

# Elucidating the substance use disorder-HIV health syndemic

Dr Bryan Garner is a Senior Implementation Research Scientist with RTI International. His latest research explores the neglected overlap between HIV and substance use disorders (SUDs). In May 2019, clients of AIDS service organisations (ASOs), ASO staff, and HIV/AIDS Planning Council members participated in a Stakeholder-Engaged Real-Time Delphi (SE-RTD) survey exploring the prevalence and individual-level negative impact of five SUDs for people with HIV (PWH). Overall, Dr Garner and his team found alcohol use disorder, methamphetamine use disorder, and opioid use disorder to have the greatest population-level negative impact scores. Their findings support the need to better integrate SUD services within HIV settings.

Dr Bryan Garner and colleagues' research is focused on identifying effective and cost-effective strategies to improve public health. In his most recent study, Dr Garner and team explored the neglected overlap between substance use disorders (SUDs) and people with HIV (PWH) in the United States.

Their team used an innovative Stakeholder-Engaged Real-Time Delphi (SE-RTD) survey to assess the prevalence of SUDs among this population. Besides advancing knowledge of the individual-level and population-level negative impacts of five different SUDs on PWH in the United States, the study findings also support the argument for integrating SUD services within HIV settings. The results may also help public health policymakers, HIV planning councils (HPCs), and AIDS service organisations (ASOs) to distribute funding to best address the HIV-SUD syndemic (synergistic, dual epidemic) in the United States.

## HIV-SUD SYNDEMIC

Substance use disorders are common within the population of people living with HIV, and this can have a detrimental effect on their progression along the HIV care path. Dr Garner and his team identified that integrating SUD

services within community-based ASOs is one of the keys to addressing SUDs among PWH. This includes screening, referral to specialist SUD treatment, and SUD-related wraparound services. Such integrated onsite services have been shown to be cost-effective and lead to better patient outcomes.

## HELPING ALLOCATE RESOURCES

Despite this, SUD services have still not been integrated into ASOs as well as they might. Therefore, Dr Garner and his research team aim to bolster understanding of the convergence of SUD and HIV so that ASOs and the people working for them may better prioritise their limited resources. Furthermore, this increased understanding may help to highlight the severity of the methamphetamine use problem by, for example, bringing it to the attention of policymakers, in a similar way to the opioid epidemic.

## GAP IN THE LITERATURE

A previous study by Hartzler and colleagues (2017) found that 48% of people with HIV had a SUD. This is 6.5 times higher than the US population in general. However, Dr Garner and his team recognised a gap in the literature regarding the prevalence of specific SUDs among PWH from broader samples than surveys of those treated in academic medical centres. Furthermore, they recognised that no previous research had reported on people's perceptions of the impact of different SUDs, either in the general population or among PWH.

## THE SE-RTD SURVEY METHOD

Dr Garner and team, therefore, set out



Bryan Garner and his team explore the neglected overlap between HIV and SUDs.

to establish 1) the prevalence of five SUDs – alcohol, cannabis, cocaine, methamphetamines, and opioids – among PWH in the US, 2) the perceived negative impacts for PWH who have these SUDs, and 3) the estimated population-level negative impacts of these five SUDs among PWH.

After screening, 805 people with HIV, ASO staff, and HPC members were eligible to participate. Just over half identified as female (52.1%), while 41.7% identified as male, and 5.1% identified as transgender, genderqueer, or gender non-conforming. Most participants were white (58.9%), about a third were black or African American (36.4%), and around a quarter (23.2%) were Hispanic or Latino. The majority (65.2%) were ASO staff, and the South was the most represented region (34.8% of ASOs/HPCs and 35.3% of participants). Eligibility criteria included: being at least 18 years old; having personal (including having an affected family member or friend), professional, or other experience with SUDs for at least one of the five substances studied; living in the US; and being HIV-positive (if an ASO client).

## SURVEY QUESTIONS

Using an innovative Stakeholder-Engaged Real-Time Delphi (SE-RTD) method,

participants were asked to report their perceptions of the prevalence of SUDs among PWH in their area of the US as well as individual-level negative effects of each particular SUD on four HIV care path indicators along with four other important aspects of life. This type of survey is more complicated to administer than a standard cross-sectional survey. However, Dr Garner and his team chose the SE-RTD method because it allows each participant to share their reasons for each response anonymously, review other participants'

## Integrating SUD services within community-based ASOs is one of the keys to addressing SUDs among people living with HIV.

responses and reasons, and change their response and reasons – for example, after finding out new information from other participants. This reduces the likelihood that between-group differences are due to lack of information, knowledge, or understanding.

## REAL-TIME DELPHI SURVEY BENEFITS

In addition to the main benefits of a traditional Delphi survey (which can be time- and labour- intensive to administer) – anonymity, controlled feedback of responses to all group members, iteration, and statistical aggregation of individual responses – Real-Time Delphi surveys

have been shown to produce similar results more quickly and efficiently, with feedback provided instantly.

