

**Feedback Summary for
Request for Information (RFI) NOT-AA-24-012**

"Harmonization of research metrics on alcohol use, misuse,
pathology, and mortality internationally."

The National Institute on Alcohol Abuse and Alcoholism (NIAAA)

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Introduction

Responses were received by email with variability in format, length, and how the responses were laid out. Therefore, in order to provide a consistent summary of all responses to share with the public, we used NIH Community Chatbot, CHIRP, to 1). Summarize each of the responses received (see question 1 below), and 2). Provide an overall summary of all responses using titles created by question 1 (see question 2 below). Responses are sorted in the order they were received.

Question 1: *Write a scientific summary of the information included in each of the emails and associated files as follows: A. Write a title (30 words maximum) reflecting the scientific content, B. summarize content using the following sections as output: section 1. Background, section 2. Proposed research, section 3. Conclusion. Finally, write information about the contributor(s).*

Question 2: *Use the title's text from all summaries to create a 250-word (max) summary that provides an overview of all the topics of interest related to "Harmonization of research metrics on alcohol use, misuse, pathology, and mortality internationally."*

Importantly, summaries below should not be interpreted as research proposals. Rather, they reflect the scientific interest, and priorities, of the research communities to address the questions described in Request for Information (RFI) [NOT-AA-24-012](#) and may lead to scientific collaborations through appropriate channels, e.g., [How to Apply – Application Guide | Grants & Funding](#).

Overall Summary

This is a summary of all diverse topics proposed by respondents to RFI [NOT-AA-24-012](#) to contribute to the international efforts to harmonize research metrics on alcohol use, misuse, pathology, and mortality. Key areas of focus include **standardizing definitions and measurement tools**—such as “standard drink” and risk thresholds—across countries to improve epidemiological comparability and policy translation. Research highlights the need for **culturally adapted self-report instruments** (e.g., AUDIT-C), **objective biomarkers** (e.g., phosphatidylethanol), and digital health tools to enable reliable, internationally comparable data collection, including in resource-limited settings and among specific populations (e.g., ethnic minorities, HIV cohorts, and the homeless).

Efforts extend to **harmonizing diagnostic criteria** for alcohol use disorders and alcohol-related neurocognitive impairments, leveraging approaches like Item Response Theory, core outcome sets, and consensus-driven definitions. The integration of **biological, behavioral, and cognitive biomarkers** is emphasized for robust stratification and improved understanding of heterogeneity in alcohol-related outcomes. Special attention is

given to **secondhand harms** from alcohol and other substances, craving and cue-reactivity assessment, and the standardization of outcome measures in intervention studies.

Cross-national collaborations are actively exploring **multidimensional, translational strategies**, including preclinical biobanking, neuroimaging, and noninvasive neuromodulation, to elucidate neurobiological mechanisms and inform personalized treatments. Comparative studies in specialized contexts—such as Housing First programs for the homeless, stroke rehabilitation, and cannabidiol (CBD) interventions—underscore the need for **harmonized metrics across diverse healthcare systems and populations**. Overall, these initiatives aim to foster international consensus, enhance data quality, and support effective, evidence-based public health responses to the global burden of alcohol use and related harms.

Summary of each individual response received

1: Harmonizing International Metrics for Alcohol Consumption in Ethnic Minority Sub-Populations

Background

Accurate measurement of alcohol use, misuse, related pathology, and mortality is crucial for global public health initiatives. However, current research metrics and methodologies vary significantly across countries, particularly in the context of sub-populations such as ethnic minorities. These inconsistencies hinder the comparability of data and limit the ability to address disparities in alcohol-related health outcomes.

Proposed research

We propose to contribute to ongoing international efforts led by the NIAAA to harmonize research metrics on alcohol use. Our focus will be on the development and standardization of measurement tools and methodologies for assessing alcohol consumption within ethnic minority groups. This will involve reviewing current practices, identifying gaps, and suggesting best practices for cross-country comparability. We aim to submit ideas and recommendations that address the unique challenges of measuring alcohol use in diverse populations.

Conclusion

Harmonizing metrics for alcohol consumption in ethnic minorities will facilitate better data comparability, inform targeted interventions, and ultimately improve public health outcomes. Collaborative international dialogue and research are essential to achieve these goals.

