

Neighborhood Influence on Health Behaviors Among Survivors of Childhood Cancer

James W Kinchen ¹, I-Chan Huang PhD², Tara M Brinkman PhD^{2,3}, Rachel Webster PhD³, Deo Kumar Srivastava PhD⁴, Kevin R Krull PhD,^{2,3}

Kirsten K Ness PT PhD², Leslie L Robison PhD², Melissa M Hudson MD^{2,5}, Carmen L Wilson PhD²

¹ Epidemiology Program, Louisiana State University Health Sciences Center New Orleans School of Public Health, ² Departments of Epidemiology and Cancer Control ³ Psychology ⁴ Biostatistics ⁵ Oncology, St. Jude Children's Research Hospital



Background

- Survivors of childhood cancer have an increased risk of developing chronic health conditions because of cancer therapies received in childhood.¹
- Health behaviors can influence chronic disease risk. As health behaviors are modifiable, they represent important targets for interventions.
- In the general population, neighborhood deprivation can influence both health behaviors and chronic disease risk beyond that of individual markers of socioeconomic status (SES).^{2,3}
- Among childhood cancer survivors, evidence on the influence of neighborhood deprivation on health outcomes/behaviors is limited, largely focused on obesity and survival outcomes.^{4,5}
- Given the high burden of disease in survivors understanding both individual SES and neighborhood deprivation SES factors influencing health behaviors among survivors is important to inform intervention development.

