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Response to Comment on Mosquito Control Practices and Zika Knowledge Among Outdoor Construction Workers: A Comment

To the Editor:

We thank Dr Joob and Prof Wiwanitkit for their thoughtful and insightful comments on our recent article describing the results of a rapid survey assessment administered to a non-probabilistic sample of construction industry employees in Miami-Dade County, Florida.¹ In the present response letter, we address the two comments raised by the authors on the measurement of mosquito control practices and knowledge, and construction workers as a high-risk worker group for mosquito bites.

We first would like to draw the important distinction between the measures used in the survey instrument to assess mosquito control and prevention worksite activities ("practice") as well as knowledge of U.S. government Zika virus guidelines. We agree with the authors in that we expected Zika virus knowledge to range from low to nonexistent among surveyed workers given the timeline of virus emergence in the geographic area. However, being only one of two States with local

transmission of the virus, and strong media outreach about local Miami-Dade County virus transmission,² we documented that the awareness of Zika virus in workers was greater than nonexistent, where 46% of respondents knew of US Centers for Disease Control and Prevention (CDC) and the Occupational Safety and Health Administration (OSHA) guidance for protecting workers from occupational exposure to Zika virus from mosquitoes. The survey measures used in our study focused on mosquito control practices conducted by the construction firm and the individual worker. At these different levels (ie, organizational- vs worker-level) of the construction worksite, we documented low organizational mosquito control practices in general, not focused on Zika virus rather the vector of transmission. This finding suggests an opportunity to engage construction firms on evidence-based worksite mosquito control practices.

We agree with the authors that *Aedes aegypti* is a daytime biting mosquito and has preference for indoor space living. In Florida, indoor building temperatures are often kept cooler than outdoor spaces given the hot South Florida climate.³ At an active construction site void of windows, doors, and some walls, cooler spaces are frequently found in the lower levels of buildings that often aggregate pooled rain water or construction work water, a perfect breeding ground for *Aedes aegypti*. It has been our research team's observation that some safety barriers frequently found at construction sites to create protection between the site and local pedestrians have divots that coalesce water perfect for mosquito breeding. Given that

construction work in Miami-Dade often starts at dawn, an optimal feeding time for *Aedes* mosquito coupled with water breeding sources in and around the construction site, workers at these sites are likely at a high risk for mosquito bites due to proximity to mosquito breeding sites. Further research is needed at understanding the mechanisms and impact of mosquito control practices at sites at the organizational and worker-levels and how that risk differs from the general community who work and live in different settings.

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