

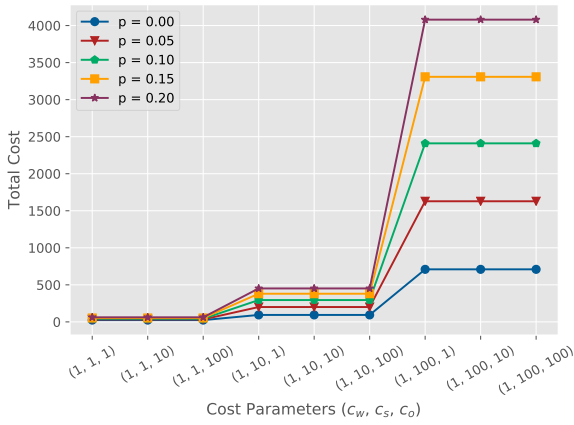
## Appendix

We present performance of the schedule of the 7 patient problem presented in Figure 3 when optimal continuous appointment times rounded to the closest time that is multiple of 15 minutes ( $a_1 = 0, a_2 = 15, a_3 = 60, a_4 = 120, \text{lunch}=180, a_5 = 210, a_6 = 270, \text{and } a_7 = 300$ ). Based on these fixed appointment times, Table A.1 has average waiting time, idle time and overtime metrics across all scenarios compared to the results when optimal (continuous) appointment times were used. Results show that the affects are minimal.

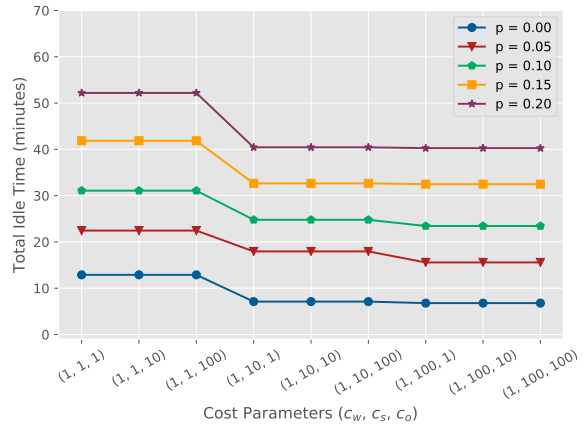
Table A.1: Comparison of outcomes considering optimal continuous appointment times vs rounded appointment times ( $\alpha = 0.05, \delta = 60, c_w = 1, c_s = 10, c_O = 10, p = 0.12, 1000$  scenarios tested). Each set of scenarios considers the specified number of patients and one “lunch patient”.

Appointment Times	Avg. Total Wait (min.)	Avg. Wait per Patient (min.)	Avg. Idle Time (min.)	Avg. Overtime (min.)
Optimal (continuous)	230.0	32.99	131.78	8.04
Rounded	238.7	34.1	14.22	8.04

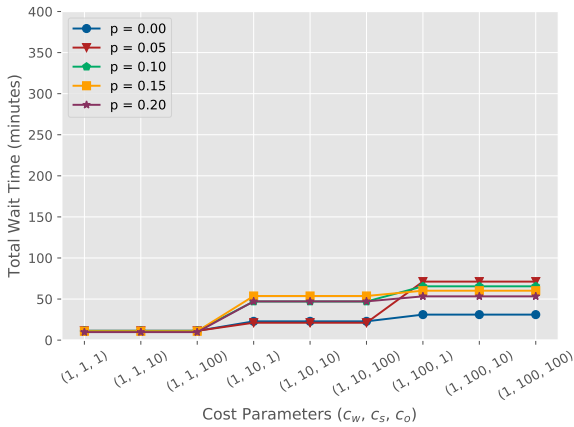
For completeness, we present the sensitivity analysis results for scheduling 5 and 6 patients in Figures A.1 and A.2.