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2. Improving International Harmonization of Alcohol Use Measurement: Challenges, Biomarkers, and Research Directions

Background

Research on alcohol use, morbidity, and mortality is often challenged by differences in measurement tools and methodologies across countries. While the U.S. and international studies use self-report instruments (such as the AUDIT, AUDIT-C, and Timeline Followback) and biomarkers like phosphatidylethanol (PEth), there are notable cultural, contextual, and technical differences that complicate direct comparisons. Self-report data are particularly vulnerable to social desirability bias, especially outside the U.S., while biomarkers like PEth provide more objective assessments but are limited by cost and laboratory requirements.

Proposed Research

Research efforts should focus on harmonizing alcohol use measures across U.S. and international sites, notably through large collaborative studies and individual participant data (IPD) meta-analyses. The development and adoption of standardized protocols for both self-report and biomarker-based assessments are proposed. A key research priority is the development of low-cost, point-of-care PEth tests suitable for resource-limited settings. Additionally, there is a need for validated instruments to assess lifetime alcohol use to improve research on long-term health outcomes.

Conclusion

To advance international comparisons in alcohol research, it is essential to harmonize measurement tools and address technical barriers such as the accessibility of biomarkers. Collaborative efforts and further investment in technology and validated measures are needed to improve data comparability and the understanding of alcohol-related health effects globally.

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3. Harmonization of Research Metrics on Alcohol Use, Misuse, Pathology, and Mortality Internationally

Background

International comparisons of alcohol consumption are challenging due to cultural differences in drinking behaviors, drink sizes, and measurement methods. Standardization efforts using concepts like the "standard drink" are complicated by regional variations. Traditional harmonization methods, including manual expert curation and rigid technological solutions, are insufficient for the field's growing complexity. Advanced approaches leveraging artificial intelligence, such as those developed under the NIAAA contract (ASSIST II), show promise in improving the accuracy and efficiency of data harmonization.

Proposed Research

The authors propose a research direction aimed to develop adaptive measurement frameworks that incorporate cultural contexts, biological markers, and healthcare system classifications, while maintaining historical data compatibility. The research also seeks to create implementation tools that reduce researcher burden and maintain semantic accuracy. Additionally, machine learning approaches could be developed to bridge the gap between standardized terminologies and actual research practices, processing both structured and unstructured data across diverse formats, languages, and cultural contexts.

Conclusion

Advancing harmonization efforts through adaptive, context-aware systems would enable more effective comparison and integration of international research findings. This would support the NIAAA's mission to improve understanding and treatment of alcohol-related disorders worldwide by facilitating reliable and culturally relevant data aggregation and analysis.

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4. Harmonization of Research Metrics for Alcohol-Related Hospitalizations and Mortality in France: Utilizing National Health Data Systems

Background:

The French Monitoring Centre for Drugs and Addiction (OFDT) plays a key role in analyzing data related to alcohol consumption and its consequences in France. The OFDT coordinates a consortium of national experts (the IDA group) aimed at enhancing data production, pooling collection methods, and ensuring scientific validity for public decision-making. The IDA consortium includes representatives from national public research organizations, health institutions, and universities. Two priority research themes identified for 2024 are the standardization of hospitalization and mortality indicators attributable to alcohol in France.

Proposed research

Objective 1 focuses on improving estimates of alcohol-related hospitalizations by leveraging existing work and data from various medical databases. The goal is to analyze changes over time, by sex and age, and to study care trajectories to measure recurrence, related hospitalizations, treatments, and mortality.

Objective 2 aims to improve estimates of alcohol-related mortality, constructing indicators for causes of mortality and morbidity attributable to alcohol. A retrospective study will analyze care trajectories, hospital management, and drug prescriptions for individuals who died due to alcohol.

OFDT will partner with institutions in the IDA consortium and involve the NIAAA's Public Health Department. The research will utilize the Constances cohort to model probable alcohol consumption levels in the SNDS, building a predictive algorithm for individuals seeking care.

Conclusion:

This proposed research direction aims to harmonize and improve the reliability of alcohol-related hospitalization and mortality metrics in France. By leveraging national health data systems and collaborating with international experts, this research would enable better public health decision-making and facilitate international comparisons.

