentional Drowning 86	Suicide Suffocation 2,237	Suicide Suffocation 3,117	Homicide Firearm 2,569	Suicide Poisoning 1,396	Suicide Suffocation 1,934	Unintentional Suffocation 3,793	Homicide Firearm 13,958
6	Unintentional Drowning 39	Unintentional Pedestrian, Other 70	Unintentional Other Land Transport 20	Unintentional Fire/Burn 52	Suicide Poisoning 454	Undetermined Poisoning 824	Suicide Poisoning 990	Homicide Firearm 1,382	Suicide Poisoning 1,491	Unintentional Poisoning 3,269	Suicide Suffocation 13,840
7	Homicide Suffocation 30	Homicide Other Spec., Classifiable 66	Homicide Unspecified 17	Unintentional Suffocation 43	Unintentional Drowning 431	Suicide Poisoning 753	Undetermined Poisoning 780	Unintentional Fall 1,131	Unintentional Suffocation 858	Adverse Effects 3,100	Unintentional Suffocation 6,701
8	Undetermined Unspecified 30	Homicide Firearm 54	Adverse Effects 16	Unintentional Other Land Transport 37	Homicide Cut/pierce 256	Unintentional Drowning 482	Unintentional Fall 502	Undetermined Poisoning 876	Homicide Firearm 802	Unintentional Fire/Burn 1,404	Suicide Poisoning 6,237
9	Unintentional Natural/Environment 22	Unintentional Natural/Environment 38	Unintentional Pedestrian, Other 15	Unintentional Poisoning 23	Undetermined Poisoning 224	Homicide Cut/Pierce 455	Unintentional Drowning 414	Unintentional Drowning 456	Adverse Effects 766	Suicide Poisoning 1,133	Unintentional Unspecified 6,082
10	Two Tied 18	Unintentional Firearm 30	Homicide Other Spec., NEC ^a 14	Suicide Poisoning 20	Suicide Fall 205	Unintentional Fall 345	Homicide Cut/Pierce 340	Unintentional Suffocation 401	Undetermined Poisoning 704	Suicide Suffocation 1,014	Adverse Effects 4,604

Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System.
Produced by: National Center for Injury Prevention and Control, CDC using WISQARS™.



Centers for Disease
Control and Prevention
National Center for Injury
Prevention and Control



Unintentional Injury
contributed to more **years of potential life lost*** than any other cause of death in 2020.

*Years of potential life lost (YPLL) is an estimate of number of years a person would have lived if they had not died prematurely. In this graphic, YPLL was calculated where deaths occurring before age 65 are considered premature.
Data Source: 2020 NCHS Vital Statistics System produced by CDC WISQARS (www.cdc.gov/injury/wisqars/fatal.html)

www.cdc.gov

AB-CASI Feasibility and 6-Month Follow-up

- Feasibility
 - Bilingual automated ED-SBIRT integrated BNI and computer-generated personalized feedback and alcohol use reduction plans
 - 5,103 ED patients
 - >80% with no preference for a doctor or nurse vs. a computer asking private alcohol-related questions
 - >75% said easier or as easy to provide honest answers to a computer as compared to a doctor or nurse
- 6-Month Follow-up
 - 221 completed the 6-month follow-up interview
 - 47% “at-risk” patients were no longer drinking over the NIAAA low-risk limits
 - Readiness to change was a good predictor of drinking below the NIAAA low-risk limits

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Feasibility of Emergency Department Bilingual Computerized Alcohol Screening, Brief Intervention, and Referral to Treatment

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Doug Kim, MS
Mauricio Arcila, BS

ABSTRACT. The purpose of this study was to assess the feasibility of utilizing a computerized alcohol screening and intervention (CASI) kiosk in an emergency department (ED). An interactive English and Spanish audiographic computer program, developed for use on a mobile computer cart, was administered to 5103 patients. Patients who screened at risk (19%) also received a fully computer-guided brief negotiated interview (BNI) and a printed personal alcohol reduction plan. A higher percentage of younger patients, and males (31% versus 16% females), screened at risk or dependent. Patient surveys indicated CASI was easy to use and over 75% did not prefer a medical professional over the computer. The ED-based bilingual computerized alcohol screening, brief intervention, and referral to treatment required little time to administer, was acceptable to patients, identified at-risk and dependent drinkers, and was able to provide personalized feedback and brief intervention.

