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Exposure to neighborhood poverty and drinking patterns over five years

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A L C O H O L
R E S E A R C H
G R O U P

Presenter Disclosures

Katherine Karriker-Jaffe, PhD

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose



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Learning Objectives

- Compare characteristics of residential neighborhoods for people with different drinking patterns
- Evaluate relationships between drinking patterns and duration of neighborhood poverty over time
- Assess factors that increase likelihood heavy drinkers will migrate to or remain in high-poverty neighborhoods over time



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Why study neighborhood effects?

- Neighborhoods differ in social and physical resources
- Neighborhoods influence health and behavior
- Some neighborhoods are good places to live, others are not
- People choose their neighborhoods for many reasons



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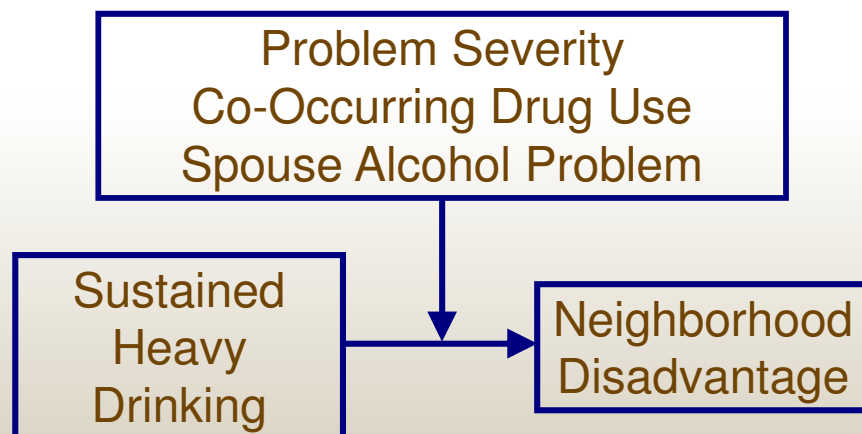
Current study

- Aims:
 - Examine impact of longitudinal drinking patterns on duration of residence in high-poverty neighborhoods
 - Assess moderators of these effects



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Current study



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Methods

- Interview data from a longitudinal study
 - Sample 1: Recruited from 10 alcohol treatment programs in one Northern California county
 - Sample 2: Probability sample of heavy drinkers drawn from the same county



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Methods

- Linked with tract data from 2000 US Decennial Census
 - Geocoded respondent addresses from 5 waves of data covering a period of 7 years



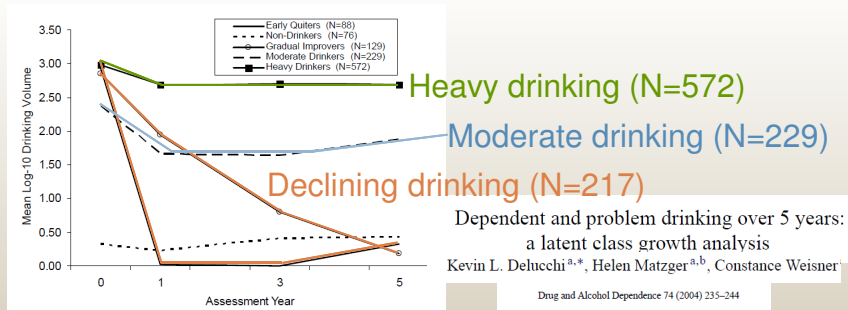
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Drinking Patterns

- Derived using latent class growth modeling
 - ▣ Cases with 4 waves of data over a period of 5 yrs
 - ▣ N = 1094, 58% male