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5. Standardizing International Research Metrics for Alcohol Use: The Case for Biomarkers and Harmonized Self-Report Measures in HIV and Diverse Populations

Background

Current research on alcohol use, misuse, pathology, and mortality is hindered by imprecise and biased self-report measures and inconsistent diagnostic practices across countries and settings. Studies in international HIV cohorts, the U.S. Veterans Aging Cohort Study, and diverse populations have demonstrated substantial variability in alcohol exposure measurement, limiting comparability and validity. Biomarkers such as phosphatidylethanol (PEth) provide a reliable, objective standard for current alcohol exposure, while self-report instruments like AUDIT-C, when harmonized and converted to grams/day, offer practical tools for international research. Genetic and epigenetic data (e.g., ADH1B polymorphisms, DNA methylation signatures) further validate the need for objective standards.

Proposed Research

The authors propose that NIAAA lead a global effort to standardize patient-reported alcohol exposure metrics using reliable gold standards like PEth for current use. Among self-reported measures, AUDIT-C is recommended for its ease of use and comparability to more intensive methods such as Timeline Followback (TLFB). Further research should establish appropriate standards for historical alcohol use, with DNA methylation signatures on PEth emerging as a promising approach. International harmonization should emphasize conversion to grams/day and consider cultural factors, such as locally relevant measures of alcohol intake (e.g., cost-based estimation in Kenya).

Conclusion

Self-reported alcohol use and provider-assigned diagnoses are insufficient as research standards due to bias and inconsistency. Objective biomarkers like PEth, combined with harmonized, validated self-report measures (notably AUDIT-C), will enable robust, internationally comparable research on alcohol use and its health consequences. Standardization led by NIAAA is both timely and essential for advancing the field.

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6. Harmonizing International Research Metrics for Alcohol Use, Misuse, Pathology, and Mortality: Challenges and Future Directions

Background

Alcohol research faces significant challenges in harmonizing definitions and metrics across international contexts. Key measures—such as “standard drink,” “heavy drinking,” and “relapse”—differ between organizations like the NIAAA and their international counterparts, limiting comparability. There is also a shift from abstinence-focused outcomes to those recognizing reductions in drinking, but the clinical relevance of these reductions is often unclear. Non-drinking-related outcomes, including craving and quality-of-life measures, are increasingly recognized as important but are hampered by inconsistent definitions, lack of validation, and insufficient focus on patient-centered perspectives. Additionally, heterogeneity in study populations and limited utility of current biomarkers further complicate research and translation to clinical practice.

Proposed Research

To address these challenges, the author proposes the following research directions:

- Harmonize international definitions of key drinking metrics (e.g., “heavy drinking,” “relapse”) and align outcome measures with patient-centered goals.
- Develop and validate new craving scales and quality-of-life metrics that are culturally sensitive and capture the full impact of alcohol use disorders.
- Stratify study populations based on treatment goals (abstinence vs. reduction) and recent withdrawal status to improve the relevance and comparability of outcomes.
- Advance the development of biomarkers that are more specific, timely, and reflective of clinical progress and intervention efficacy.
- These efforts should be supported by large-scale, cross-cultural studies to ensure metrics are both scientifically robust and clinically meaningful.

Conclusion

Effective harmonization of alcohol research metrics requires standardized definitions, integration of subjective and objective outcomes, and a stronger focus on clinical and

patient relevance. Collaborative, international research is essential to improve the comparability and utility of research findings, ultimately enhancing patient care and public health interventions.

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7. Measuring Secondhand Harms from Alcohol and Drugs: US and International Survey Approaches, Trends, and Recommendations

Background

Alcohol's harm to others (AHTO)—secondhand harms experienced due to someone else's drinking—has emerged as a critical public health metric. These harms include family disruption, financial problems, violence, property damage, and injury, affecting both close contacts and strangers. Since 2000, six US National Alcohol Surveys (NAS) have included AHTO questions, with expanded items in some years to capture more detailed harms, perpetrators, and costs. Comparative and multinational studies—such as GENAHTO and WHO projects—have broadened the evidence base, showing that AHTO prevalence and patterns vary by country, relationship, and policy context. Recent efforts have also extended measurement to secondhand harms from cannabis, opioids, and other drugs.

