Coverage, xi=0(Mis xi), interactions=TRUE, mis_Y=2, mis_PS=2, N=2000 $\pi_{as} = 0.75$ $\pi_{as} = 0.5$ 1.00 0.75 - π_{pro} : High 0.50 -0.25 -Coverage 00.0 00.1 0.75 - π_{pro} : Low 0.50 -0.25 -XX0.00 4 10 5 3 **Number of Covariates** Mahal cal Mahal PS Mahal cal: OLS Mahal: WLS PS: WLS

Mahal cal: WLS

Coverage, xi=0.05(Mis xi), interactions=TRUE, mis_Y=2, mis_PS=2, N=2000 $\pi_{as}=0.75$ $\pi_{as} = 0.5$ 1.00 0.75 - π_{pro} : High 0.50 0.25 -Coverage 00.0 00.1 0.75 - π_{pro} : Low 0.500.250.00 5 10 3 **Number of Covariates** Mahal cal Mahal PS Mahal cal: OLS Mahal: WLS PS: WLS Mahal cal: WLS

Coverage, xi=0.1(Mis xi), interactions=TRUE, mis_Y=2, mis_PS=2, N=2000 $\pi_{as} = 0.75$ $\pi_{\text{as}}=0.5$ 1.00 0.75 - π_{pro} : High 0.50 0.25 -Coverage 00.0 00.1 0.75 - π_{pro} : Low 0.50 -0.250.00 4/2 10 5 3 10 **Number of Covariates** Mahal cal Mahal PS Mahal cal: OLS Mahal: WLS PS: WLS Mahal cal: WLS

Coverage, xi=0.2(Mis xi), interactions=TRUE, mis_Y=2, mis_PS=2, N=2000 $\pi_{\text{as}}=0.5$ $\pi_{as}=0.75$ 1.00 0.75 - π_{pro} : High 0.50 -0.25 -Coverage 0.75 - π_{pro} : Low 0.50 -0.250.00 5 3 10 **Number of Covariates** Mahal cal Mahal PS Mahal cal: OLS

Mahal: WLS

Mahal cal: WLS

PS: WLS

Coverage, 3X, Mis xi, interactions=TRUE, mis_Y=2, mis_PS=2, N=2000 $\pi_{as}=0.75$ $\pi_{as} = 0.5$ 1.00 0.75 - π_{pro} : High 0.50 -0.25 -Coverage 0.75 - π_{pro} : Low 0.50 -0.25 -0.00 0.2 0.1 0.2 0.1 Ó Ó 0.05 0.05 ξ Mahal cal Mahal PS Mahal cal: OLS Mahal cal: WLS Mahal: WLS PS: WLS

Coverage, 5X, Mis xi, interactions=TRUE, mis_Y=2, mis_PS=2, N=2000 $\pi_{as} = 0.5$ $\pi_{as} = 0.75$ 1.00 0.75 - π_{pro} : High 0.50 -0.25 -Coverage 00.0 00.1 1.00-0.75 - π_{pro} : Low 0.50 -0.25 -0.00 0.2 0.1 0.2 0.05 0.05 0.1 Ó ξ Mahal cal Mahal PS Mahal cal: OLS Mahal: WLS PS: WLS Mahal cal: WLS

Coverage, 10X, Mis xi, interactions=TRUE, mis_Y=2, mis_PS=2, N=2000 $\pi_{as} = 0.5$ $\pi_{as} = 0.75$ 1.00 0.75 - π_{pro} : High 0.50 -0.25 -Coverage 00.00 0.75 - π_{pro} : Low 0.50 -0.25 -0.00 0.2 0.2 0.05 0.1 0.05 0.1 ξ Mahal cal Mahal PS Mahal cal: OLS Mahal: WLS PS: WLS Mahal cal: WLS