## DIAGNOSTIC CRITERIA

Participants were asked to report whether they had ever used each substance or ever met two or more of the 11 Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5) SUD criteria during a 12-month timeframe. The criteria are: spent a lot of time using the substance and/or recovering from use of the substance; taken the substance in large amounts or more often than they meant to; failed to meet responsibilities at work, school, or home because of their use of the

substance; continued to use the substance even though they knew using the substance may have caused a physical or psychological problem to happen or get worse. Participants were also asked to report whether they had an affected family member, friend, or client.

## NEGATIVE IMPACT PERCEPTION

Additionally, they were asked to estimate the percentage of PWH in their area who had a use disorder for each substance (defined as two or more of the 11 criteria during the past 12 months). Participants were also asked to rate the negative impact (if they believed there was one) of having a use disorder for each substance



Lightspring/Shutterstock.com





Participants were asked to report their perception of the prevalence of SUDs among PWH in their area.

piotr\_pabjan/Shutterstock.com

## Real-Time Delphi surveys have been shown to produce similar results more quickly and efficiently, with feedback provided instantly.

on 1) being linked to HIV care, 2) being retained in HIV care, 3) being prescribed HIV medications, 4) being virally suppressed, 5) having stable housing, 6) having a reliable mode of transport, 7) being employed, and 8) having a strong social support system. The individual-level negative impact score was then weighted by the proportion of PWH perceived to have the particular SUD to get the population-level negative impact score.

### STUDY FINDINGS

The survey revealed that the highest perceived rates of SUDs were for alcohol and cannabis use disorders, with all of the five SUDs having at least one significant regional difference. In general, the perceived prevalence of alcohol, cannabis, cocaine, and opioid use disorders was lower in the West than in other regions, while the perceived prevalence of methamphetamine use

disorder was greater in the West. These findings differ in comparison to the wider US population within which rates of alcohol and illegal drug use disorder are comparatively lower in the South and higher in the West. Furthermore, while Dr Garner and team found that the three groups of participants surveyed generally agreed, they discovered that rates reported by ASO staff were significantly lower than rates reported by PWH for both cocaine use disorder and methamphetamine use disorder.

### CANNABIS DICHOTOMY

The survey results showed that cannabis use disorder is perceived to be the most prevalent. Use disorder for this substance produced the lowest population-level negative impact score across regions and stakeholders. This mirrors national population-based research showing reductions in the perception of risk

associated with cannabis use (not SUD) among the general public. However, the recent significant changes in marijuana policies and legislation should be taken into account when considering perceptions around cannabis. Cannabis use is a complex and evolving issue, as disordered use results in negative mental health and other impacts. Yet conversely, cannabis may have a positive impact on health, including benefits related to HIV care. Therefore, more high-quality research is needed to elucidate this issue.

### INDIVIDUAL AND POPULATION NEGATIVE IMPACTS

Dr Garner and team found that methamphetamine use disorder has the highest individual-level negative impact with opioid use disorder having the second highest. They also found a significant difference between these two use disorders and each of the others. For cocaine use disorder and alcohol use disorder, the individual-level negative impacts were similar, with both shown to be significantly higher than cannabis use disorder. The SUDs with the greatest population-level negative impact scores (possible range 0–24) were 1) alcohol use disorder (population-level negative impact – 6.9; perceived prevalence – 41.9%), 2) methamphetamine use disorder (population-level negative impact – 6.5; perceived prevalence – 3.2%), and 3) opioid use disorder (population-level negative impact – 6.4; perceived prevalence – 34.6%).

### FUTURE RESEARCH

Dr Garner and his colleagues made suggestions for future research to further develop the knowledge base surrounding the SUD-HIV syndemic, including examining the extent to which the negative impacts on the HIV care path vary according to severity of substance use and SUD. Unprecedented efforts have been rightly mounted to tackle the opioid crisis in the US in recent years. However, as Dr Garner and his team highlight, it is important that this problem does not overshadow efforts to tackle use disorders for other substances, particularly methamphetamine and alcohol. Future research will help to establish the best treatment interventions and implementation strategies for tackling simultaneous HIV and SUDs within HIV service settings.



# Behind the Research

## Dr Bryan R. Garner

E: bgarner@rti.org T: +1 919 597 5159

### Research Objectives

Dr Bryan Garner and his team explored the neglected overlap between substance use disorders (SUDs) and people with HIV (PWH) in the United States.

### Detail

**Address:** 3040 E. Cornwallis Rd.  
Research Triangle Park, NC 27709-2194, USA

### Bio

Dr Bryan Garner is a Senior Implementation Research Scientist with RTI International. Dr Garner's research is focused on identifying effective and cost-effective strategies to improve public health.

### Funding

The National Institute on Drug Abuse (NIDA); R01DA044051

### References

Garner, B, et al, (2021) The Prevalence and Negative Impacts of Substance Use Disorders among People with HIV in the United States: A Real-Time Delphi Survey of Key Stakeholders. *AIDS and Behaviour*, [online]. doi.org/10.1007/s10461-021-03473-9

### Personal Response

**What are the next steps in terms of ensuring your findings are taken forward and put to use within the HIV care continuum?**

// Next steps include promoting our work via Twitter and/or other relevant social-media outlets. //



Blue Planet Studio/Shutterstock.com