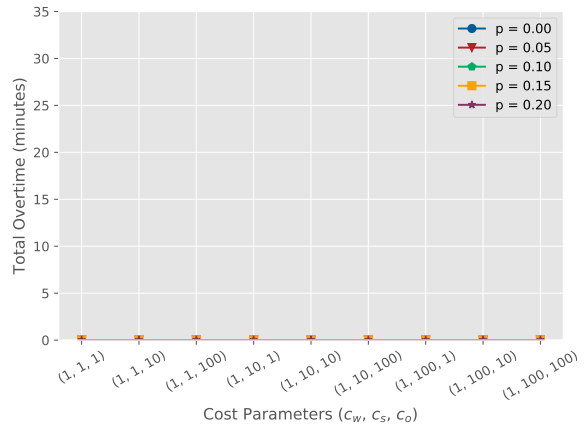
(a) Total Cost



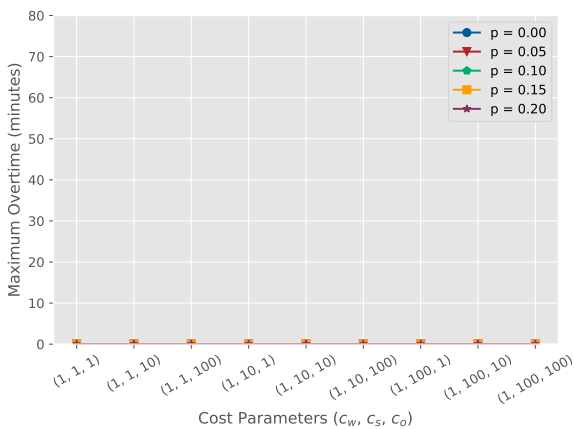
(b) Total Idle Time



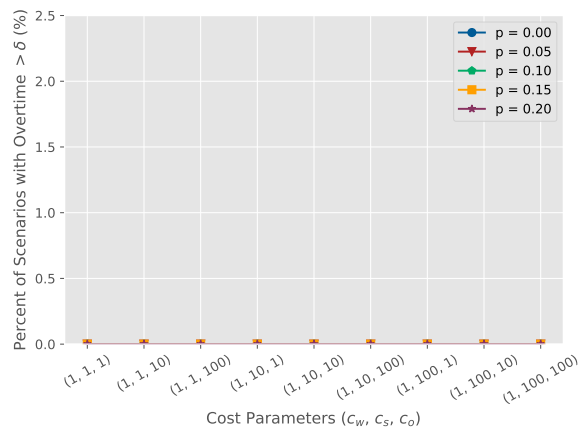
(c) Total Waiting Time



(d) Total Overtime

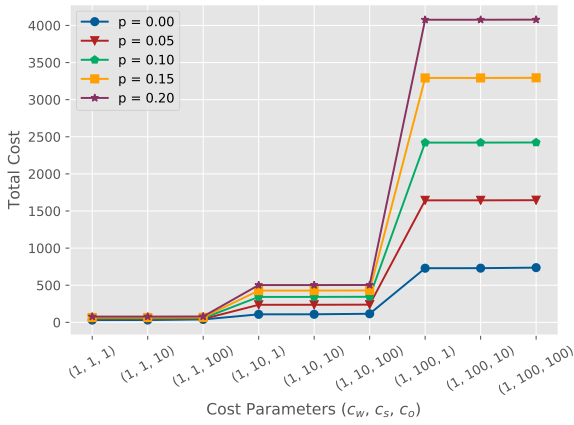


(e) Maximum Overtime

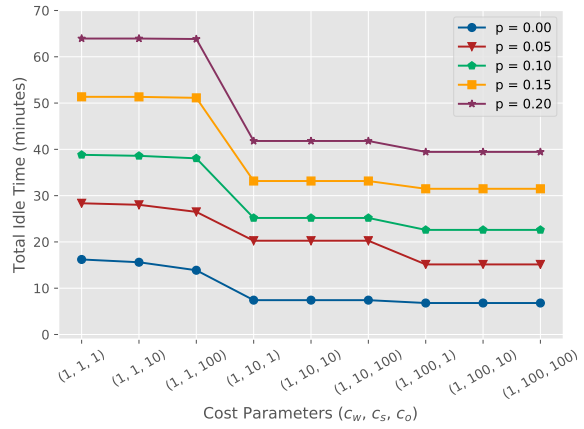


(f) Percentage of Scenarios with Excessive Overtime

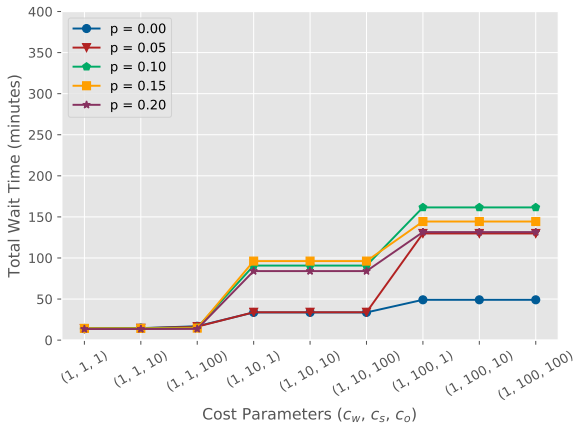
Figure A.1: Outcomes for varying no-show rates and costs functions when scheduling 5 patients. The subfigures display Total Cost (a), Total Idle Time (b), Total Waiting Time (c), Total Overtime (d), Maximum Overtime (e), and Percentage of Scenarios with Excessive Overtime (f).



