

# **Increased Substance Abuse and Mental Health Disorders for Persons Living with HIV in Michigan**

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### BACKGROUND

Medical Monitoring Project (MMP)

- Gathers information about the needs of those living with HIV
- Information can be used to guide policy and funding decisions<sup>1</sup>
- CDC-sponsored surveillance project
- Conducted annually in 23 project areas throughout the United States
- Michigan was selected to participate as a medium-morbidity state
  - Facilities representing high, medium and low patient loads were selected from all Michigan facilities
  - Individuals were randomly selected from patient lists which • were generated by facilities
- Data collected via survey and medical record abstraction (MRA)
- IRB approved

### 2013 Cycle

- Total of 5,030 participants nationally
- Total of 163 Michigan participants completed both interview and MRA

### **METHODS**



- National data and Michigan MMP data from 2013 compared
- Chi-square test used to determine if the observed differences between the national prevalence and Michigan prevalence were statistically significant at a 95% level of confidence
  - Self-reported non-injection drug use
  - Self-reported binge drinking\*
  - Categorical depression (no depression, other depression,

or major depression)\*\*

\*Binge drinking categorized as 5+ drinks in one sitting for men, 4+ drinks in one sitting for women, in the past 30 days

\*\*Depression category based on Kroenke and Spitzer's (2002) algorithm

## **FIGURES**

Figure 1. Chi-Square Test & Prevalence of Non-Injection Drug Use in National vs. Michigan Sample

Chi-Square	8.4818
Degree of Freedom	1
p-value	0.0036

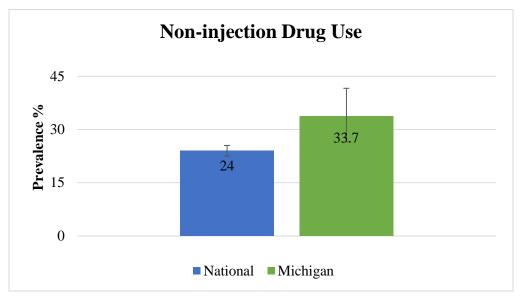


Figure 3: Chi-Square Test of & Prevalence of Depression in National vs. Michigan Sample

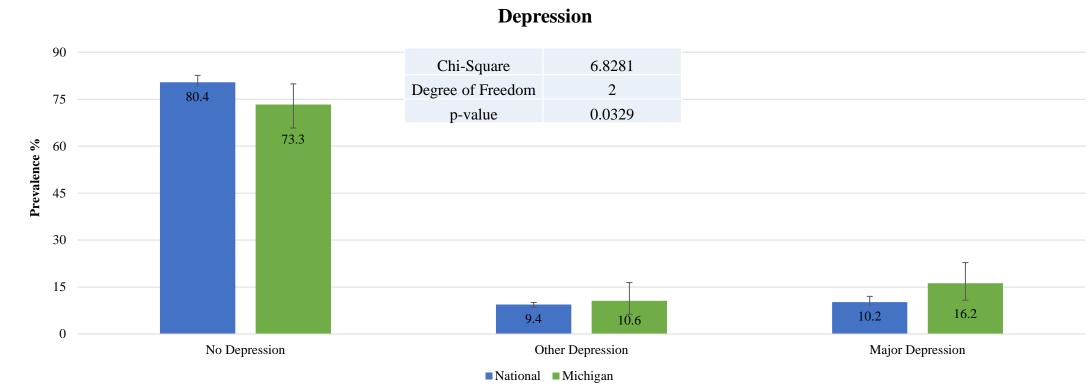
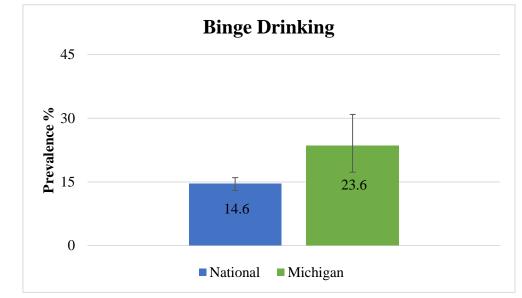




Figure 2: Chi-Square Test & Prevalence of Binge Drinking in National vs. **Michigan Sample** 

10.465
1
0.0012



### RESULTS

- Observed prevalence found in the Michigan population was significantly different from the national data at a 95% level of confidence
- Michigan's HIV-positive individuals had a higher prevalence of
  - Non-injection drug users (33.7% vs. 24.0%)
  - Binge drinkers (23.6% vs. 14.6%)
  - Higher rates of both other depression and major depression (16.2% and 10.2%, respectively vs. 10.6% and 9.4%, respectively)

### LIMITATIONS

- 2013 cycle of MMP included only those individuals who were in care, thus results may not be generalizable
- Due to the sampling only those in care, these values may actually be under-estimated compared to those of the general population
- These variables are self-reported, so it is possible that the prevalence of these behaviors is even higher

### DISCUSSION

- Depression, binge drinking, and non-injection drug use are all factors that have been known to be associated with high-risk behaviors<sup>234</sup> that could result in further transmission of HIV
- These behaviors are associated with general poor health outcomes<sup>567</sup> and possibly related to lack of medication adherence<sup>8</sup>
- Knowledge that Michigan has significantly higher proportions of these behaviors indicate that there is a need for additional programs or assistance for these individuals

### REFERENCES

. Medical Monitoring Project (MMP). Centers for Disease Control and Prevention. s/systems/mmp/ March 2015. 2. Medley et al. Alcohol use and its association with HIV risk behaviors among a cohort of patients attending HIV clinical care in Tanzania, Kenya, and Namibia. AIDS Care 2014; 26(10): 1288 3. Hutton, H. et al. Depression and HIV Risk Behaviors Among Patients in a Sexually Transmitted Disease Clinic. Am J Psychiatry 2004: 161:912–914). 4. Meade, C. et al. HIV Risk Behavior Among Methamphetamine Users Entering Substance Abuse Treatment in Cape Town, South Africa. AIDS Behav. Pp. 1-11. 5. Fact Sheets - Binge Drinking. Centers for Disease Control and Prevention. http://www.cdc.gov/alcohol/fact-6. Depression. Centers for Disease Control and Prevention. http://www.cdc.gov/mentalhealth/basics/mentalss/depression.htm. March 2016. 7. Substance Abuse. Office of Disease Prevention and Health Promotion. https://www.healthypeople.gov/2020/topics-objectives/topic/substance-abuse. March 2016. 8. Boni, R. et al. Binge drinking is associated with differences in weekday and weekend adherence in HIVinfected individual

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