KEYWORDS. Alcohol, brief intervention, computer, emergency department, screening

INTRODUCTION

The development and implementation of alcohol screening, brief intervention, and referral to treatment (SBIRT) activities in emergency departments across the nation are becoming more commonplace. Although proliferation of this

emergency department (ED)-based intervention may bode well for patients with clinically apparent as well as less apparent alcohol use disorders, there are several challenges to implementing SBIRT efforts in the ED (1-4). One challenge most frequently cited in the literature concerning ED-SBIRT points to the additional

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This work has been presented at the 2008 SAEM Annual Meeting, May 29-June 1, Washington, DC.
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Six-Month Follow-Up of Computerized Alcohol Screening, Brief Intervention, and Referral to Treatment in the Emergency Department

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ABSTRACT. The goal of this observational study was to measure change in alcohol consumption at 6 months following emergency department computerized alcohol screening brief intervention (CASI) and referral to treatment (ED-SBIRT) with integrated brief negotiated interview (BNI) and computer-generated personal alcohol reduction plans. At-risk patients received a BNI by CASI, including personalized feedback, assessment of readiness to change, reasons for cutting down, goal setting, and a printed personal alcohol reduction plan. Alcohol use was assessed by telephone interview 6 months after CASI. Factors associated with lower alcohol consumption were examined. Of the 385 participants who completed the BNI, were consented, and enrolled, 221 subjects completed the 6-month follow-up interview. Forty-seven percent of the study sample of at-risk patients were no longer drinking over the National Institute on Alcohol Abuse and Alcoholism (NIAAA)-recommended limits. Reductions were greater for patients with Alcohol Use Disorders Identification Test (AUDIT) scores of 1 to 7. Readiness to change was a good predictor of drinking below the recommended limits. The use of computerized ED-SBIRT with integrated personalized messaging and BNI holds promise as a viable screening and intervention modality for a wide range of emergency department patients.

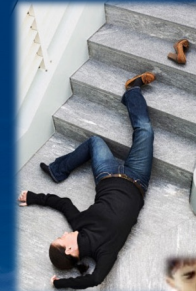
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This project was supported by a grant from the California Office of Traffic Safety. The authors would like to thank Christina Cheng and the University of California, Irvine, Emergency Medicine Research Associates Program for their help with this project.

The Burden of Alcohol Use Disorders and EDs

- Alcohol use disorders (AUD) are a major contributor to disease burden in the U.S. (e.g., liver and cardiovascular disease, cancers, addiction)
- EDs acutely witness this more than just about any other setting in the US healthcare system – negative consequences and health disparities
- 2019 National Hospital Ambulatory Medical Care Survey (NHAMCS)
 - >150 million visits (40.4/100 persons)
 - >26 million were injury related
 - >26 million ED visits (>6.4 million injury-related) by Latinos
 - “Chronic condition at ED visit” > 5.1 million
 - “alcohol misuse/abuse/dependence ED visits”



Julien et al. 2020; Cairns et al., 2021

The Burden of Alcohol Use Disorders and EDs

- 2006 - 2014, alcohol-related ED visits increased by >61%
 - acute and chronic alcohol-related - more than 51% and 75%
- Beyond ED visits, 1999 – 2017...
 - ≥ 16 y/o, annual alcohol-related deaths doubled (35,914 to 72,558)
 - More than 50% increase in the alcohol-related death rate (16.9 to 25.5 per 100,000)
- Conceptualization and testing of ED alcohol screening brief intervention and referral to treatment (ED-SBIRT), that began over 20 years ago, has provided opportunity to identify and address AUDs in EDs

White et al., 2018; White et al., 2020

The Burden of Alcohol Use Disorders and EDs

- Routine ED-SBIRT lags behind national guidelines
- Perceived barriers to its implementation
 - Practitioner time burden, Personnel cost
 - Maintaining intervention fidelity
 - Seamless delivery in languages other than English
- Language a fundamental rate limiting step
 - Limits reach of prevention and treatment
 - Limits ability to address alcohol-related health disparities
 - U.S. Latinos, the largest racial/ethnic minority group 60.6 million (18.5% of U.S. population)

U.S. Latinos and AUDs

- Despite studies showing U.S. Latinos are less likely to receive alcohol intervention nearly all U.S. ED-SBIRT studies have excluded enrollment of predominantly Spanish speaking patients
- Latino men that drink have high prevalence of daily heavy drinking and high rates of chronic liver disease and cirrhosis-related death
- While Non-Latino Whites are more likely to develop AUD, once alcohol dependent, Latinos have higher prevalence of recurrent/persistent dependence
- Latinos face higher rates of negative consequences (e.g., impaired driving)

Field, et al., 2009; Mulia et al., 2014; Zemore et al., 2018; Levitt et al., 2019; Salas-Wright et al., 2021.

