

Table 1: Comparison between TMLE estimators and one-step EIF estimator under positivity assumption violation when the outcome is in the district of the treatment.

	$\psi_{dnorm}^+(\hat{Q})$	$\psi_{dnorm}(\hat{Q}^*)$	$\psi_{densratio}^+(\hat{Q})$	$\psi_{densratio}(\hat{Q}^*)$	$\psi_{bayes}^+(\hat{Q})$	$\psi_{bayes}(\hat{Q}^*)$
<b>n=500</b>						
Bias	-0.008	-0.005	0.231	0.001	-0.039	-0.009
SD	4.315	1.110	23.990	1.149	4.444	1.122
MSE	18.600	1.231	575.017	1.319	19.731	1.258
CI coverage	95.8%	95.2%	98.2%	98.3%	96.7%	97.5%
CI width	7.797	4.161	49.691	37.484	9.361	5.266
<b>n=1000</b>						
Bias	-0.101	-0.051	0.085	-0.045	-0.114	-0.053
SD	2.529	0.944	15.718	0.988	2.660	0.966
MSE	6.402	0.893	246.817	0.977	7.080	0.936
CI coverage	95.8%	95.5%	97.5%	99.6%	96.9%	97.6%
CI width	4.670	3.038	38.245	31.273	5.652	3.794
<b>n=2000</b>						
Bias	0.050	0.018	0.097	0.021	0.080	0.029
SD	1.335	0.720	7.277	0.745	1.457	0.734
MSE	1.783	0.519	52.917	0.554	2.127	0.540
CI coverage	96.2%	96.1%	97.3%	100%	96.5%	97.6%
CI width	3.115	2.351	22.211	19.313	3.790	2.908