Proposed Research

Recent and ongoing research (e.g., the Alcohol and Drug Harm to Others Survey, ADHTOS) aims to refine and expand the assessment of secondhand harms. This includes developing more comprehensive item sets (up to 16 harms), distinguishing harms by timing and perpetrator relationship, and covering a wider range of substances and harm domains (financial, emotional, physical, property). Qualitative studies have informed new survey items to capture the full scope of harms across the lifespan and settings such as the workplace and home. Planned analyses will yield composite measures of co-occurring harms and enable nuanced understanding of risk factors, mental health impacts, and family burdens.

Conclusion

Robust, standardized measurement of secondhand harms from alcohol and other drugs is essential for understanding their societal impact and informing policy. The US NAS core 6-item set provides a minimum standard, but expanded item sets and refined

methodologies—distinguishing timing, perpetrator, and harm type—are recommended for more comprehensive surveillance. International collaboration and harmonization of measures enable cross-national comparisons and policy evaluation. Future research should prioritize capturing harms to vulnerable subgroups and settings, and track evolving trends in harm from both alcohol and other substances.

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8. International Comparability and Methodological Challenges in Measuring Alcohol Use Patterns and Related Constructs

Background

Measuring alcohol use patterns across countries presents significant methodological challenges, primarily due to differences in standard drink sizes, beverage types, drinking practices, reference periods, and definitions of heavy drinking occasions. International efforts, such as those by the World Health Organization (WHO), have sought to harmonize assessment methods using ethanol grams as a common metric. However, local variations in beverage types and serving sizes, as well as the need for culturally appropriate survey questions, complicate direct comparisons. Commonly used measures include beverage-specific consumption, frequency of drinking, and heavy episodic or binge drinking, though definitions and thresholds vary by country and sex. Tools like the Graduated Frequency (GF) and Quantity Frequency (QF) measures have been adapted for cross-national studies, with careful calibration to local norms and beverage ethanol content. Drinking context and situational norms are also measured but require adaptation to local settings.

Proposed Research

Future research should prioritize developing and validating culturally and contextually appropriate measurement instruments that can be reliably translated into grams of ethanol consumed. This involves using locally relevant questions, beverage types, and vessel sizes, as well as pictorial aids, to improve accuracy. International studies should agree on

ethanol-based thresholds for heavy drinking occasions and ensure consistent training in survey implementation. There is a need to further refine and validate context-specific and situational norms questions to capture the diversity of drinking environments. Special attention should be paid to under-researched populations, including individuals from sexual minority populations, to ensure inclusivity and comparability in heavy episodic drinking measures.

Conclusion

Accurate international comparisons of alcohol use require harmonized methodologies that account for local drinking practices and definitions. Using ethanol grams as a common metric and adapting survey instruments to local contexts improves comparability. Continued methodological innovation, validation, and inclusivity are essential for effective cross-national alcohol research and public health monitoring.

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9. Harmonizing Identification of Biological and Behavioral Markers for Stratification in Alcohol Use Disorder Research

Background

Current research on Alcohol Use Disorders (AUD) often treats affected individuals as a homogenous group, despite considerable heterogeneity in their clinical presentation. AUD subjects can display various phenotypes and fulfill different diagnostic criteria according to the DSM, indicating the need for more nuanced approaches in both research and clinical practice. The lack of reliable stratification methods limits the ability to tailor interventions and understand the disorder's diverse manifestations.

Proposed Research

The authors propose that global harmonization efforts in alcohol research should prioritize the identification of robust biological and behavioral markers for AUD. These markers could enable reliable stratification of clinically diagnosed AUD individuals, facilitating more precise research and potentially informing personalized treatment strategies. A key

research question is to determine which markers are most effective and how they can be standardized and implemented across studies and populations worldwide.

Conclusion

Identifying and harmonizing biological and behavioral markers to stratify AUD subjects would represent a significant advance in alcohol research. Such efforts could improve the comparability of studies, enhance understanding of AUD heterogeneity, and ultimately contribute to more effective interventions.

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10. Advancing International Harmonization of Alcohol Use Disorder Metrics: Cross-National Comparison, Measurement, and Digital Assessment Strategies

Background

Measurement of alcohol use, misuse, pathology, and related mortality varies internationally, hindering effective global comparisons and collaborations. Differences in diagnostic criteria, research designs, and data collection methods—such as those between DSM-5, ICD-10, and WHO systems—complicate efforts to harmonize findings across countries. Understanding these similarities and differences, especially regarding Alcohol Use Disorder (AUD) diagnosis and its association with other substance use disorders (SUDs), is essential for improving international research, prevention, and treatment strategies.