Aims

- Primary aim: Compare efficacy of AB-CASI to SC in reduction of alcohol consumption among Latino ED patients with unhealthy drinking
 - Hypothesized that at 12-months, AB-CASI would be superior to SC in reducing number of binge drinking episodes and mean number of weekly standard drinks over the last 28-days
- Secondary aim: Compare efficacy of AB-CASI to SC in reduction of alcohol-related negative health behaviors/consequences
 - Hypothesized that at 12-months, AB-CASI would be superior to SC in reducing alcohol-related negative health behaviors/consequences

Methods

- Bilingual unblinded, parallel group RCT
 - AB-CASI vs. Standard Care among adult Latino ED patients
 - Reducing alcohol use when compared to
- Trial included the whole spectrum of unhealthy drinking, definitionally including those drinking above the low-risk limits through dependence
- Randomized using a stratified randomization procedure delivered by Oncore Clinical Trials Management System

Vaca FE, Dziura J, Abujarad F, et al. Trial study design to test a bilingual digital health tool for alcohol use disorders among Latino emergency department patients. *Contemp Clin Trials*. 2020;97:106128.

Setting

- From October 2014 – May 2020, 840 participants were enrolled and followed
- Self-identified adult Latino ED patients
- Large community tertiary care center urban ED, American College of Surgeons (ACS) verified Level 2 trauma center in the northeastern U.S.

AB-CASI

El Alcohol y Su Salud

Empiezas 100% Completas

Hoy, su resultado del AUDIT fue un 26. Esto indica que usted podría ser dependiente del alcohol.

0	8	16	20 or más
Baja gravedad de problemas relacionados con el alcohol	Mediana gravedad de problemas relacionados con el alcohol	Alta gravedad de problemas relacionados con el alcohol y mediana probabilidad de tener trastorno por consumo de alcohol	Alta Probabilidad de un Trastorno por consumo de alcohol incluyendo alcoholismo

26
↓

Un resultado de 19 o más en el AUDIT denota efectos dañinos causados por el alcohol. Esto nos preocupa por que quiere decir que usted puede estar sufriendo los efectos dañinos del alcohol debido a su nivel de consumo.

[➡ Sígueme](#)

El Alcohol y Su Salud

Empesar: 75% Completado Lista

Seleccione todas las respuestas que apliquen. Estoy listo para aceptar un referido hoy, porque...

- ☐ Quiero evitar regresar a la Sala de Emergencias
- ☐ Quiero ser más saludable
- ☐ Quiero prevenir problemas con mi salud
- ☐ Quiero prevenir situaciones donde me pueda herir
- ☒ Quiero tener más control sobre mi comportamiento
- ☒ Quiero ahorrar dinero
- ☐ Quiero prevenir problemas en mi escuela o trabajo
- ☒ Mi consumo de alcohol me hace sentir mal
- ☐ Mi pareja, esposo o esposa quiere que comience un tratamiento
- ☐ No me quiero convertir en un alcohólico como le pasó a alguien que yo conozco
- ☐ No quiero ser arrestado por conducir un vehículo bajo la influencia del alcohol
- ☐ Tengo otra razón que no ha sido mencionada

 Siguiente

Navigation icons: back, forward, search, volume, and a progress bar.