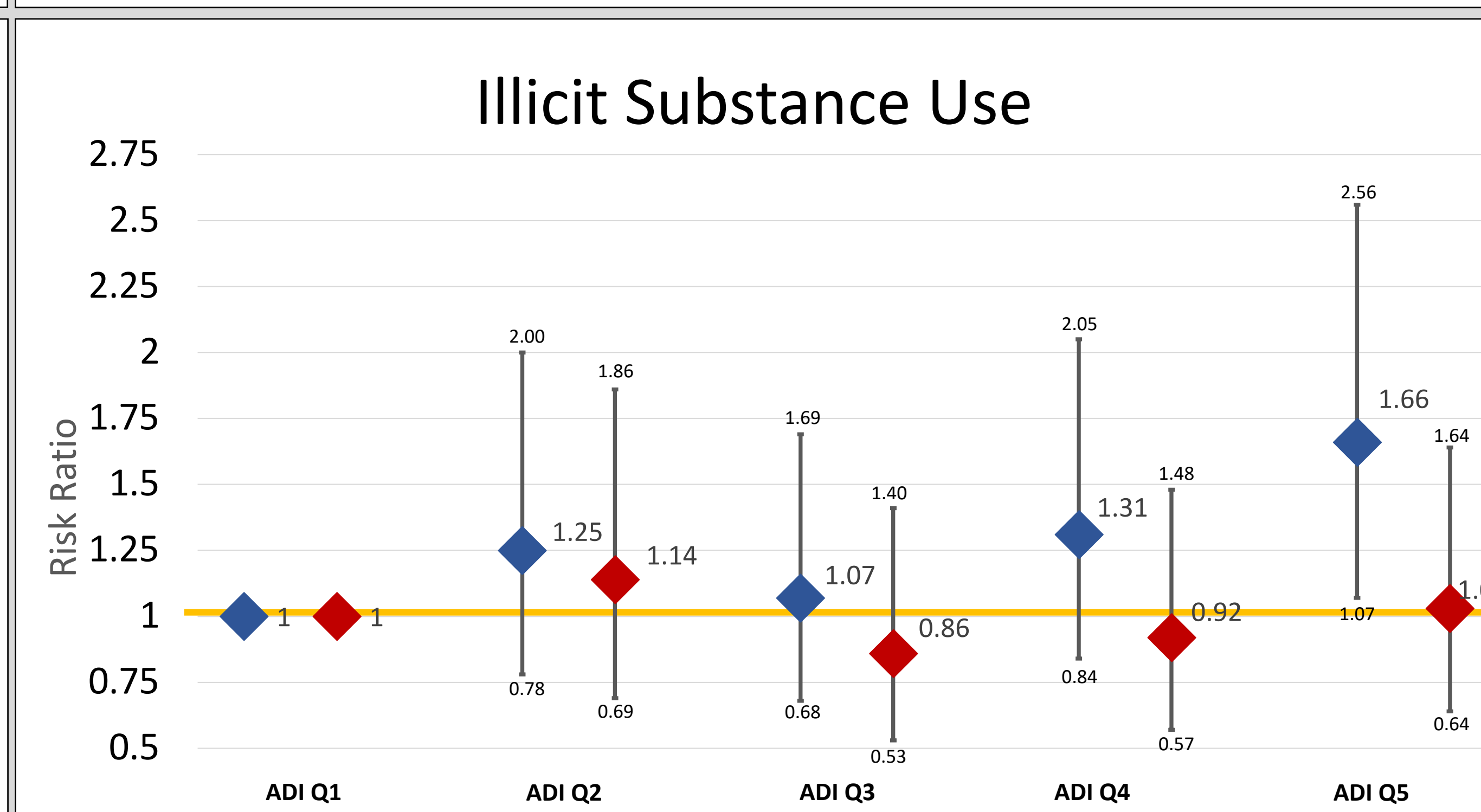
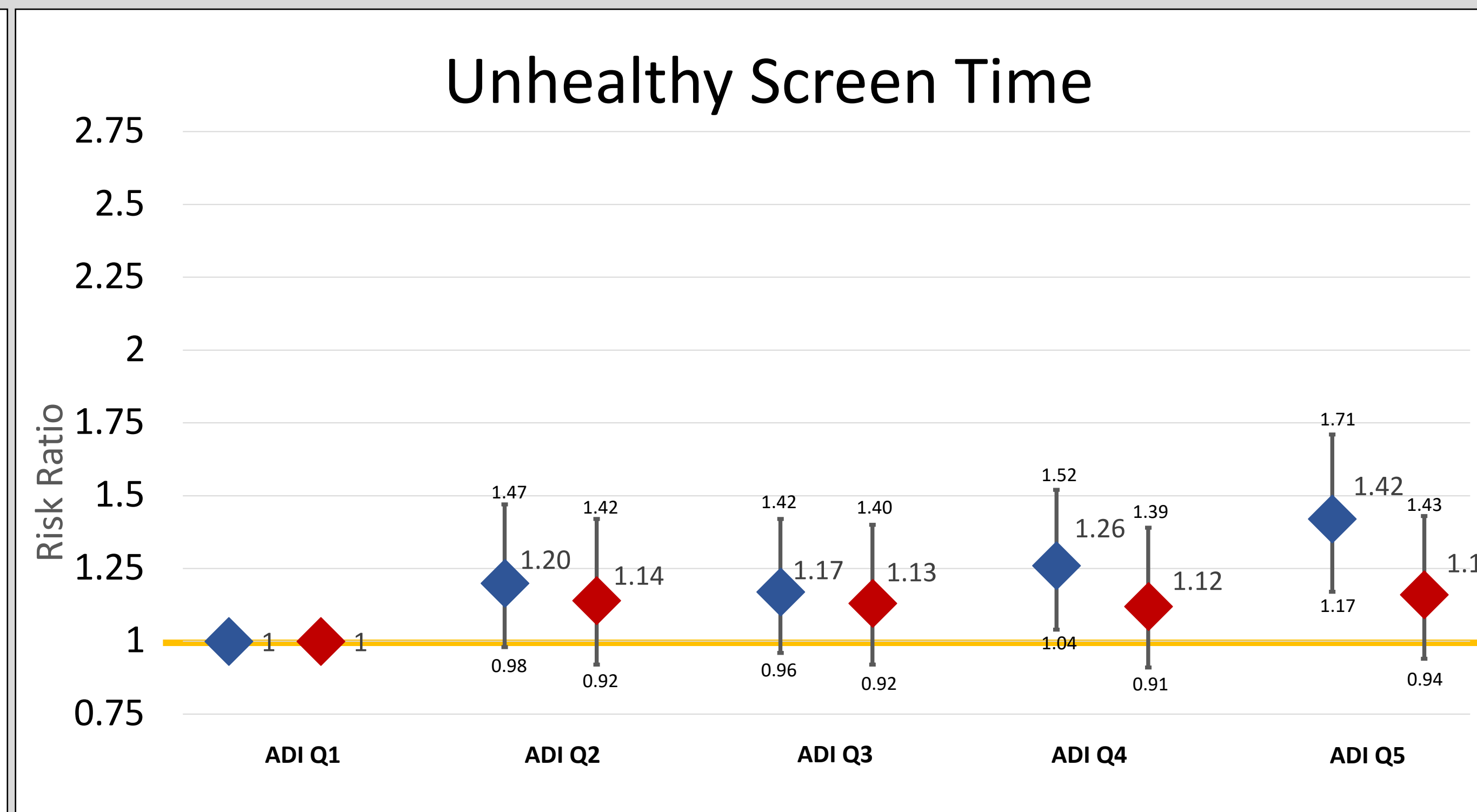