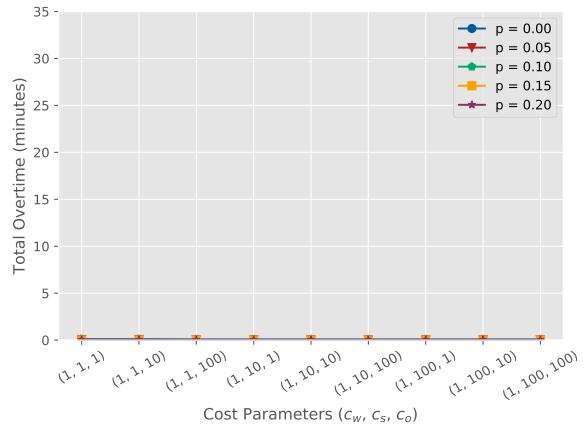
(a) Total Cost



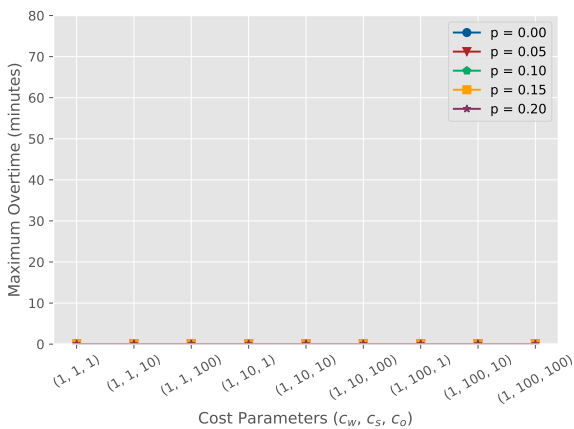
(b) Total Idle Time



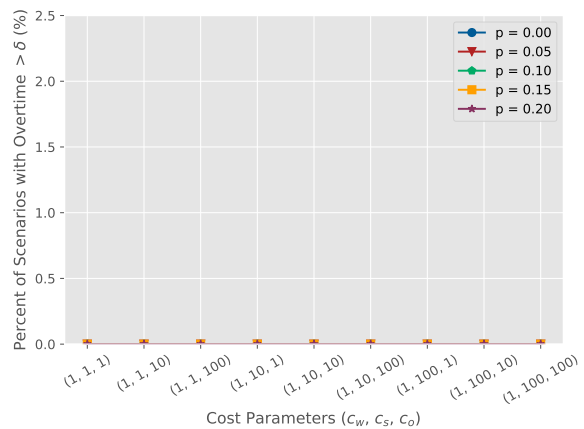
(c) Total Waiting Time



(d) Total Overtime



(e) Maximum Overtime



(f) Percentage of Scenarios with Excessive Overtime

Figure A.2: Outcomes for varying no-show rates and costs functions when scheduling 6 patients. The subfigures display Total Cost (a), Total Idle Time (b), Total Waiting Time (c), Total Overtime (d), Maximum Overtime (e), and Percentage of Scenarios with Excessive Overtime (f).