

USA Math Outcomes Analysis 2018
Grades Using the ST Math Program in 2017/18

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2019-09-09

RTex Version 1.0 (S.A.M.01.12.15)

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ST Math Grade Aggregated Implementation ($\geq 85\%$ Enrollment Grades only):

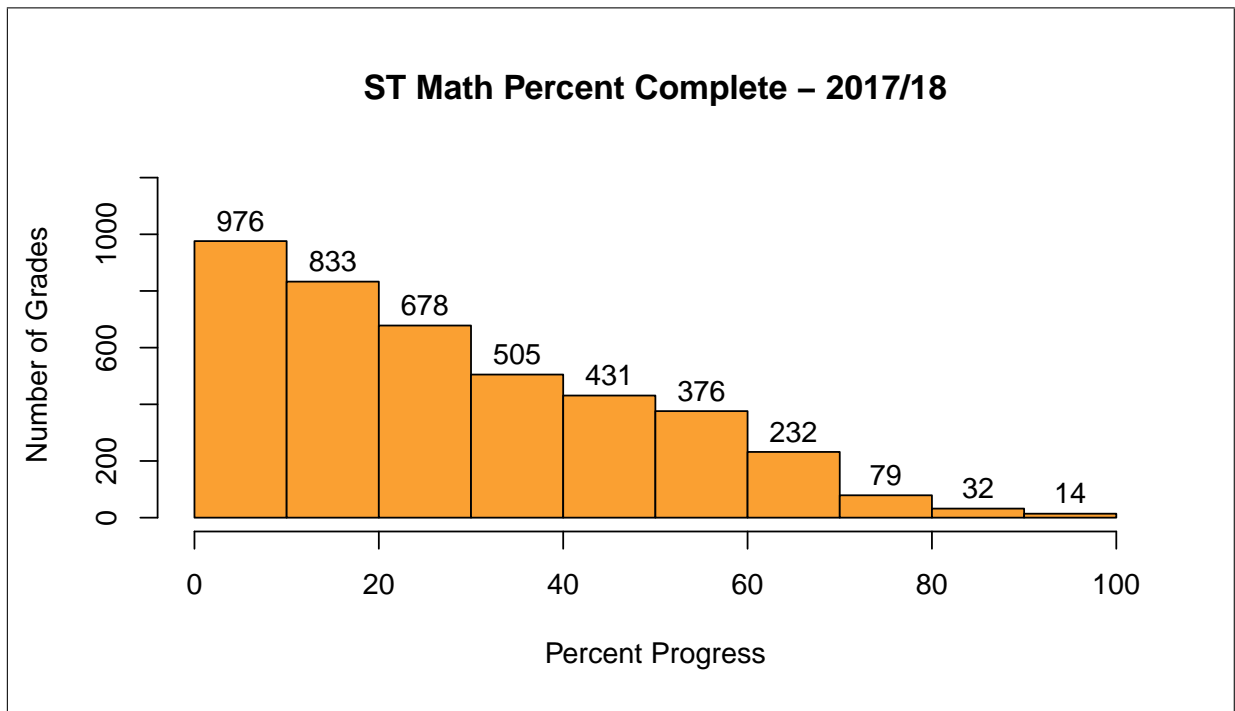


Figure 1: HAA% - Histogram All-grades Absolute %-progress (2017/18)

Quintiles:

Number of TRT grades (Equal to Number of CTL grades)	
Progress <20%	1044
Progress >=20% & <40%	1012
Progress >=40% & >60%	731
Progress >=60% & <80%	282
Progress >= 80%	33

Table 1: Number of TRT grades by Quintiles

	Progress <20%	Progress >=20% & <40%	Progress >=40% & >60%	Progress >=60% & <80%	Progress >= 80%
TRT.Baseline	-0.31	-0.19	-0.01	0.19	0.72
TRT.Current	-0.31	-0.12	0.19	0.52	1.26
CTL.Baseline	-0.13	-0.14	-0.18	-0.10	0.20
CTL.Current	-0.13	-0.12	-0.09	-0.14	0.16

Table 2: Mean Math z-score - TRT vs CTRL - Baseline vs Current - by Quintiles

	Progress <20%	Progress >=20% & <40%	Progress >=40% & >60%	Progress >=60% & <80%	Progress >= 80%
TRT % Growth	50.00	57.00	61.00	67.00	79.00
CTL % Growth	49.00	51.00	55.00	48.00	45.00

Table 3: Percentage of Positive Math Z-score Growth - TRT vs CTRL by Quintiles

	Z-score	Effect Size
Progress <20%		0.01
Progress ≥20% & <40%		0.06
Progress ≥40% & >60%		0.12
Progress ≥60% & <80%		0.41
Progress ≥ 80%		0.69

Table 4: Effect Size by Quintiles

Quintile 1: Progress < 20%:

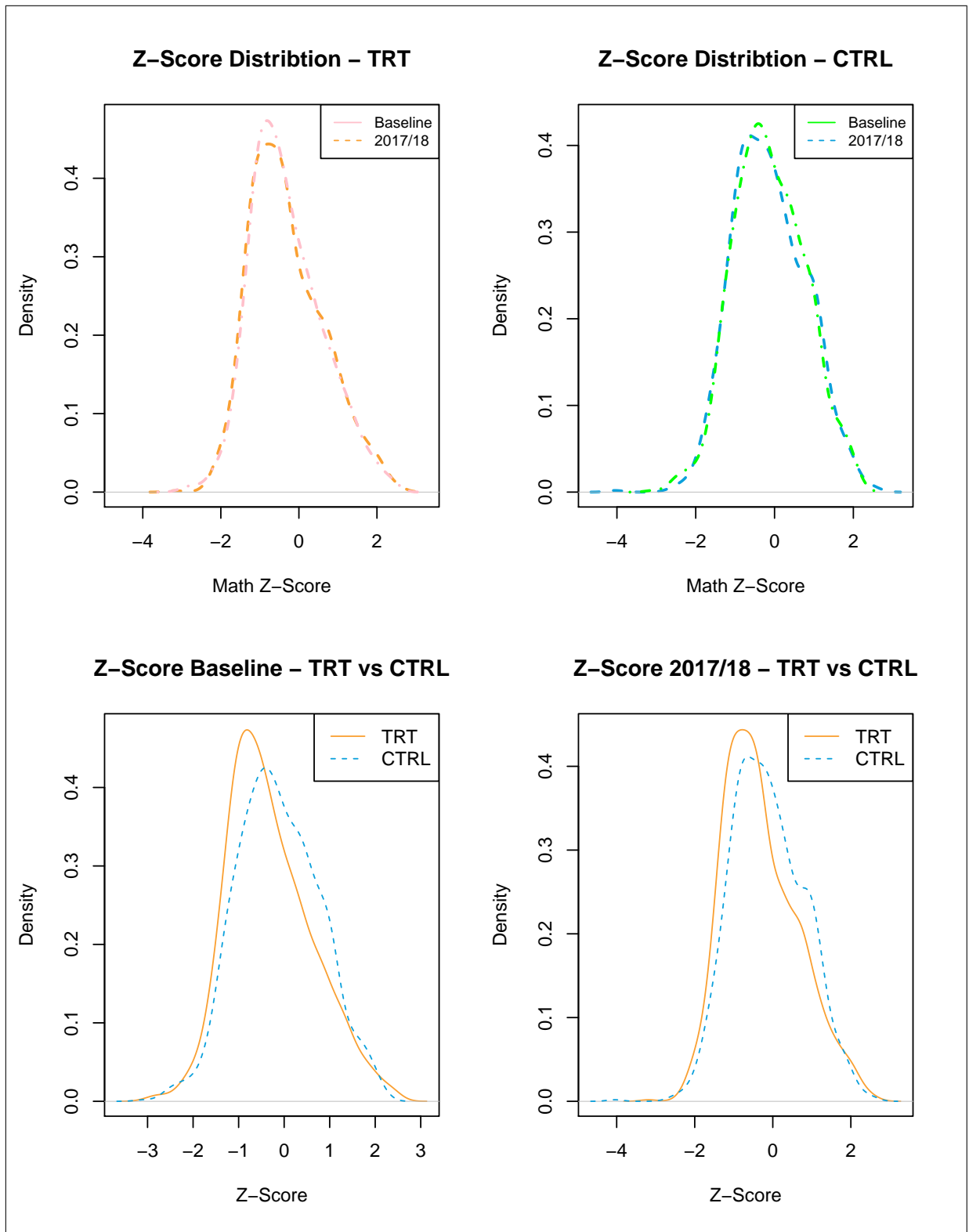


Figure 2: DAAPCTQ1: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

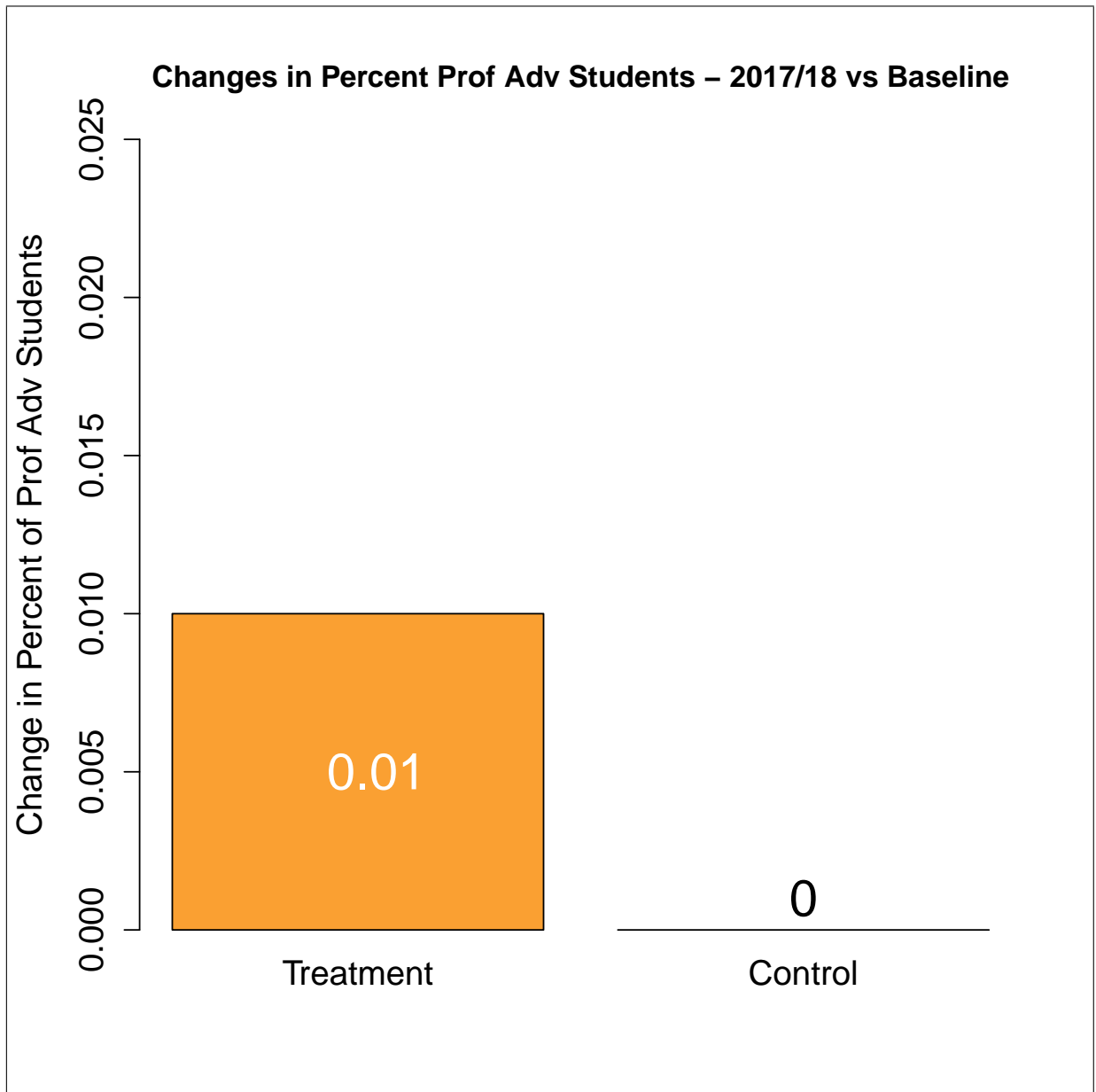


Figure 3: BADPQ1: Bar-chart All-grades Delta ProfAdv

Quintile 2: Progress $\geq 20\%$ & $< 40\%$:

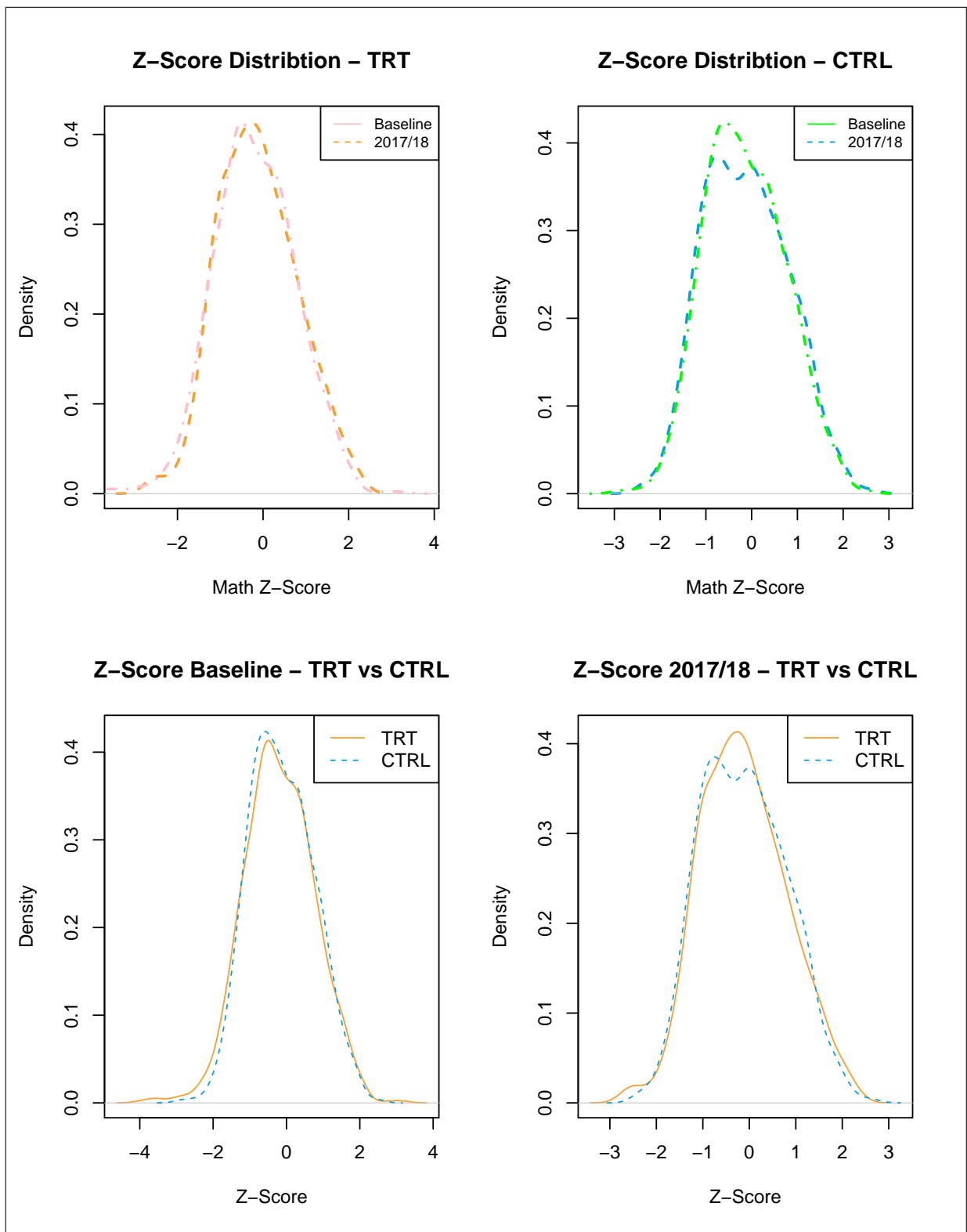


Figure 4: DAAPCTQ2: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

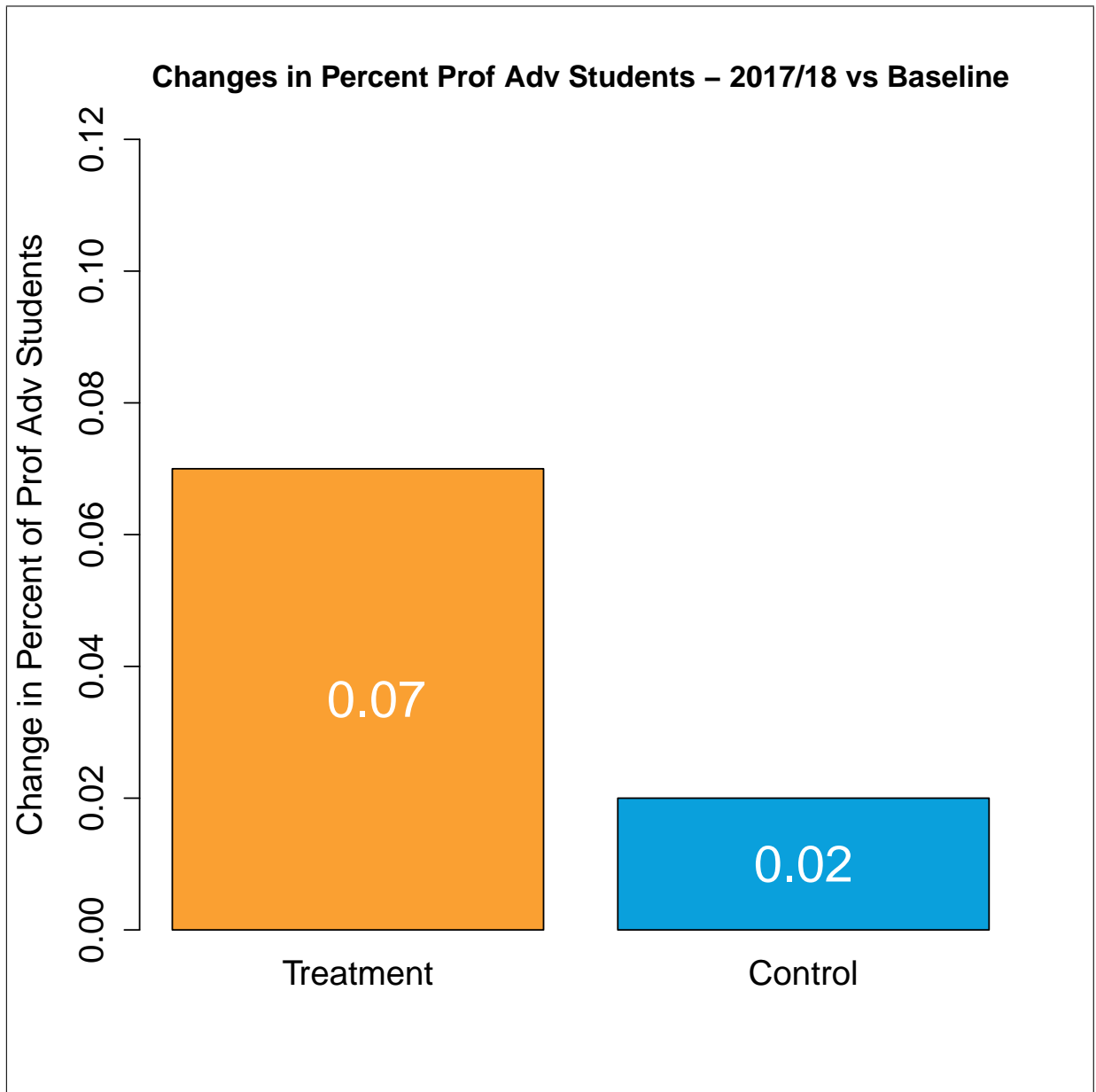


Figure 5: BADPQ2: Bar-chart All-grades Delta ProfAdv

Quintile 3: Progress $\geq 40\%$ & $< 60\%$:

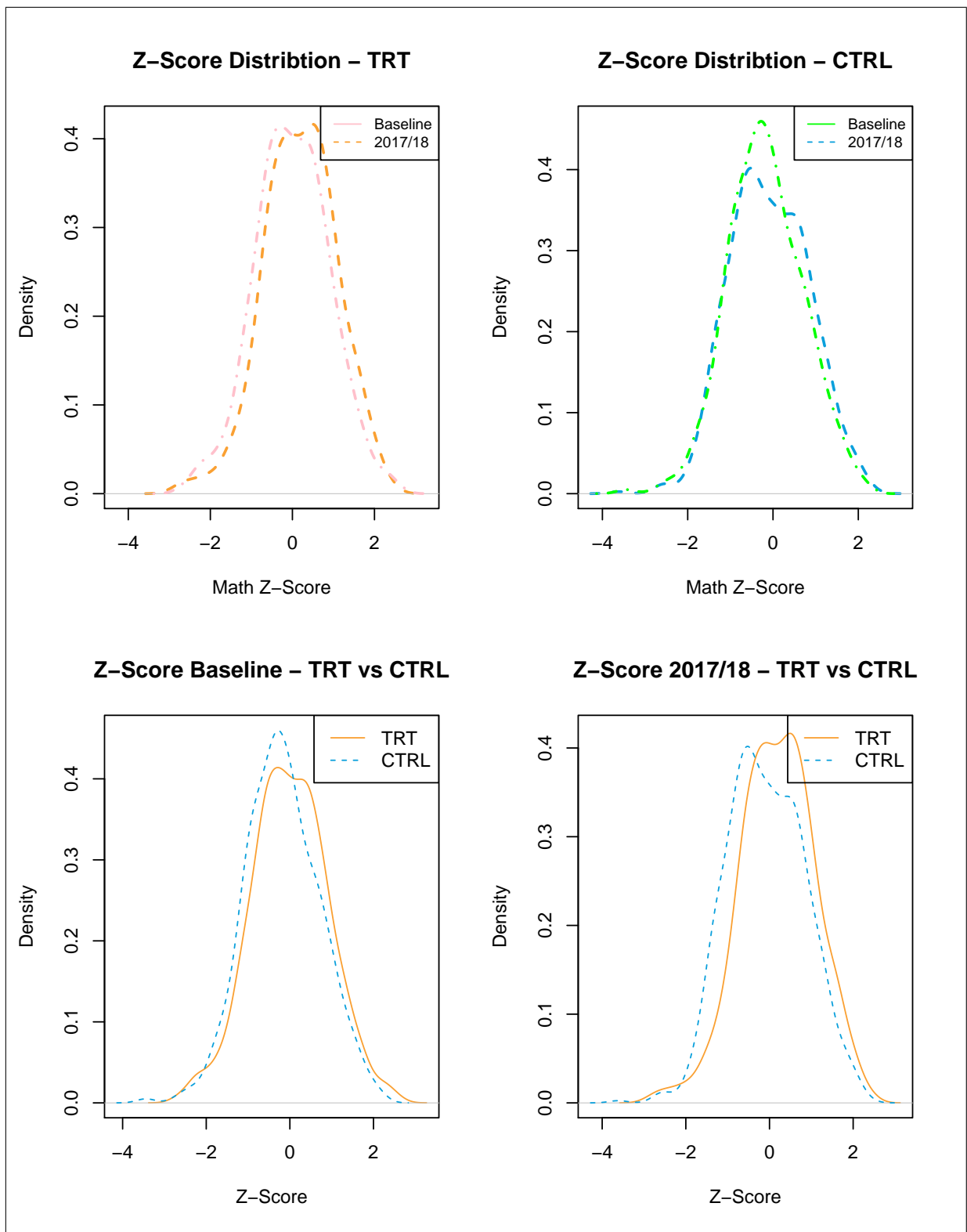


Figure 6: DAAPCTQ3: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

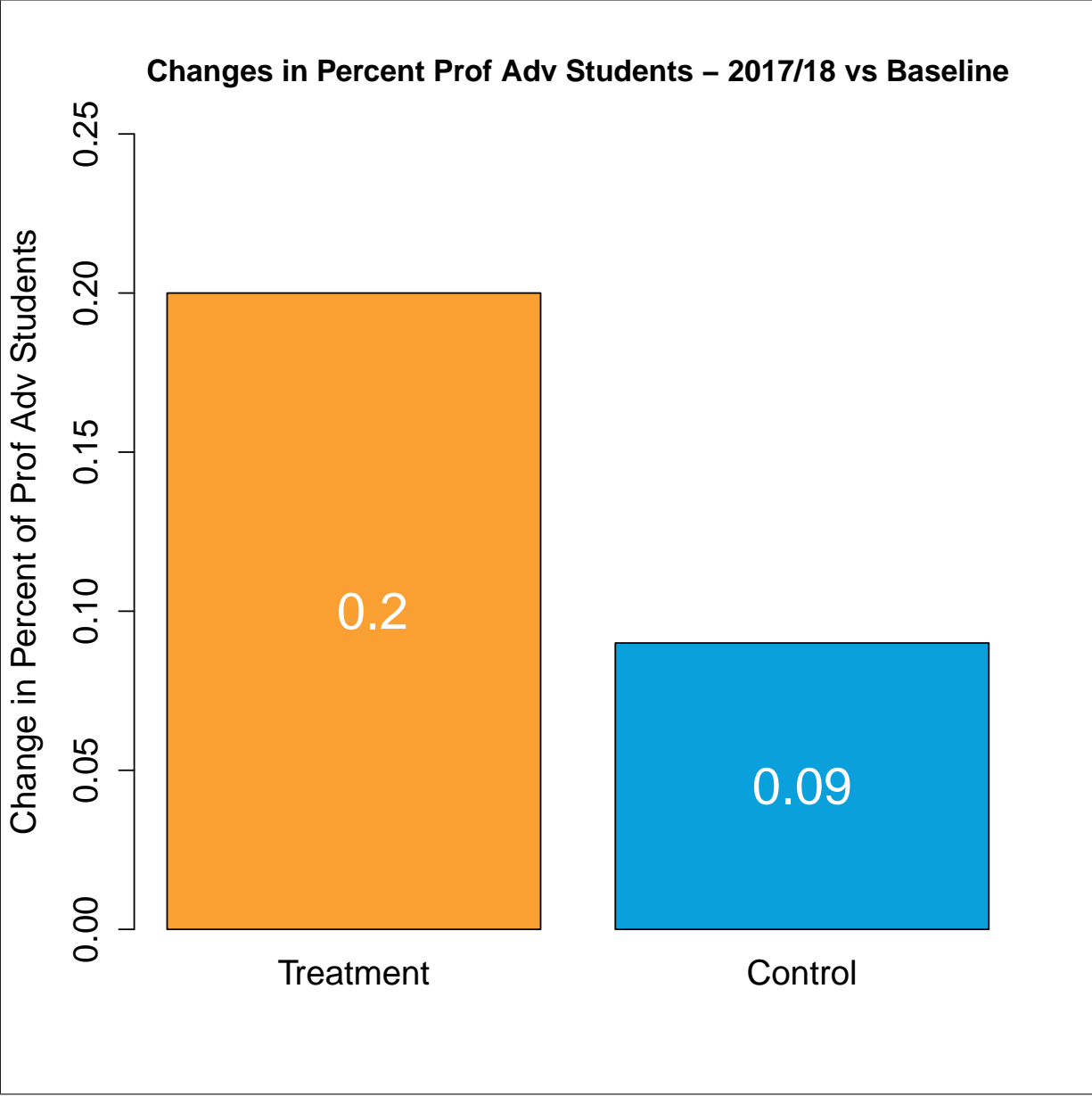


Figure 7: BADPQ3: Bar-chart All-grades Delta ProfAdv

Quintile 4: Progress $\geq 60\%$ & $< 80\%$:

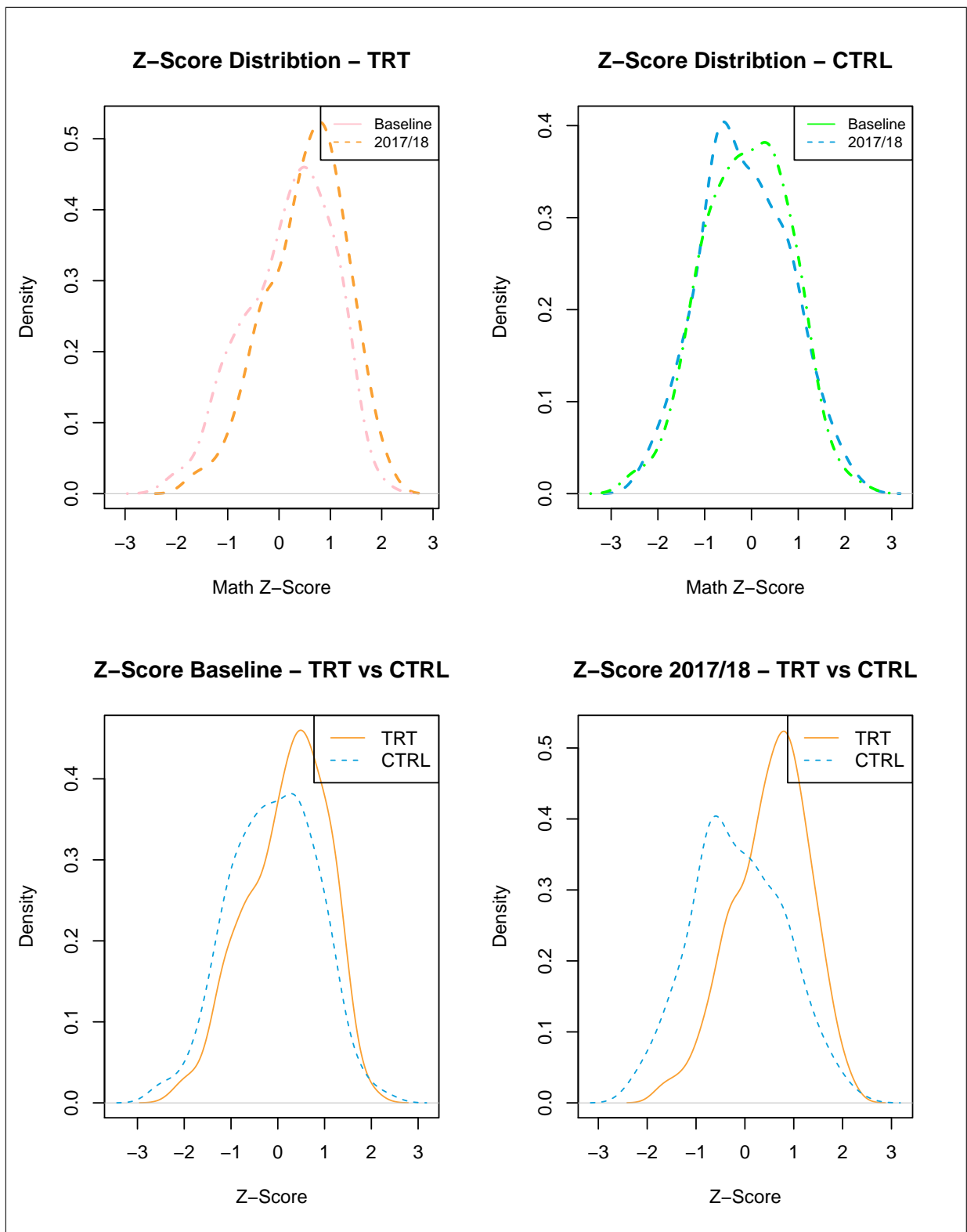


Figure 8: DAAPCTQ4: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

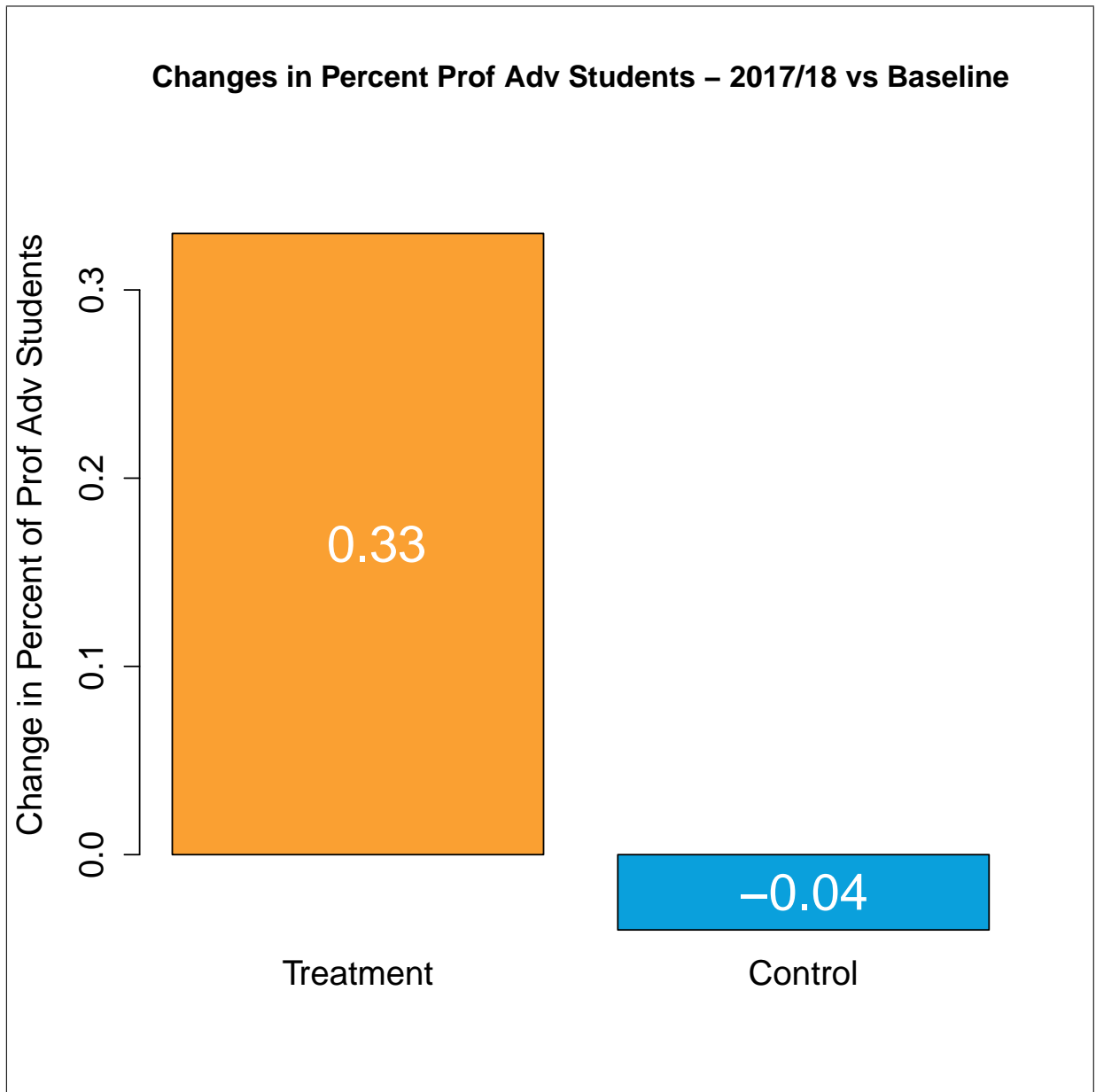


Figure 9: BADPQ4: Bar-chart All-grades Delta ProfAdv

Quintile 5: Progress $\geq 80\%$:

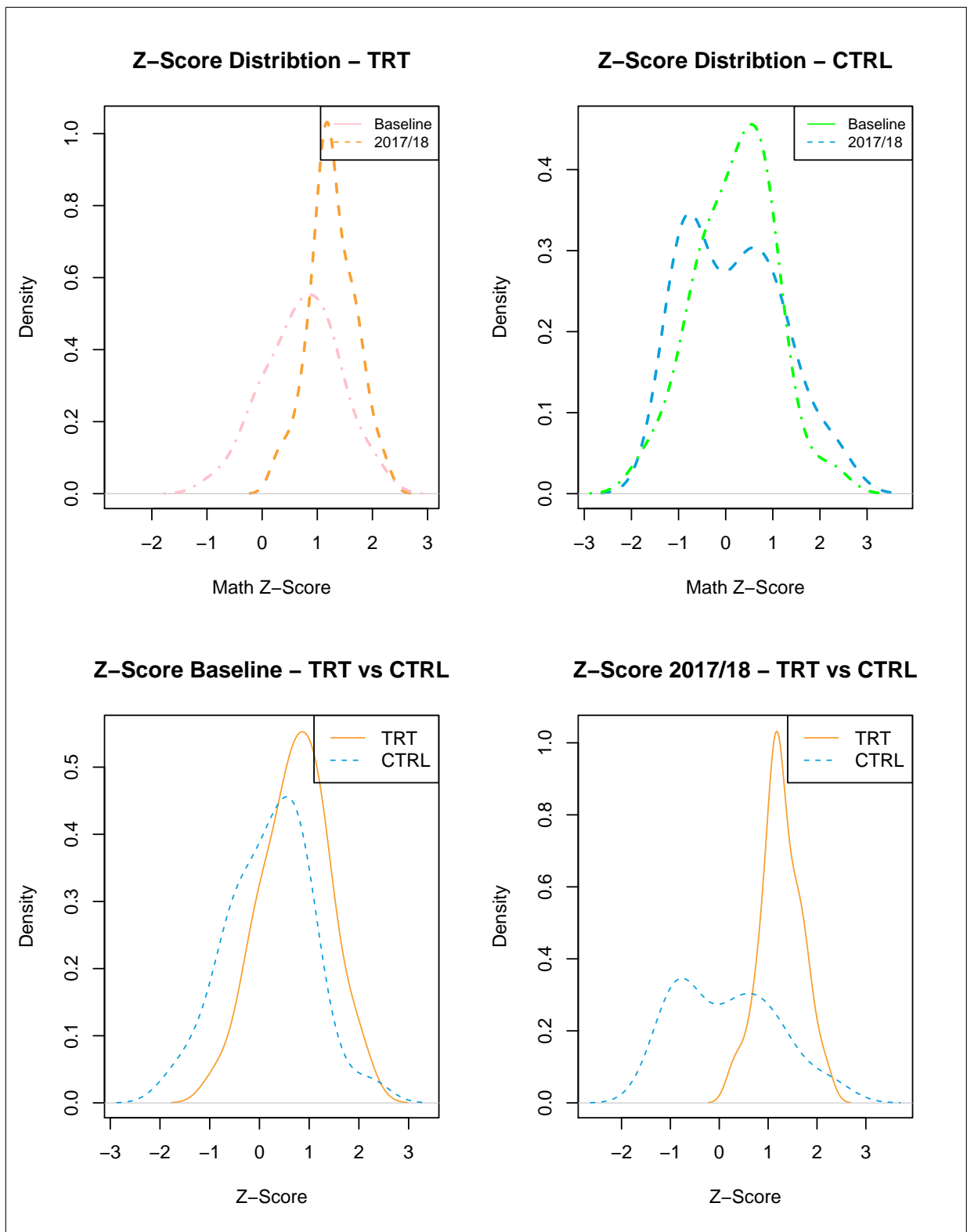


Figure 10: DAAPCTQ5: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

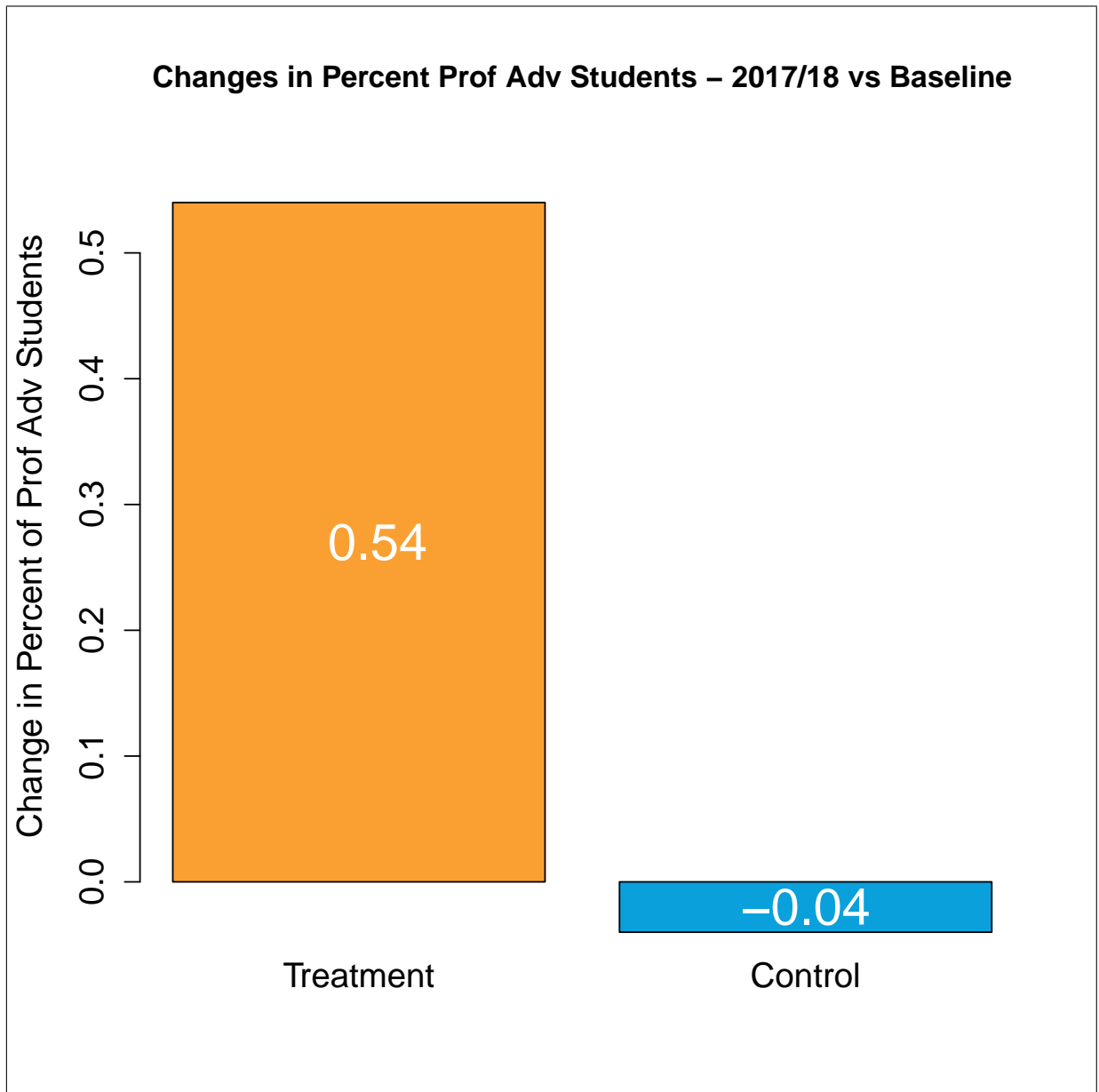


Figure 11: BADPQ5: Bar-chart All-grades Delta ProfAdv

Quartiles:

Number of TRT grades (Equal to Number of CTL grades)	
Progress <25%	1344
Progress >=25% & <50%	1102
Progress >=50% & >75%	595
Progress >= 75%	61

Table 5: Number of TRT grades by Quartiles

	Progress <25%	Progress >=25% & <50%	Progress >=50% & >75%	Progress >= 75%
TRT.Baseline	-0.29	-0.12	0.06	0.64
TRT.Current	-0.28	-0.00	0.35	1.05
CTL.Baseline	-0.13	-0.15	-0.16	0.03
CTL.Current	-0.13	-0.10	-0.12	-0.05

Table 6: Mean Math z-score - TRT vs CTRL - Baseline vs Current - by Quartiles

	Progress <25%	Progress >=25% & <50%	Progress >=50% & >75%	Progress >= 75%
TRT % Growth	51.00	58.00	66.00	74.00
CTL % Growth	49.00	52.00	53.00	48.00

Table 7: Percentage of Positive Math Z-score Growth - TRT vs CTRL by Quartiles

	Z-score	Effect Size
Progress <25%		0.01
Progress ≥25% & <50%		0.08
Progress ≥50% & >75%		0.26
Progress ≥ 75%		0.63

Table 8: Effect Size by Quartiles

Quartile 1: Progress < 25%:

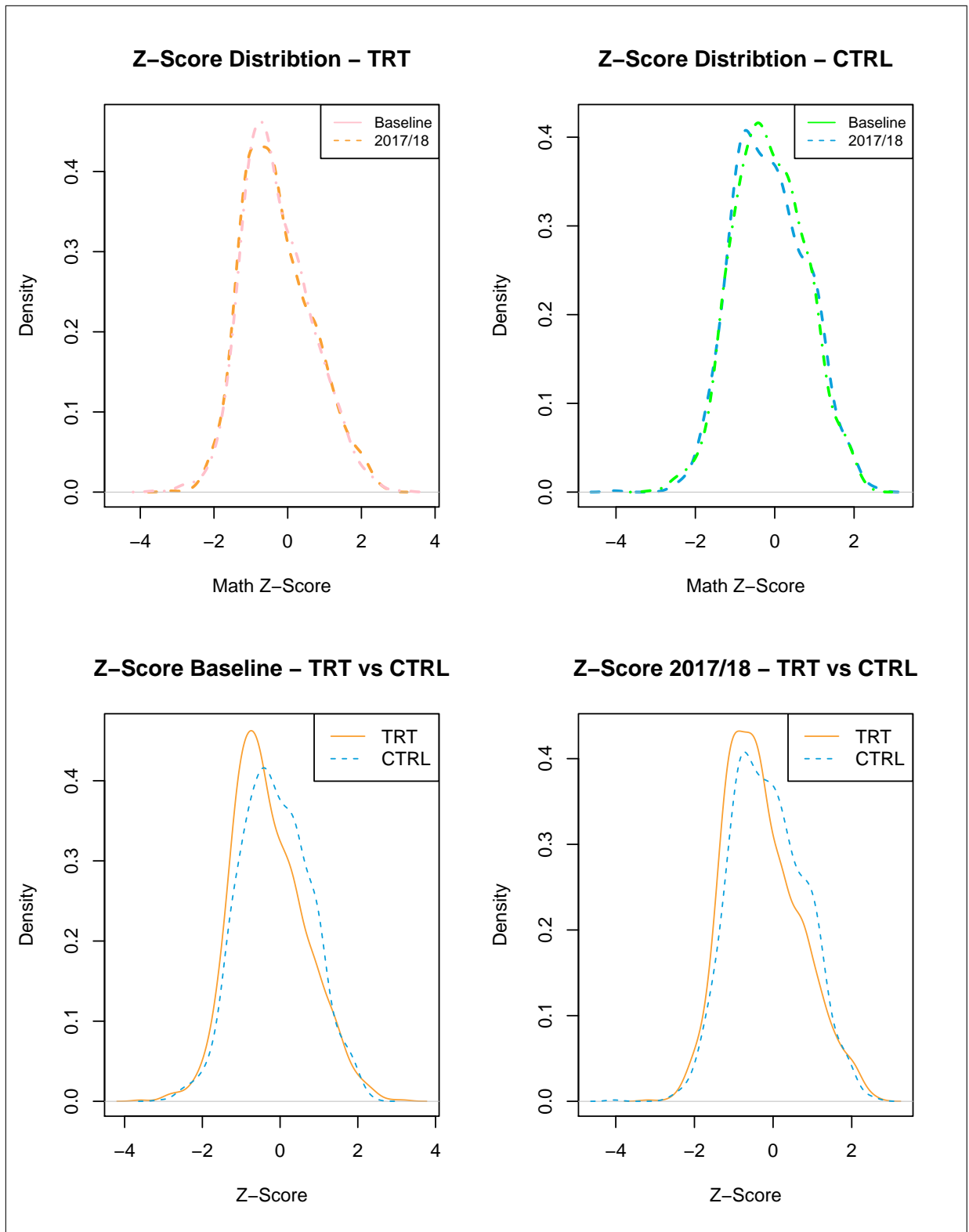


Figure 12: DAAPCTQ6: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

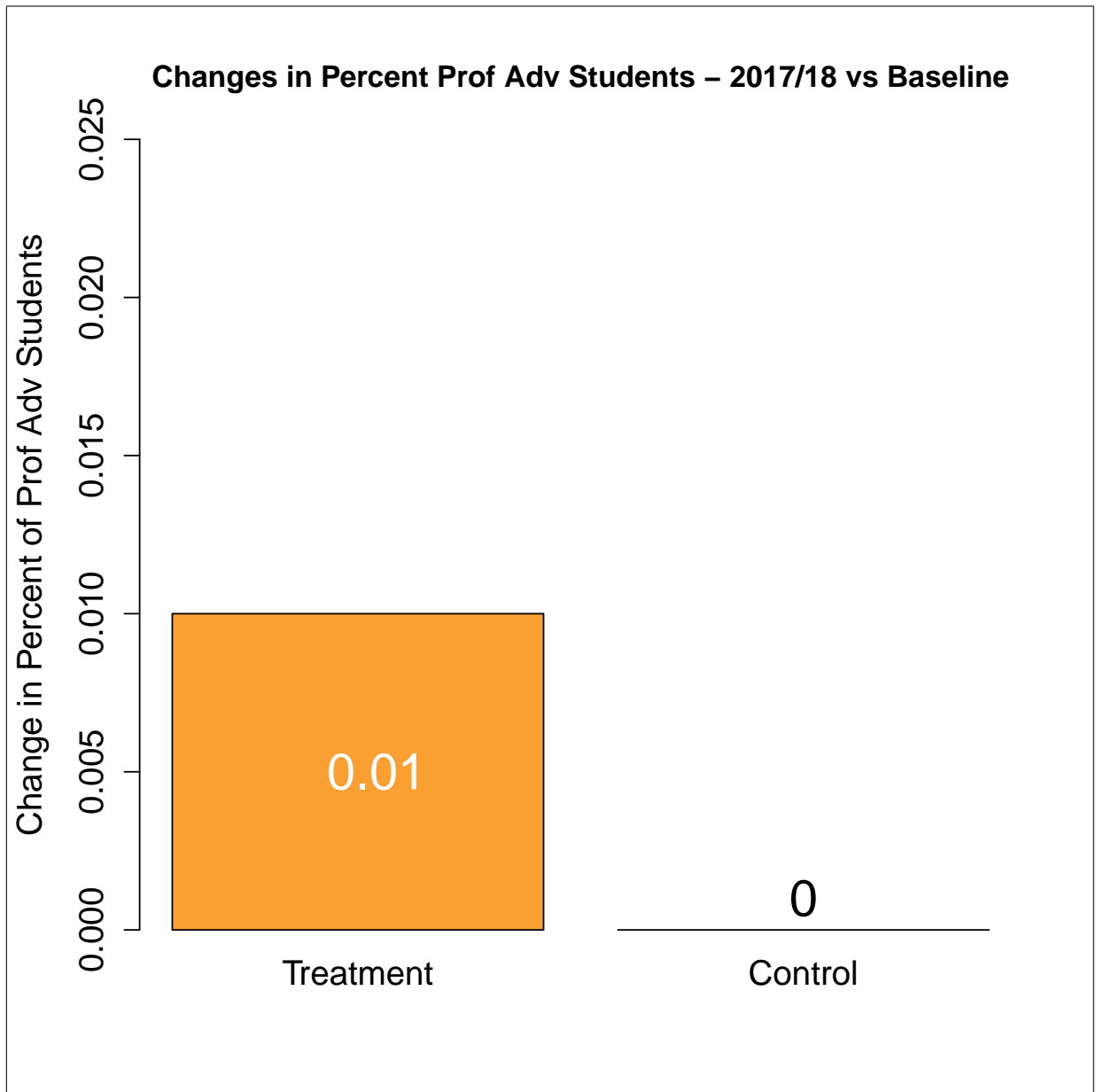


Figure 13: BADPQ6: Bar-chart All-grades Delta ProfAdv

