

APPENDIX D: PROGRAMMING CODE

In this appendix, we include the details to reproduce all results within the paper. Please download the codebase from https://github.com/zengshx777/OWRCT_codes_package with

R Scripts

Main_RCT_Continuous.R	Run simulations with continuous outcome.
Main_RCT_Binary.R	Run simulations with binary outcome.
real_data_application.R	Analyze BestAir study data produce Table 3 in the main text.
Crude.R	Function implements $\hat{\tau}^{\text{UNADJ}}$.
IPWC.R	Function implements $\hat{\tau}^{\text{IPW}}$.
LinearR.R	Function implements $\hat{\tau}^{\text{LR}}$.
PS_AIPW.R	Function implements $\hat{\tau}^{\text{AIPW}}$.
OW.R	Function implements $\hat{\tau}^{\text{OW}}$.
plot_cont.R	Visualize continuous simulation results, produce Figure 1 in main text.
plot_bin.R	Visualize binary simulation results, produce Figure 2,3 in main text.
table_produce.R	Summarize all results, produce Table 1 in the main text, Table 1,2,3 in Web Appendix E.
example.R	Simple demo for running simulations.
all_jobs.sh	Bash script to run all simulations.

To replicate the simulation results in the paper, the simplest way is to run `all_jobs.sh` after setting the code package as the working directory. The results will be automatically saved in folders ‘cont’ and ‘bin’. For real data application, running `real_data_application.R` will reproduce the results.