Proposed Research

The authors propose several research directions to advance harmonization:

- Apply Item Response Theory and Symptom Network Analyses on DSM-5 AUD criteria using large, multi-country cohort datasets to compare diagnostic features and their replication across contexts.

- Investigate the relationship between alcohol consumption patterns, AUD thresholds, and the influence of national alcohol policies.
- Utilize Ecological Momentary Assessment (EMA) protocols to capture real-time, culturally specific drinking behaviors, contexts, and predictors of use or relapse.
- Explore universal biomarkers and smartphone-based digital health tools for diagnosis and intervention, assessing their cross-national validity and feasibility.

Conclusion

International harmonization of alcohol research metrics requires coordinated efforts to standardize diagnostic criteria, assessment methods, and digital tools. Comparative analyses using robust statistical approaches and real-life data collection (e.g., EMA) can provide insights into cross-cultural similarities and differences, informing the development of universal, scalable prevention and treatment strategies for AUD and related disorders.

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11. Harmonizing Research Metrics for Alcohol-Related Cognitive Impairment: Diagnostic Challenges, Biomarker Development, and International Collaboration

Background

Alcohol-related cognitive impairment (ARCI), previously termed alcohol-related dementia, encompasses a broad range of cognitive deficits associated with chronic alcohol use, extending beyond the classic Korsakoff syndrome. Recent advances in diagnostic techniques for Alzheimer's disease and other dementias have revealed that a significant proportion of patients with severe cognitive impairment and alcohol use disorder (AUD) may have underlying biological Alzheimer's disease. Additionally, individuals with severe AUD are exposed to multiple brain-damaging events (e.g., head injuries, seizures, delirium tremens, thiamine deficiency, repeated withdrawals), complicating the clinical picture and making accurate diagnosis challenging.

Proposed Research

To address these challenges, the harmonization of diagnostic criteria and research methodologies for ARCI is urgently needed. The development and validation of accessible, reproducible biomarkers capable of predicting cognitive recovery outcomes should be a research priority. Future studies should include longitudinal designs using advanced

neuroimaging (anatomical and functional MRI), blood-based biomarkers indicative of neuronal damage, and comprehensive neuropsychological assessments. International collaboration is emphasized as essential for conducting these ambitious and complex studies, enabling standardized approaches and increased scientific rigor.

Conclusion

Clarifying the definition and diagnosis of ARCI through harmonized research methods and biomarker validation will improve prognosis and management for patients with severe AUD. Coordinated international efforts are critical to advance this field.

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12. Harmonizing International Research Metrics for Cannabidiol (CBD) Treatment Response in Alcohol Use Disorder (AUD) Studies

Background

There is a growing body of research investigating the therapeutic potential of cannabinoids, especially cannabidiol (CBD), for psychiatric and addictive disorders, including Alcohol Use Disorder (AUD). Despite limited published results, numerous ongoing international studies are evaluating the benefit/risk ratio of prescribed CBD in these populations. Specifically, at least 14 registered studies are exploring CBD's efficacy for various AUD-related outcomes, such as alcohol intoxication, withdrawal, abstinence, and psychiatric symptoms. US- and France-based research teams, including those at INSERM and the NIAAA, are actively conducting clinical trials in this field. However, research efforts are hindered by significant methodological heterogeneity, particularly in assessment methods and outcome measures.

Proposed research

To address these challenges, the author advocates for the harmonization of research metrics and assessment strategies in international studies of CBD treatment for AUD. Establishing standardized methods and outcome measures will facilitate data comparability, accelerate knowledge generation, and optimize discovery across global research networks. The formation of an international consortium of researchers focused on this specific domain is proposed as a means to enhance collaboration and accelerate progress.

Conclusion

There is a critical need for harmonized assessment approaches in international research on CBD treatment for AUD. Coordinated efforts and standardized metrics will improve the quality, comparability, and translational impact of future studies, ultimately advancing clinical care for individuals with AUD.