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Neighborhood SES

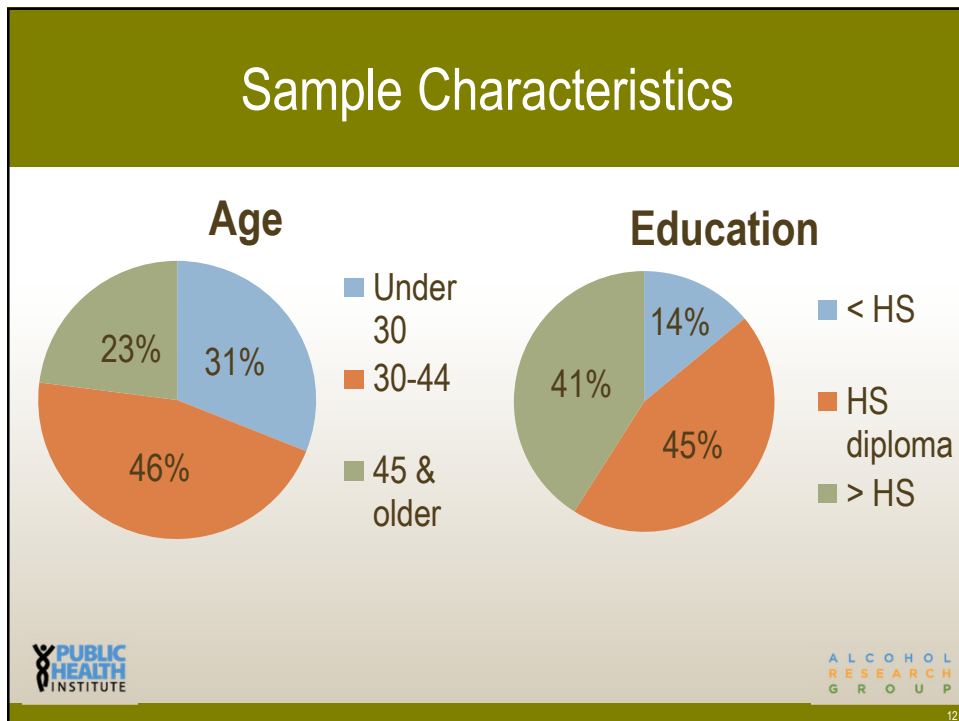
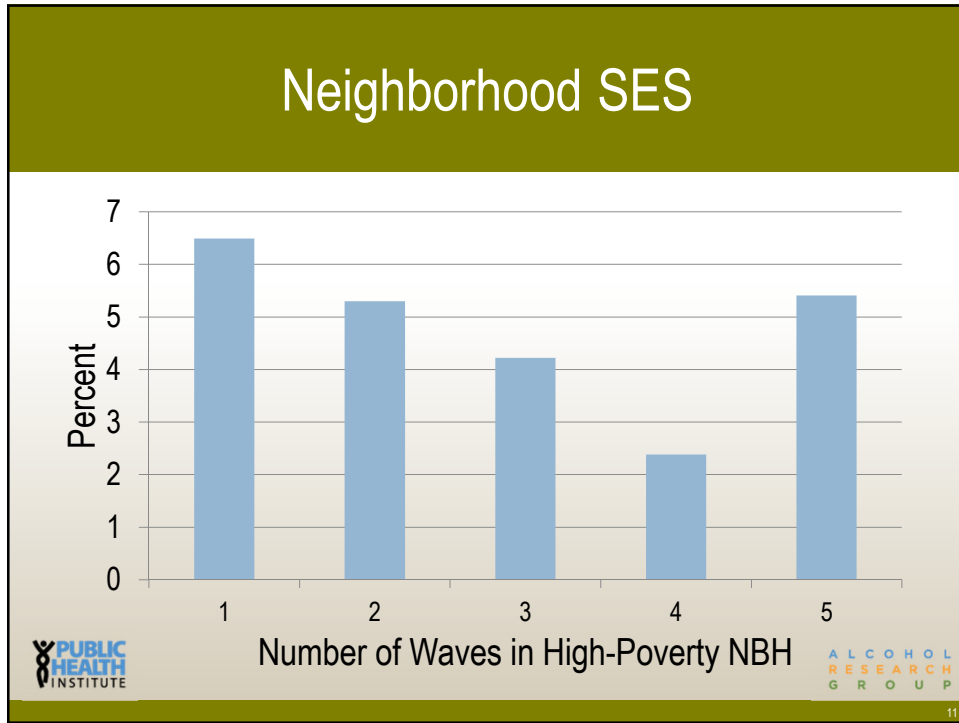
- Key outcome measure:
 - ▣ Proportion of time respondent lived in a high-poverty neighborhood
 - High-poverty = > 20% of residents with incomes below poverty level
 - ▣ 24% of respondents lived in high-poverty neighborhood at some point



