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.

	$\psi_{dnorm}^{+}(\hat{Q})$	$\psi_{dnorm}(\hat{Q}^{\star})$	$\psi_{densratio}^{+}(\hat{Q})$	$\psi_{densratio}(\hat{Q}^{\star})$	$\psi_{bayes}^{+}(\hat{Q})$	$\psi_{bayes}(\hat{Q}^{\star})$
n=500						
Bias	0.002	-0.030	0.003	-0.036	-0.044	-0.038
SD	2.740	2.026	2.733	2.044	3.434	2.068
MSE	7.501	4.100	7.462	4.177	11.782	4.272
CI coverage	89.8%	79.3%	90%	78.2%	92.2%	86.7%
CI width	6.947	5.108	6.941	5.102	8.909	6.319
n=1000						
Bias	-0.031	-0.029	-0.033	-0.038	-0.027	-0.023
SD	1.499	1.413	1.497	1.421	2.321	1.443
MSE	2.245	1.994	2.241	2.018	5.380	2.080
CI coverage	91.3%	86.8%	91.8%	87.1%	93.6%	91.8%
CI width	4.986	4.373	4.980	4.367	6.387	5.214
n=2000						
Bias	-0.037	-0.039	-0.038	-0.043	-0.054	-0.046
SD	1.109	1.063	1.109	1.070	1.477	1.086
MSE	1.229	1.131	1.231	1.146	2.183	1.179
CI coverage	94.3%	90.6%	94.3%	90.5%	95.6%	94.5%
CI width	3.917	3.618	3.913	3.614	4.802	4.231