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13. Towards International Harmonization of Alcohol Research Metrics: Standard Drink Definitions, Risk Thresholds, and Policy Influences

Background

Research on alcohol use, misuse, and related health outcomes is hampered by inconsistent definitions of key metrics such as the "standard drink" and "risky alcohol use" across countries. For example, the standard drink is set at 14g of pure alcohol in the US but 10g in France, and thresholds for risky use also differ and are subject to change. Public understanding of these definitions is limited, and inconsistencies hinder epidemiological comparisons and policy translation. Furthermore, legislative, cultural, and industry influences shape public health messaging and perceptions of alcohol risks, complicating efforts to develop evidence-based global guidelines.

Proposed research

To address these challenges, the authors propose prioritizing research that: (1) assesses the impact of varying standard drink and risk definitions on international comparability of findings; (2) evaluates public awareness and effectiveness of these definitions in achieving public health goals; and (3) examines the influence of legislative and regulatory contexts on drinking patterns and outcomes. The proposed approach combines quantitative analyses—such as parallel statistical studies using both US and French definitions on comparable cohort datasets (e.g., US and French national health databases)—with qualitative research including interviews and focus groups with the general population and health professionals. The authors suggest a collaborative, mixed-methods project involving French and US research teams.

Conclusion

International harmonization of alcohol research metrics is essential to improve research rigor, cross-national comparability, and the translation of evidence into effective public health policies. Consensus definitions, transparent development of guidelines, and minimization of industry influence are key priorities.

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14. International Harmonization of Research on Alcohol Use: Neurobiological Mechanisms, Biobanking, and Scientific Exchange

Background

Alcohol addiction remains a major public health concern, with significant variability in individual susceptibility, severity, and treatment response. While numerous studies have explored alcohol use and pathology, international harmonization of research metrics and resources is lacking. France and the United States have developed complementary expertise in preclinical models, biobanking, and public information dissemination,

providing an opportunity for transatlantic collaboration to enhance the robustness and translational impact of alcohol research.

Proposed Research

The authors propose three research directions:

- 1) Conducting preclinical studies using genetically diverse HS rats to investigate the neurobiological mechanisms underlying alcohol addiction and individual differences in treatment response, integrating advanced imaging and network analyses.
- 2) Establishing an international preclinical biobank to share tissues and samples from animal models, leveraging French and American resources to address addictive and somatic aspects and facilitate translational research.
- 3) Developing a scientific information exchange network to harmonize and expand public education and prevention resources, building on existing platforms in both countries.

Conclusion

The aim of the proposed research is to foster international collaboration, increase the predictive validity of animal models, accelerate translational research, and enhance public health communication regarding alcohol use and addiction.

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15. Harmonizing Alcohol Research: International Comparisons, Measurement Challenges, and Core Outcome Set Solutions

Background

International research on alcohol use and interventions faces significant challenges due to differences in study designs, outcome measurements, and reporting practices between the U.S. and other countries. Variability exists in the definition of a "standard drink," recommended consumption limits, and the metrics used to assess alcohol-related morbidity, mortality, and consumption. This lack of harmonization complicates direct comparison and synthesis of research findings globally. Key barriers include inconsistent outcome measures, reporting bias, and limited adoption of harmonized standards. Initiatives such as the Core Outcome Set (COS) and organizations like the COMET Initiative

and ICHOM aim to standardize outcome measurement and reporting, thus improving comparability and quality of evidence in alcohol research.

Proposed Research

The authors recommend expanding and adopting harmonized measurement systems—specifically, internationally agreed core outcome sets for alcohol research and interventions. They present data comparing U.S. and global trials of alcohol brief interventions, highlighting differences in trial design, participant demographics, reporting quality, and outcome selection. They review the development and application of the ORBITAL and ICHOM core outcome sets, which standardize what should be measured and reported in alcohol intervention trials and treatment settings. The proposal calls for greater international collaboration, transparent consensus processes, and involvement of diverse stakeholders (including people with lived experience) in developing, updating, and implementing COS. The authors advocate for registering all harmonization efforts in a centralized, accessible database (e.g., COMET), and for ongoing evaluation and evolution of these sets to maintain global relevance.

Conclusion

Effective international comparison and synthesis of alcohol research require standardized outcome measurement and reporting. Core outcome sets, developed through transparent, inclusive international collaboration, address current barriers and reduce research waste. Broad adoption and continuous evolution of COS will support high-quality, comparable research, enhance evidence synthesis, and ultimately improve policy and practice in alcohol-related health interventions worldwide.