Alcohol and Your Health

Start Finish

Select all that apply: I'm ready to accept a treatment referral because:

- ☐ I want to avoid coming back to the Emergency Room
- ☐ I want to be healthy
- ☒ I want to avoid health problems
- ☐ I want to avoid situations where I could get hurt
- ☐ I want to be in better control of my behavior
- ☐ I want to save money
- ☒ I want to avoid school or work problems
- ☒ I feel bad about my drinking
- ☒ My partner or spouse wants me to get treatment
- ☐ I want to avoid becoming an alcoholic like someone I know
- ☐ I want to avoid getting arrested for driving after drinking
- ☐ Some other reason

 Next

▶ ◀ 🔊 🔇 🔍

Alcohol and Your Health

Start | 87% Complete | Finish

We suggest you take a moment to think about your answers and the information you have received. Which of the following four actions would you be willing to take to cut down on the amount of alcohol you drink?

- I AM NOT PREPARED** to cut down on my drinking at this time.
- I CANNOT COMMIT** to cut down to the recommended limits but I can cut down some.
Your commitment to cut down is a great choice for your health. Please use the sliders below to change the number of drinks.
- I COMMIT** to drink no more than 4 drinks on any occasion and no more than 14 drinks a week. Your commitment to drink within recommended limits is a great choice for your health...
- I COMMIT TO QUIT DRINKING ALCOHOL.** This is a good decision for your health.
For some people this is the best way to reduce their risk for alcohol-related injury and illness...

➔ Next

▶ ◀ 🔊 [Slider] 🔊 ▶



Treatment Condition: Standard Care

- Participants not randomized to AB-CASI received emergency medicine provider Standard Care including an informational sheet with recommended primary care follow-up
- Screening and referral requirements were performed according to ACS Level 2 trauma center designation
- Social worker consultation was at full discretion of the treating provider

Baseline and Long-term Follow-up Assessments

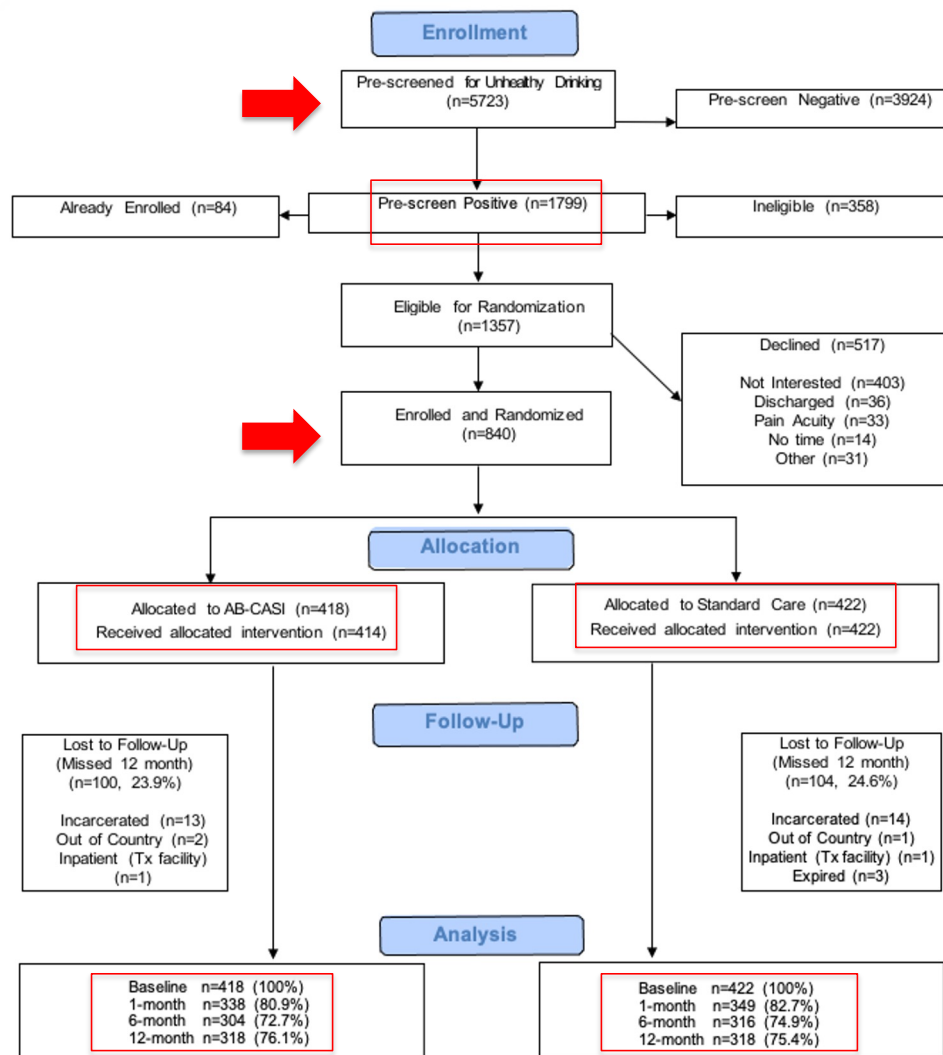
- Baseline and follow-up assessments (1, 6, and 12-months) included:
 - AUDIT [baseline]
 - Timeline Followback (TLFB - last 28-days) [baseline, 1, 6, 12-months]
 - Revised Injury Behavior Checklist (RIBC) [baseline, 12-months]
 - Short Inventory of Problems (SIP) [baseline, 1, 6, 12-months]
 - Brief Event Data (BED) [baseline, 1, 6, 12-months]
 - Treatment Services Review (TSR) [baseline, 1, 6, 12-months]
- Bilingual trained research assistants, blinded to group assignment, completed scripted follow-up assessments by phone

