**Comparison of time-varying exposure coding approaches**

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| **Exposure coding method** | **Description** | **Rationale for including/excluding** |
| **Intention-to-treat** | Take exposure status at baseline and apply it over the full follow-up period | Can misclassify person-time if exposure frequently changes over time, as happens with the exposure in our study; this was commonly done in previous time to symptomatic malaria studies (Henning et al., 2004; Le Port et al., 2008; Liljander et al., 2011; Males et al., 2008; Njama-Meya et al., 2004; Nsobya et al., 2004; Portugal et al., 2017; Sonden et al., 2015; Wamae et al., 2018) |
| **Allow participants to change exposure group over follow-up**  | Exposure is reassessed for participants over time and summarized as the number of months exposed | Can have issues with left truncation bias for exposures that began before the study, as occurred in our study where participants could have been infected with asymptomatic malaria at baseline |
| **Ever-never approach** | Classify participant as exposed if were ever exposed during follow-up period | Many issues with misclassification and “look-back” bias; Buchwald *et al.* (Buchwald et al., 2019) did a modified version of this where participants were classified as unexposed until an asymptomatic infection occurred then classified as exposed for the remaining period afterward |
| **Hernán *et al.* multiple month method**(Hernán et al., 2005) | Modified version of intention-to-treat where each month was treated as a baseline for follow-up; The exposure status of each monthly visit was applied to the subsequent follow-up period | Allows exposure to change over time with more precision than the typical intention-to-treat approach; produces effect estimate that is predictive of future risk regardless of prior exposure so not prone to left truncation bias; some misclassification bias still possible but less than alternative methods |

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