

Table 1: Comparative analysis of TMLEs and one-step estimators under model misspecifications when the outcome is in the district of the treatment.

	TMLEs									One-step estimators								
	$\psi_{dnorm}(\hat{Q}^*)$			$\psi_{densratio}(\hat{Q}^*)$			$\psi_{bayes}(\hat{Q}^*)$			$\psi_{dnorm}^+(\hat{Q})$			$\psi_{densratio}^+(\hat{Q})$			$\psi_{bayes}^+(\hat{Q})$		
	Linear	SL	CF	Linear	SL	CF	Linear	SL	CF	Linear	SL	CF	Linear	SL	CF	Linear	SL	CF
<b>n=500</b>																		
Bias	0.623	0.361	0.373	0.498	0.267	0.271	0.588	0.289	0.346	0.648	0.366	0.395	0.319	-0.013	0.016	0.614	0.295	0.352
SD	0.979	0.981	0.995	0.988	0.978	0.989	0.975	0.972	1.027	0.989	0.983	1.028	1.268	1.251	1.240	1.015	0.967	1.111
MSE	1.345	1.091	1.129	1.223	1.028	1.051	1.296	1.027	1.174	1.396	1.099	1.211	1.709	1.564	1.537	1.406	1.022	1.358
CI coverage	87.6%	86.5%	91.9%	93.1%	92.6%	95.7%	88.4%	86.9%	92.9%	88.3%	87.7%	91.6%	91.8%	90.2%	94.6%	89.3%	87.4%	92.1%
CI width	3.584	3.190	3.726	4.682	4.568	4.913	3.589	3.135	3.818	3.711	3.246	3.787	4.753	4.557	4.881	3.760	3.144	3.940
<b>n=1000</b>																		
Bias	0.597	0.302	0.305	0.492	0.216	0.223	0.562	0.195	0.216	0.619	0.305	0.313	0.230	-0.062	-0.063	0.580	0.208	0.228
SD	0.717	0.729	0.745	0.704	0.712	0.704	0.720	0.722	0.762	0.737	0.737	0.760	0.864	0.874	0.836	0.762	0.718	0.877
MSE	0.871	0.622	0.648	0.738	0.553	0.544	0.833	0.559	0.626	0.925	0.636	0.675	0.799	0.768	0.702	0.917	0.559	0.820
CI coverage	82.5%	86.6%	90.3%	93.5%	95.2%	96.4%	83.9%	87%	91%	83.9%	86.9%	90.3%	93.8%	94.4%	95.7%	85.2%	87.7%	90.7%
CI width	2.572	2.339	2.598	3.264	3.183	3.325	2.578	2.295	2.651	2.659	2.387	2.646	3.304	3.184	3.319	2.682	2.300	2.746
<b>n=2000</b>																		
Bias	0.628	0.310	0.311	0.528	0.225	0.226	0.592	0.179	0.197	0.644	0.310	0.312	0.302	-0.008	0.005	0.603	0.197	0.200
SD	0.508	0.521	0.525	0.490	0.495	0.494	0.511	0.503	0.532	0.516	0.528	0.541	0.564	0.536	0.535	0.530	0.502	0.544
MSE	0.651	0.367	0.372	0.519	0.296	0.295	0.611	0.285	0.321	0.680	0.374	0.389	0.409	0.287	0.285	0.644	0.291	0.335
CI coverage	73%	84.5%	87%	86%	93.3%	94.5%	76.1%	87.7%	90.6%	73%	85%	87.5%	90.9%	94%	95%	76.6%	88.5%	90.7%
CI width	1.836	1.686	1.830	2.150	2.067	2.154	1.844	1.651	1.881	1.886	1.717	1.872	2.174	2.071	2.156	1.908	1.661	1.925