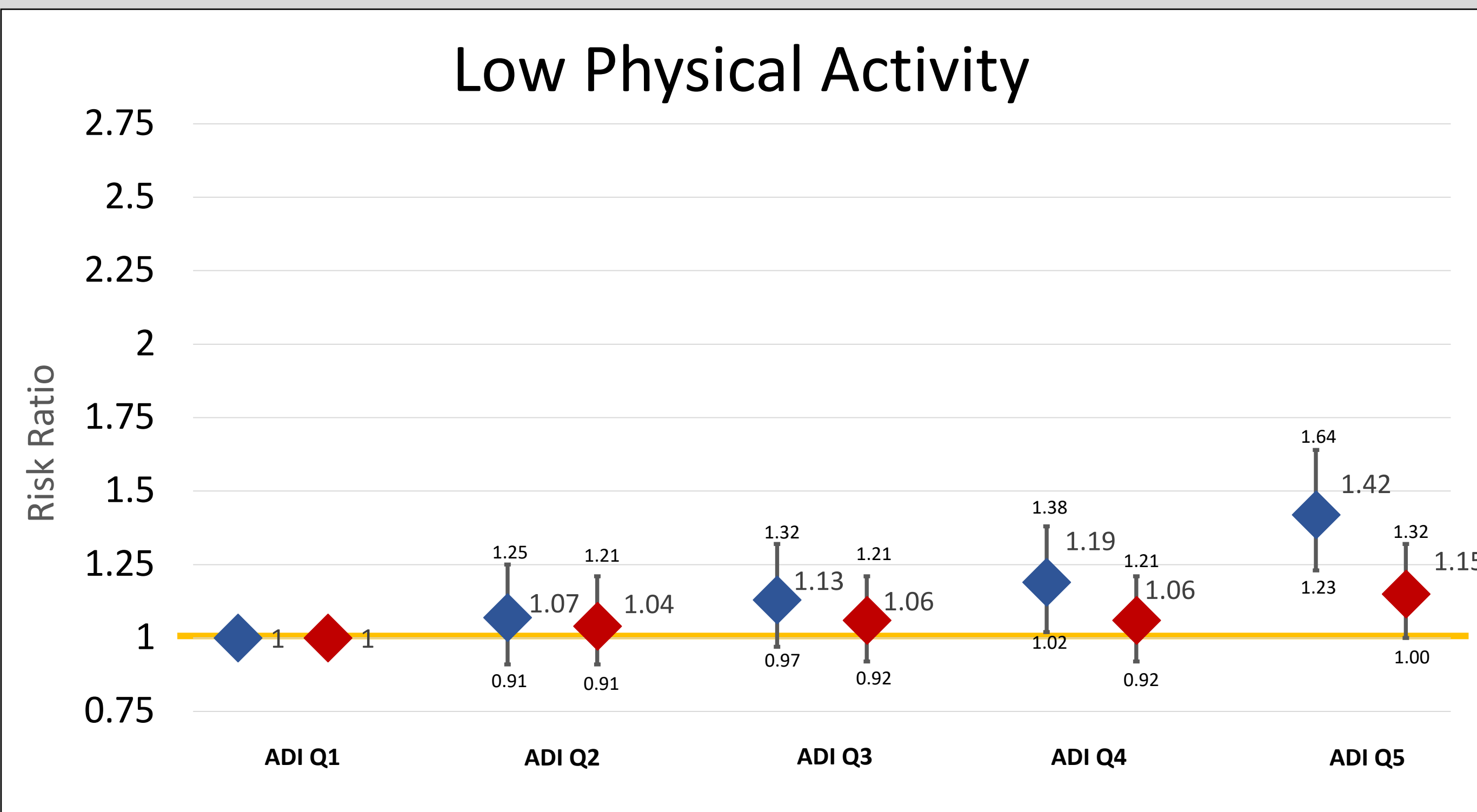
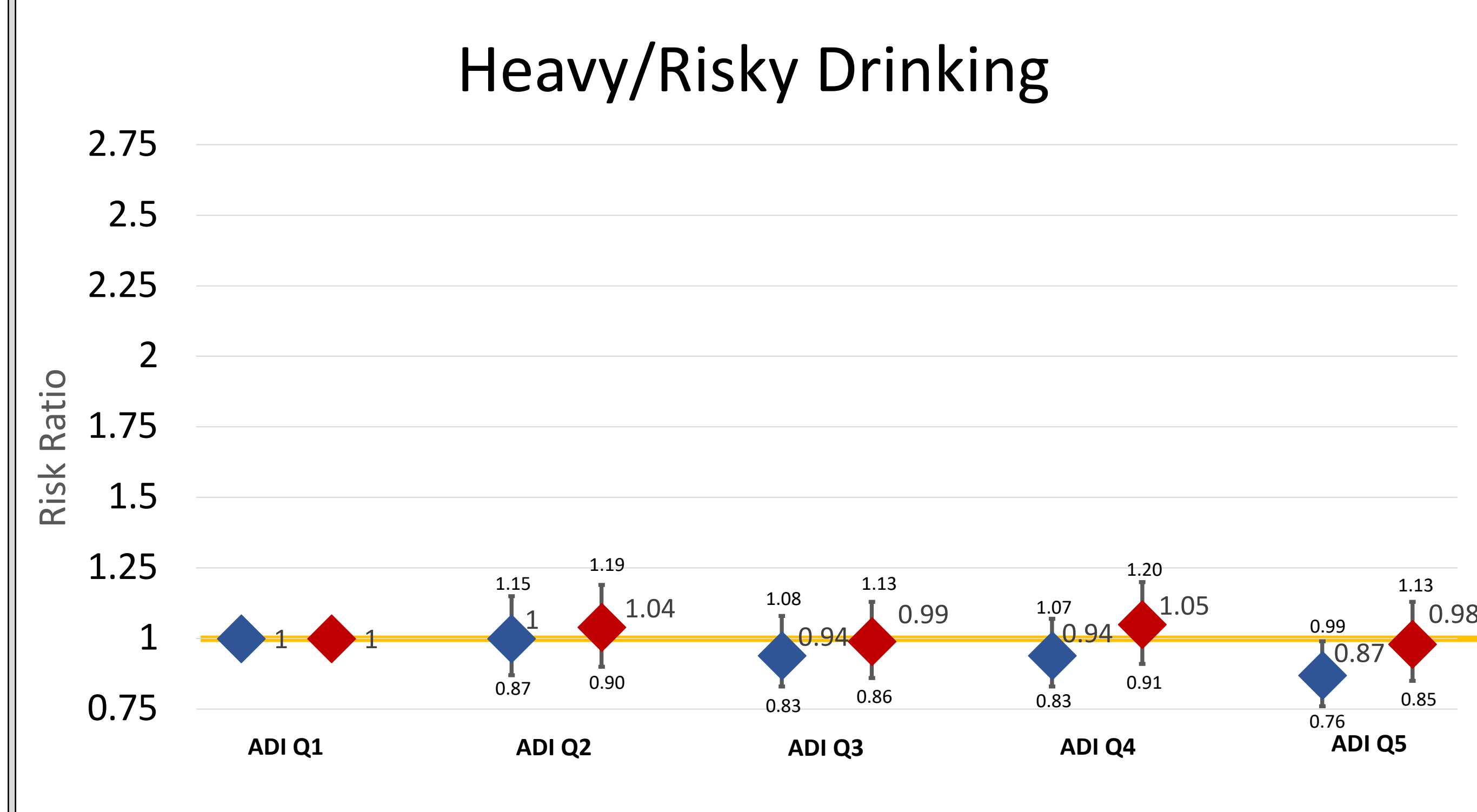
