

**The DIVISION OF BIOSTATISTICS  
of the  
MEDICAL COLLEGE OF WISCONSIN**

Proudly Presents  
A Special Talk  
By:



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**Evaluating a School-Based Bystander Intervention:  
Can time-dependent confounders help us understand?**

In 2008, the Kentucky Association of Sexual Assault Programs (KASAP) Board selected *Green Dot* as a promising program to be implemented to reduce sexual and dating violence among adolescents in Kentucky. As described by Coker et al, 2011, the *Green Dot* violence prevention program aims to engage bystanders to act to reduce sexual violence and related forms of interpersonal violence ([www.livethegreendot.org](http://www.livethegreendot.org)). While the intervention demonstrated a reduction in reported violence outcomes (primary outcome), measuring efficacy through increased student reports of bystander behaviors (secondary outcome) was problematic.

Data were collected within a randomized, longitudinal trial to evaluate the efficacy of a bystander intervention, Green Dot, in 26 high schools. Initial analyses of reported bystander behaviors demonstrated an inverse relationship with reported violence outcomes; reports of bystander behaviors were greater in intervention schools at study start, when reports of violence were higher, and reduced at study end as reports of violence declined. The intervention in this trial successfully engaged high school students as change agents and was effective in reducing sexual and dating violence, but standard approaches of covariate-adjustment using generalized linear models, did not appropriately account for this changing environment. The mechanism for the reduction in violence was difficult to quantify as bystander behaviors measures were challenged by the reduced level of opportunity. Treating opportunity and level of training as time-varying confounders provided an alternative approach. Using marginal structural models via inverse probability weights, the complex relationship of intervention training and opportunity, and bystander behaviors was (appropriately) investigated.

**Tuesday, February 7, 2017**  
**3:30 – 4:30 PM**  
**Medical College of Wisconsin**  
**Room M2050 – 2<sup>nd</sup> floor of the MEB**  
*Refreshments 3:00 – 3:30 PM in H2030*