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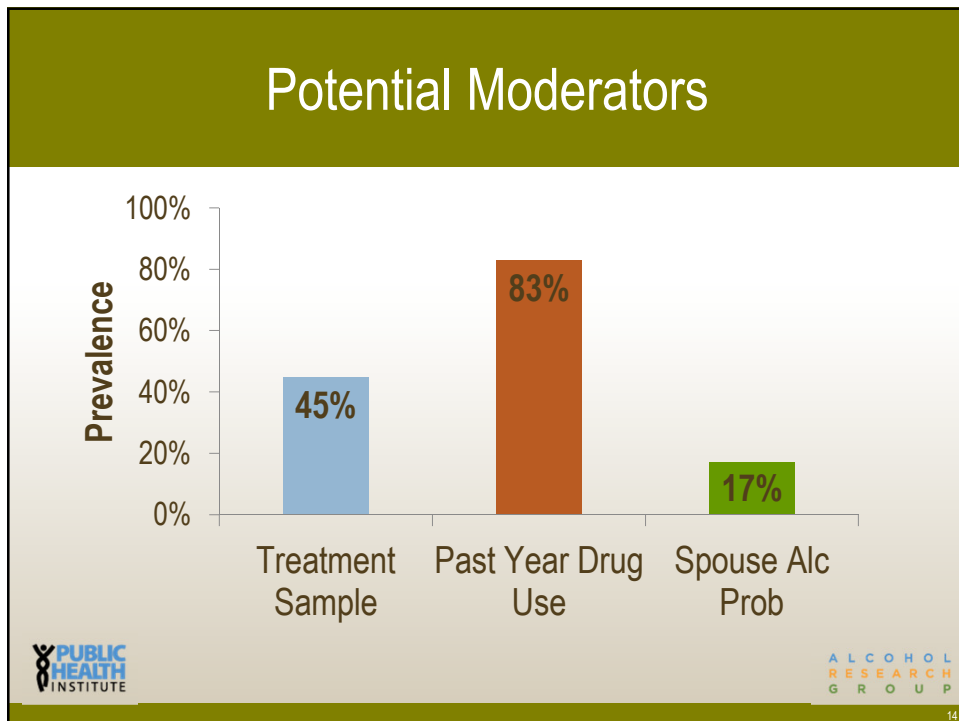
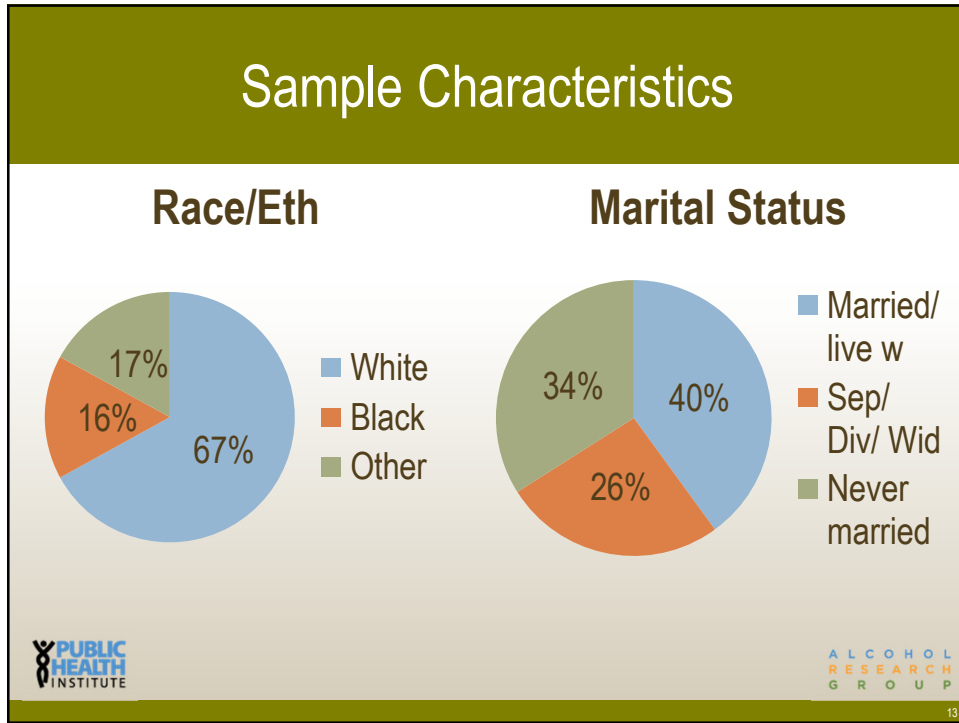
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Analyses