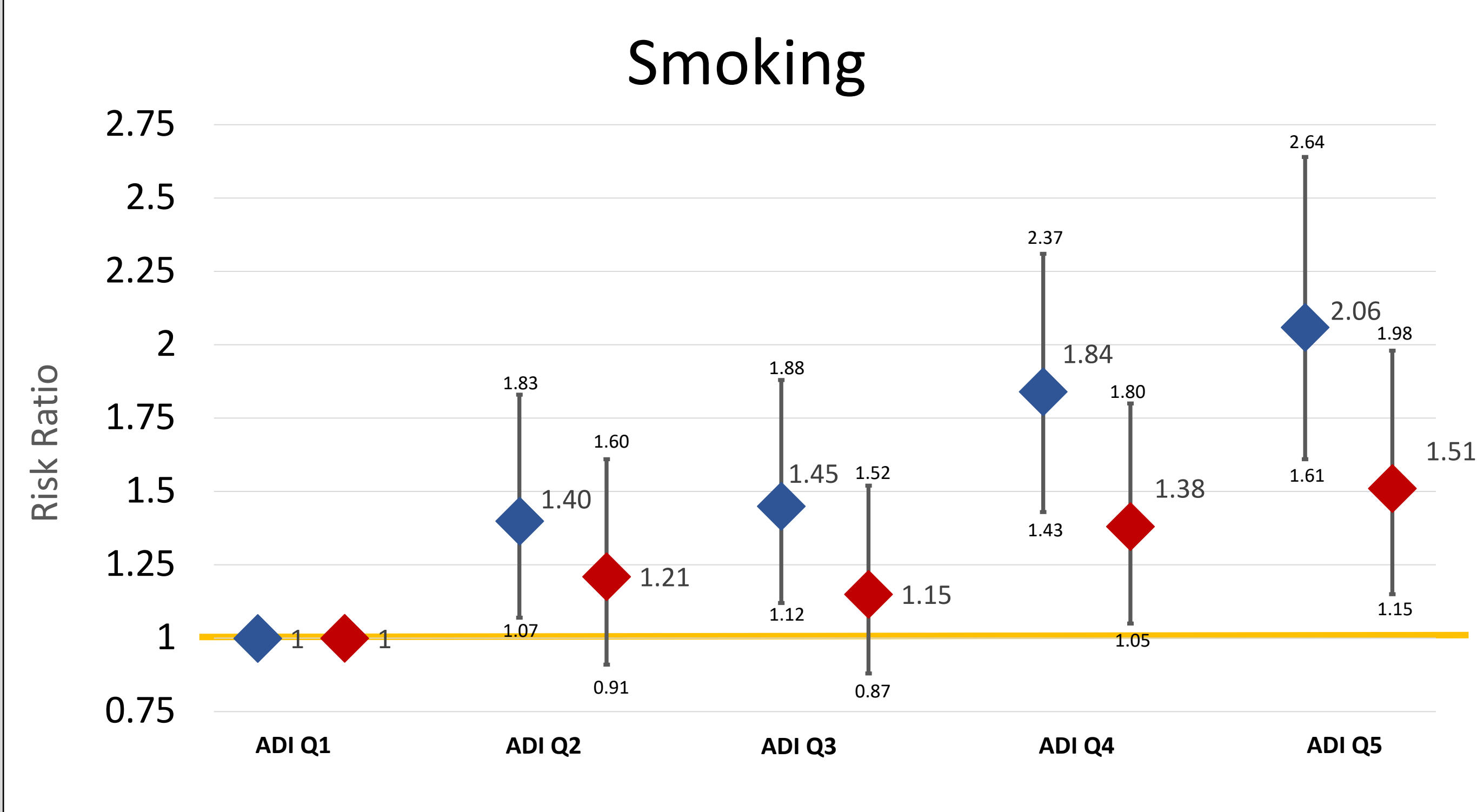
Objectives