Outcomes

- Primary outcome measure was self-reported number of binge drinking episodes
 - (i.e., women and all >65 y/o: >3 standard drinks and men: >4 standard drinks/occasion) over the previous 28 days assessed using 28-day TLFB (12-months post-randomization)
- Secondary outcome measures included self-reported mean number of weekly standard drinks measured by 28-day TLFB (12-months post-randomization), and alcohol-related negative health behaviors/consequences over 12-months

Study Population

- Of 1,799 patients screened positive for unhealthy drinking, 1,357 met eligibility criteria
- 840 (62%) were enrolled and randomized
 - 418 to AB-CASI
 - 422 to SC
- 4 participants randomized to AB-CASI did not receive the intervention



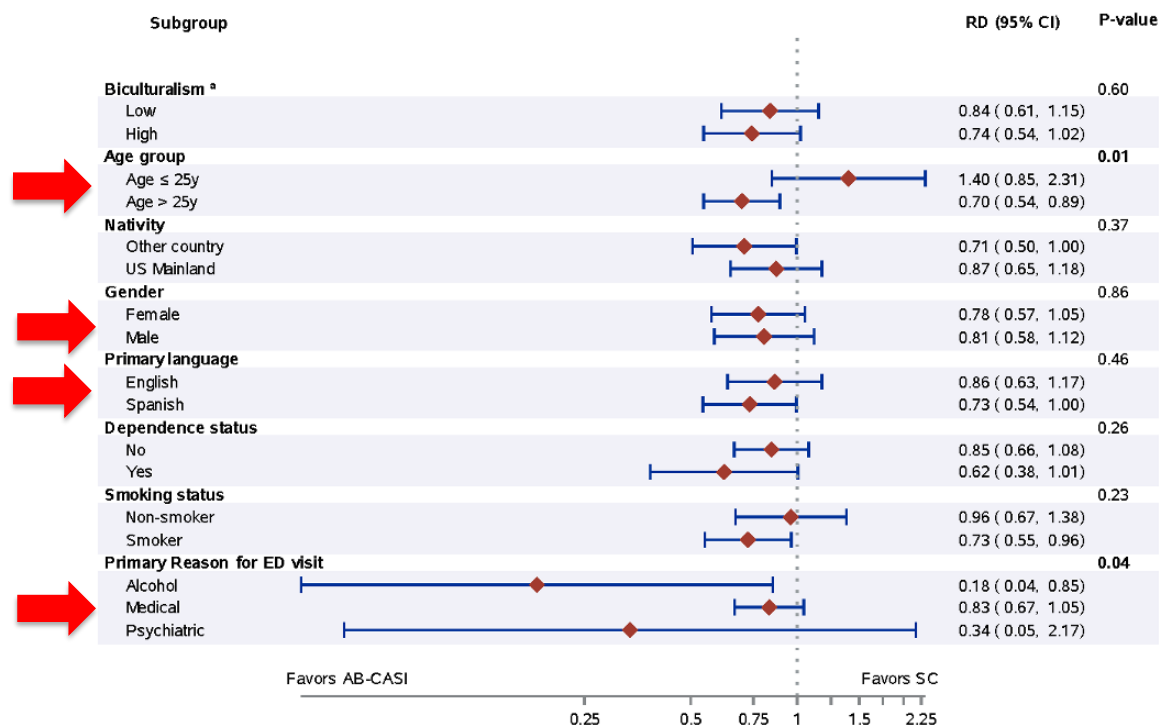
Primary Outcome

- AB-CASI mean number of binge days (last 28-days):
 - Baseline: 7.7 (95% CI=6.9, 8.7) and decreased to...
 - 1-month: 3.5 (95% CI=3.0, 4.2)
 - 6-months: 3.4 (95% CI=2.9, 4.1)
 - 12-months: **3.2 (95% CI=2.7, 3.8)**
- Standard Care mean number of binge days (last 28-days):
 - Baseline: 7.7 (95% CI=6.9, 8.7) and decreased to...
 - 1-month: 3.9 (95% CI=3.3, 4.6),
 - 6-months: 3.1 (95% CI=2.6, 3.7)
 - 12-months: **4.00 (95% CI=3.4, 4.7)**
- Primary outcome, number of binge days at 12-months, significantly lower in AB-CASI vs. SC
 - (Relative Difference (RD), RD=0.79, 95%CI=0.64,0.99, p=0.04)
 - RD of 0.79 means the mean number of binge days in the AB-CASI group was 79% of the SC group

Secondary Outcome

- AB-CASI **mean number of weekly standard drinks:**
 - Baseline: 22.8 (95% CI=20.8, 25.1) and decreased to...
 - 1-month: 12.4 (95% CI=10.8, 14.1),
