The correct model specification is

$$m_0 = \beta_{01} u$$
$$m_1 = \beta_{11} + \beta_{12} u.$$

The true values of the MTR coefficients are $\beta_{01} = 6$, $\beta_{11} = 7$, and $\beta_{12} = 8$. The instrument Z is equal to either 1 or 2, and the true propensity scores are

$$\mathbb{P}[D = 1 \mid Z = 1] = \phi_1 = 0.4$$
$$\mathbb{P}[D = 1 \mid Z = 2] = \phi_2 = 0.6.$$

The true ATU is 8.48.

The model is specified correctly for the estimator. A nonparametric probability model is estimated.

To estimate the coverage probabilities for the confidence intervals constructed in each simulation, I count the number of Monte Carlo simulations for which the coefficient of interest falls within the confidence interval, and then divide by the total number of Monte Carlo simulations (1000 for each sample size).

	$N = 50$	$N = 100$	$N = 500$	$N = 1000$	$N = 2000$
ATU: avg. estimate	11.02	3.13	8.96	8.82	8.64
ATU: avg. bootstrap s.e. estimate	76.50	116.55	23.94	2.00	1.18
ATU: Monte Carlo s.d.	77.91	210.54	2.58	1.65	1.11
Propensity: avg. coef. estimate, ϕ_1	0.40	0.40	0.40	0.40	0.40
Propensity: avg. coef. estimate, ϕ_2	0.60	0.60	0.60	0.60	0.60
Propensity: avg. bootstrap s.e., ϕ_1	0.10	0.07	0.03	0.02	0.02
Propensity: avg. bootstrap s.e., ϕ_2	0.10	0.07	0.03	0.02	0.02
Propensity: Monte Carlo s.d., ϕ_1	0.10	0.07	0.03	0.02	0.02
Propensity: Monte Carlo s.d., ϕ_2	0.10	0.07	0.03	0.02	0.02
MTR: avg. coef. estimate, β_{01}	6.06	6.05	6.01	6.01	6.00
MTR: avg. coef. estimate, β_{11}	5.62	10.09	6.76	6.83	6.92
MTR: avg. coef. estimate, β_{12}	12.97	-2.75	8.95	8.69	8.32
MTR: avg. bootstrap s.e., β_{01}	0.35	0.24	0.10	0.07	0.05
MTR: avg. bootstrap s.e., β_{11}	35.85	56.42	11.91	1.00	0.60
MTR: avg. bootstrap s.e., β_{12}	153.03	233.11	47.88	4.01	2.37
MTR: Monte Carlo s.d., β_{01}	0.33	0.23	0.10	0.09	0.05
MTR: popupation s.d., β_{11}	38.02	110.94	1.28	0.85	0.55
MTR: Monte Carlo s.d., β_{12}	155.83	421.08	5.15	3.33	2.22
ATU: 90% CI1 (quantile method) cov. prob.	0.83	0.83	0.76	0.77	0.76
ATU: 95% CI1 (quantile method) cov. prob.	0.88	0.88	0.84	0.84	0.84

ATU: 90% CI2 (percentile method) cov. prob.	0.91	0.91	0.85	0.84	0.80
ATU: 95% CI2 (percentilemethod) cov. prob.	0.92	0.92	0.87	0.88	0.87
Propensity: 90% CI1 cov. prob., ϕ_1	0.74	0.75	0.74	0.76	0.75
Propensity: 90% CI1 cov. prob., ϕ_2	0.76	0.73	0.77	0.76	0.75
Propensity: 95% CI1 cov. prob., ϕ_1	0.83	0.83	0.82	0.84	0.83
Propensity: 95% CI1 cov. prob., ϕ_2	0.84	0.81	0.84	0.84	0.83
Propensity: 90% CI2 cov. prob., ϕ_1	0.74	0.75	0.74	0.76	0.75
Propensity: 90% CI2 cov. prob., ϕ_2	0.76	0.73	0.77	0.76	0.75
Propensity: 95% CI2 cov. prob., ϕ_1	0.83	0.83	0.82	0.84	0.83
Propensity: 95% CI2 cov. prob., ϕ_2	0.84	0.81	0.84	0.84	0.83
MTR: 90% CI1 cov. prob., β_{01}	0.77	0.76	0.74	0.76	0.75
MTR: 90% CI1 cov. prob., β_{11}	0.83	0.83	0.75	0.76	0.76
MTR: 90% CI1 cov. prob., β_{12}	0.83	0.83	0.76	0.76	0.76
MTR: 95% CI1 cov. prob., β_{01}	0.85	0.84	0.82	0.84	0.83
MTR: 95% CI1 cov. prob., β_{11}	0.88	0.89	0.84	0.84	0.84
MTR: 95% CI1 cov. prob., β_{12}	0.88	0.89	0.84	0.84	0.84
MTR: 90% CI2 cov. prob., β_{01}	0.77	0.76	0.74	0.76	0.75
MTR: 90% CI2 cov. prob., β_{11}	0.83	0.83	0.75	0.76	0.76
MTR: 90% CI2 cov. prob., β_{12}	0.83	0.83	0.76	0.76	0.76
MTR: 95% CI2 cov. prob., β_{01}	0.85	0.84	0.82	0.84	0.83
MTR: 95% CI2 cov. prob., β_{11}	0.88	0.89	0.84	0.84	0.84
MTR: 95% CI2 cov. prob., β_{12}	0.88	0.89	0.84	0.84	0.84