1116-VP-971 **Khyam Paneru*** (paneruk@uww.edu), Department of Mathematics, University of Wisconsin-Whitewater, Whitewater, WI 53190. *Empirical non-coverage rate in interval estimation of expected response in ZIM regression.*

ZIM regression refers to zero-inflated mixture (ZIM) regression under complex probability sampling designs. It describes zero-inflated generalized linear models under unequal probability sampling designs via two-component mixture models where the probability distribution of non-zero component is known. In many applications such as insurance, auditing, and manufacturing, a common problem known as zero-inflation, is caused by the presence of a large proportion of zero values. Maximum pseudo-likelihood ratio statistic and its limiting distribution are used to estimate confidence intervals for expected responses at "future" covariate values/vectors using ZIM regression models. Monte Carlo simulations are carried out to calculate non-coverage probability for the parameter of interest using maximum pseudo-likelihood procedure and the popular maximum likelihood procedure. Empirical non-coverage rates are compared with nominal level under both approaches. Simulation results show that empirical non-coverage rate under maximum pseudo-likelihood approach is close to nominal level. (Received September 15, 2015)