 - 6-months: 11.6 (95% CI=10.1, 13.4)
 - 12-months: **9.9 (95% CI=8.6, 11.5)**
- Standard Care **mean number of weekly standard drinks:**
 - Baseline: 22.8 (95% CI=20.8, 25.1) and decreased to...
 - 1-month: 12.2 (95% CI=10.7, 13.9),
 - 6-months: 10.5 (95% CI=9.1, 12.1)
 - 12-months: **12.3 (95% CI=10.7, 14.1)**
- At 12-months, AB-CASI vs. SC was 19% lower but did not meet significance at the pre-specified 0.01 level for secondary outcomes (RD=0.81, 99%CI=0.64, 1.02, p=0.02)
- Alcohol-related negative health behaviors/consequences, over 12-months, were similar between groups

Effect Modifier Analysis of Number of Binge Days at 12-months



Note: SC = Standard Care; RD = Relative Difference; CI = Confidence Interval

^a Biculturalism (Hispanisism – Americanism) low range (-80, 5); high range (5.74 – 80)

RD is the relative difference (i.e. ratio of mean number of binge days in AB-CASI to mean number of binge days in SC)

Discussion

- 1st U.S. ED-SBIRT RCT using a bilingual automated health IT tool showing efficacy in reduction of unhealthy alcohol use
- AB-CASI intervention required little time to administer (replicated in this trial, 8 – 10 minutes)
 - Effectively identified individuals with unhealthy alcohol use while providing bilingual ED-SBIRT with personalized feedback
 - Outperformed SC specifically on reduction of mean number of binge days by 21%
- Although number of weekly drinks was 19% lower in AB-CASI at 12-months, the difference did not meet the pre-specified threshold for significance (i.e., $p = .01$)
 - At 1-month both groups had measurable reductions in alcohol use, the AB-CASI group **reduction endured at 12-months**