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16. Improving Risk Assessment of Heavy Alcohol Use: Integrating Hospital Data and Epidemiological Studies Internationally

Background

The burden of alcohol use disorders is underestimated due to key biases in epidemiological research. Misclassification of abstainers (combining lifetime and former heavy drinkers) inflates risk in the "no exposure" group, while underrepresentation of heavy drinkers in cohort studies leads to underestimated risks at high consumption levels. These issues, combined with underreporting in national surveys, result in downward-biased population attributable risk estimates. Existing solutions—such as more precise abstainer categorization and triangulation of survey data with alcohol sales—do not fully address the lack of very heavy drinkers in traditional studies.

Proposed Research

The main research priority should be to improve risk assessment for (former and current) heavy drinkers using new data sources and to develop methods for reconciling risk estimates from different sources. Hospital claims data, which are available in the US and many high-income countries, could provide valuable information on risks associated with heavy drinking, as heavy drinkers are frequently hospitalized for related conditions. However, hospital records typically capture only alcohol dependence (via ICD-10 codes), not detailed alcohol use patterns. Therefore, new methods are needed to reconcile risk assessments from hospital-based cohorts (defined by alcohol dependence diagnoses) and traditional epidemiological studies (based on self-reported alcohol consumption, with few very heavy drinkers).

Conclusion

Addressing the underestimation of alcohol-attributable risks requires leveraging hospital data to better assess risk in heavy drinkers and developing analytic methods to integrate findings from diverse data sources. This approach could significantly improve the accuracy of population-level alcohol risk assessments.

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17. International Harmonization of Alcohol-Related Morbidity and Mortality Metrics: Culture-Free Assessment of Behavioral and Mechanistic Risk Factors

Background

Alcohol-related morbidity and mortality are significant public health concerns worldwide, with falls and frailty emerging as major contributors. Current metrics for assessing these outcomes vary across countries, complicating international comparisons. There is a need for standardized, culture- and language-independent methods to identify and quantify the behavioral and mechanistic factors underlying alcohol-related health risks.

Proposed Research

The authors propose the implementation of systematic, standardized intake protocols across medical and emergency settings internationally. These protocols would include simple questions about alcohol consumption, physical frailty, falls, and cognitive status, and would be complemented by non-language-based laboratory tests assessing postural stability, grip strength, and cerebral perfusion via MRI. The proposed approach would be tested through a collaborative US-France research initiative, leveraging experience from Stanford University and the University of Caen, to develop and validate these culture-free measures for broader international application.

Conclusion

A harmonized, culture-independent framework for assessing alcohol-related morbidity and mortality would improve the comparability of data across countries and enhance our understanding of the underlying mechanisms. This approach has the potential to inform targeted interventions and reduce alcohol-related health burdens globally.

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18. Towards International Harmonization of Diagnostic Criteria and Biomarkers for Alcohol-Related Neurocognitive Disorders

Background

Alcohol use disorder (AUD) is frequently associated with cognitive, motor, and brain alterations, impacting treatment adherence, relapse risk, and rehabilitation. The DSM-5 classification recognizes “alcohol-induced neurocognitive disorders,” but this terminology is inconsistent globally, with various terms such as alcohol-related cognitive deficits, alcohol dementia, and uncomplicated alcoholism in use. Moreover, the DSM-5 criteria are not fully operational or sufficient for assessing severity, and multiple confounding factors (e.g., liver disease, nutrition, sleep) also affect cognition in AUD. There is a need for standardized terminology, diagnostic criteria, and assessment tools, including neuroimaging and biological biomarkers.

Proposed Research

The author advocates for an international consensus to harmonize the terminology and operationalize diagnostic criteria for alcohol-related cognitive and brain disorders. This includes standardizing cognitive, motor, and neuroimaging assessments and identifying robust biological biomarkers, paralleling advances made in Alzheimer’s research. Establishing common definitions and assessment protocols would enable the creation of large, cross-national cohorts, facilitating studies on prevalence and the impact of cultural, genetic, and care-related factors on cognitive deficits in AUD.

Conclusion

International collaboration and harmonization of definitions, diagnostic criteria, and assessment methods are essential to advance research and clinical care in alcohol-related neurocognitive disorders. The author’s laboratory, with extensive experience and established international partnerships, is uniquely positioned to contribute to this collective effort.

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