- Multivariate generalized estimating equations (GEE models)
 - Adjusted for clustering of respondents in the same neighborhood
 - Controlled for demographic covariates and median neighborhood income at baseline
 - Tested interactions of drinking pattern with potential moderators in separate models



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Results: Main Effect Model

	Main Effect Model
Moderate Drinking	2.93 ⁺
Heavy Drinking	3.10 [*]
NBH Median Income	-0.0004 ^{**}
Black/African American	12.88 ^{**}
Other Race/Ethnicity	1.40
Separated/Divorced/Wid	1.97
Never Married	2.46 ⁺
Less than HS	4.18 [*]
HS Diploma	1.07



⁺ $P < .10$; ^{*} $P < .05$; ^{**} $P < .01$; All analyses controlled for age, sex, family history of alcoholism, spouse alcohol problem, arrested/in jail, saw psychotherapist, drug use in past year, baseline dependence and sample (severity)



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Results: Interaction Models

	Main Effect Model	Interaction with Severity
Moderate Drinking	2.93 ⁺	-6.56 [*]
Heavy Drinking	3.10 [*]	-6.82 [*]
NBH Median Income	-0.0004 ^{**}	-0.0004 ^{**}
Black/African American	12.88 ^{**}	12.27 ^{**}
Less than HS	4.18 [*]	5.34 ^{**}
Recent treatment		-9.63 ^{**}
Moderate * Severe Samp		12.23 ^{**}
Heavy * Severe Samp		13.51 ^{**}

+ P < .10; * P < .05; ** P < .01; All analyses controlled for age, sex, marital status, family history of alcoholism, spouse alcohol problem, arrested/in jail, saw psychotherapist, drug use in past year, baseline dependence and sample (severity)






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Results: Interaction Models

	Main Effect Model	Interaction w/ Spouse Alc
Moderate Drinking	2.93 ⁺	4.70 [*]
Heavy Drinking	3.10 [*]	4.10 [*]
NBH Median Income	-0.0004 ^{**}	-0.0003 ^{**}
Black/African American	12.88 ^{**}	18.20 ^{**}
Less than HS	4.18 [*]	4.12 ⁺
Spouse alcohol problem		6.65
Moderate * Spouse alc		-10.02 ⁺
Heavy * Spouse alc		-7.87

+ P < .10; * P < .05; ** P < .01; All analyses controlled for age, sex, marital status, family history of alcoholism, spouse alcohol problem, arrested/in jail, saw psychotherapist, drug use in past year, baseline dependence and sample (severity)

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Results: Interaction Models

	Main Effect Model	Interaction w/ Drug Use
Moderate Drinking	2.93 ⁺	3.81
Heavy Drinking	3.10 [*]	-0.002
NBH Median Income	-0.0004 ^{**}	-0.0004 ^{**}
Black/African American	12.88 ^{**}	12.64 ^{**}
Less than HS	4.18 [*]	5.37 ^{**}
Drug use		-0.86
Moderate * Drug use		-1.36
Heavy * Drug use		3.33

+ $P < .10$; * $P < .05$; ** $P < .01$; All analyses controlled for age, sex, marital status, family history of alcoholism, spouse alcohol problem, arrested/in jail, saw psychotherapist, drug use in past year, baseline dependence and sample (severity)