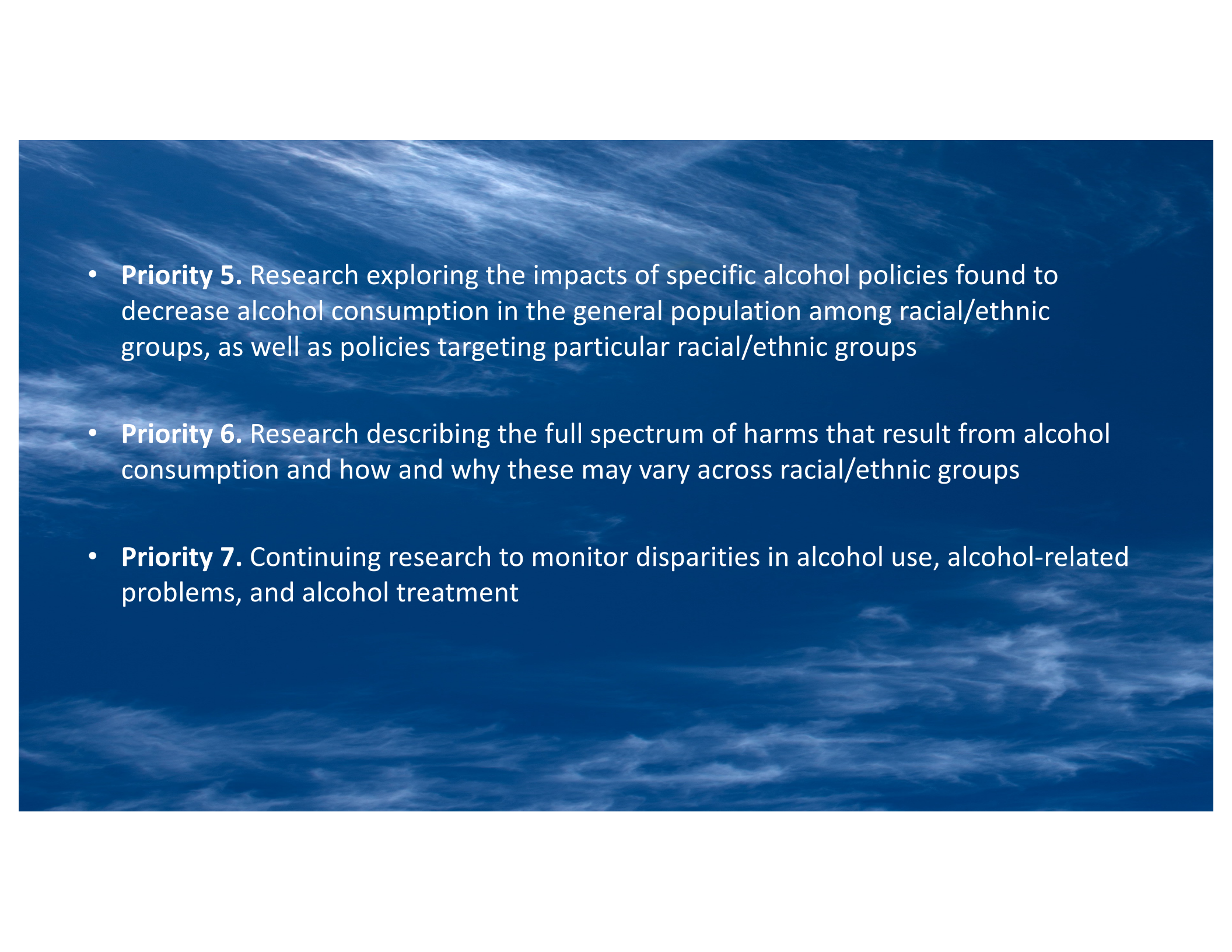
Conclusion and Implications

- Use of AB-CASI in the ED is efficacious in identification and reduction of unhealthy alcohol use among English and Spanish speaking U.S. Latino ED patients
- Highly acceptable to patients and brief in delivery, AB-CASI surmounts several long-reported barriers to ED-SBIRT with efficacious results while addressing alcohol-related health disparities among the growing U.S. Latino population

Zemore et al., The Future of Research on Alcohol-Related Disparities Across U.S. Racial/Ethnic Groups: A Plan of Attack, JSAD, 2018

- **Priority 1.** Research addressing the extent of alcohol- related disparities in health conditions and their social, psychological, and biological determinants
- **Priority 2.** Research investigating disparities in access to and utilization of alcohol treatment and related support services
- **Priority 3.** Research to identify appropriate screening and brief intervention methods among racial/ethnic minorities
- **Priority 4.** Comparative research on the efficacy of existing alcohol interventions among racial/ethnic minorities (and subgroups) as well as research developing and testing new interventions tailored for these populations



- 
- **Priority 5.** Research exploring the impacts of specific alcohol policies found to decrease alcohol consumption in the general population among racial/ethnic groups, as well as policies targeting particular racial/ethnic groups
 - **Priority 6.** Research describing the full spectrum of harms that result from alcohol consumption and how and why these may vary across racial/ethnic groups
 - **Priority 7.** Continuing research to monitor disparities in alcohol use, alcohol-related problems, and alcohol treatment