- To characterize associations between neighborhood deprivation and health behaviors among survivors of childhood cancer.
- To determine if associations between neighborhood deprivation and health behaviors among survivors are independent of markers of individual SES.

Methods

- Participants included 4,259 adult survivors of childhood cancer (18+ years, >10yrs post diagnosis) enrolled in the St. Jude Lifetime Cohort ⁶
- Health behaviors were assessed by self-report and defined as:
 - Smoking Status (current/former vs. never) ⁷
 - Alcohol consumption (heavy drinking - 5+ days in the past month and/or risky drinking - >3 drinks/day or >7 drinks/week for females or >4 drinks/day or >14/week for males vs. non heavy/risky drinking) ⁸
 - Physical activity (meets vs. does not meet CDC guidelines: 150 minutes/week of moderate/vigorous activities) ⁹
 - Diet Quality (assessed by Healthy Eating Index; dichotomized around mean)
 - Illicit drug/cannabis use (never vs. any use in past 30 days; risky marijuana use defined as >9 times during past 30 days; illicit drug/marijuana use combined into one outcome)
 - Screen time (≥4 hours/day of non-work screen time vs. <4 hours) ²
- Neighborhood deprivation was assessed using the Area Deprivation Index (ADI). Participants were divided into quintiles, based on ADI score, ranging from least to most deprived neighborhoods.
- Multivariable log-binomial regression analyses were used to assess associations between ADI, individual markers of SES and health behaviors.
- All models were adjusted for attained age, sex, race/ethnicity.

Results



◆ Unadjusted Model ◆ Model adjusted for Personal Income, Education Level, Financial Distress Status, Age, Sex, and Race/Ethnicity

Discussion

- In models adjusted for individual markers of SES, increasing levels of neighborhood deprivation were associated with increased risk of being a current smoker and having a poor-quality diet.
- Survivors living in the most deprived neighborhood also had a borderline increased risk of not meeting CDC guidelines for physical activity.
- These findings provide support for future research exploring interventions and policy changes that support survivors of childhood cancer residing in the most deprived neighborhoods to improve their health behaviors. Given established associations between poor health behaviors and adverse health outcomes, such research may improve health outcomes in this high-risk population.

The St. Jude Lifetime Cohort Study is approved by the Institutional Review Board of St. Jude Children's Research Hospital.

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