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Results: Stratified Models

	More Severe Sample	Less Severe Sample
Moderate Drinking	6.05 [*]	-6.56 [*]
Heavy Drinking	5.57 [*]	-6.82 [*]
NBH Median Income	-0.0004 ^{**}	-0.0003 ^{**}
Black/African American	15.21 ^{**}	15.71 ^{**}
Other Race/Ethnicity	3.12	-0.03
Separated/Divorced/Wid	-1.76	4.96 ^{**}
Never Married	5.02 ⁺	-0.46
Less than HS	5.53 ⁺	7.92 ^{**}
HS Diploma	2.14	0.56

+ $P < .10$; * $P < .05$; ** $P < .01$; All analyses controlled for age, sex, family history of alcoholism, spouse alcohol problem, arrested/in jail, saw psychotherapist, drug use in past year, baseline dependence and sample (severity)



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Results: Stratified Models

	Spouse Alc Prob	No Spouse Alc Prob
Moderate Drinking	-4.83	5.79*
Heavy Drinking	-4.44	6.29*
NBH Median Income	-0.0002**	-0.0003**
Black/African American	20.87**	20.29**
Other Race/Ethnicity	-1.10	4.03+
Separated/Divorced/Wid	-0.26	2.35
Less than HS	10.15+	3.52
HS Diploma	-2.06	3.01+

Note: Never married not included



+ $P < .10$; * $P < .05$; ** $P < .01$; All analyses controlled for age, sex, family history of alcoholism, spouse alcohol problem, arrested/in jail, saw psychotherapist, drug use in past year, baseline dependence and sample (severity)



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Results Summary

- Partial support for moderation hypotheses
 - ▣ Effects of drinking trajectory on exposure to high-poverty neighborhoods **stronger in the more severe sample**
 - ▣ Effects of drinking trajectory on exposure to high-poverty neighborhoods **counter to hypotheses in less severe sample**



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Results Summary

- Partial support for moderation hypotheses
 - Moderation by spouse alcohol problem **counter to hypotheses**
 - **No moderation** by past-year drug use



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Limitations and strengths

- Census data and census geographies
- Good measures of different alcohol use patterns
- Selection vs. causation
 - Alcohol dependence and downward drift¹
 - Neighborhood effects on consumption



1. Buu, et al. (2007) *ACER*, 31, 1545-1551



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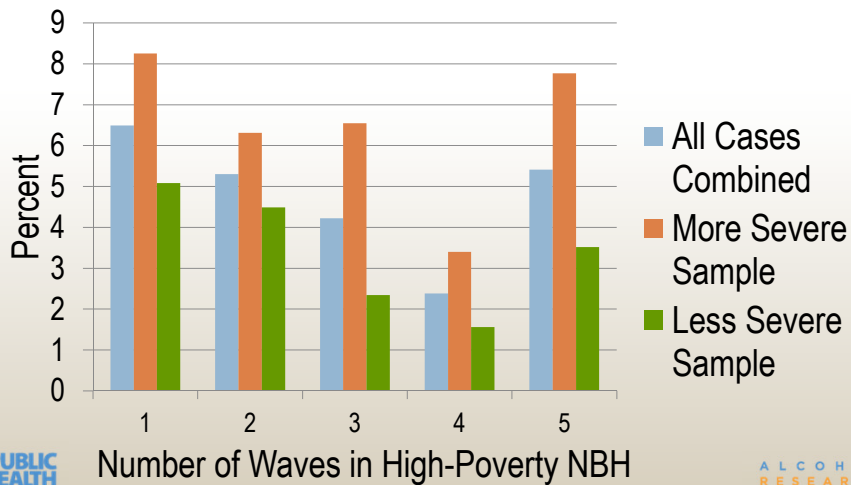
Next Steps

- New models that better assess whether drinking is causing exposure to poverty or vice versa (or both!)
- Post hoc analyses to figure out why so many findings were counter hypotheses
 - 2/3 of those reporting a spouse with alcohol problem were women



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Neighborhood SES



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Implications for prevention

- Continue to address heavy alcohol use and its long-term consequences
 - Need research on causal sequence(s)
- Extend outreach to therapists working with people from disadvantaged neighborhoods to combat relapse



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Questions?

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