Quartile 2: Progress $\geq 25\%$ & $< 50\%$:

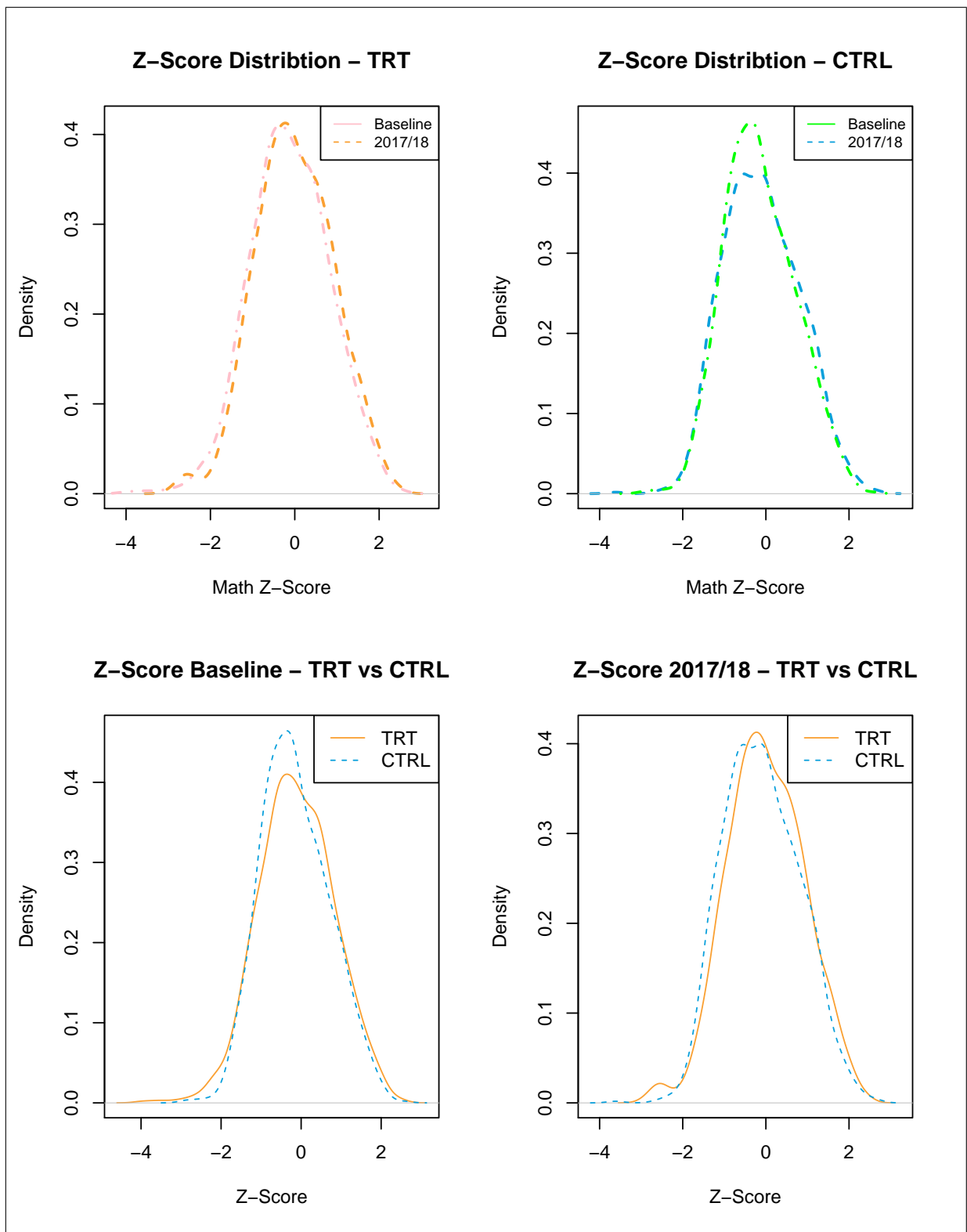


Figure 14: DAAPCTQ7: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

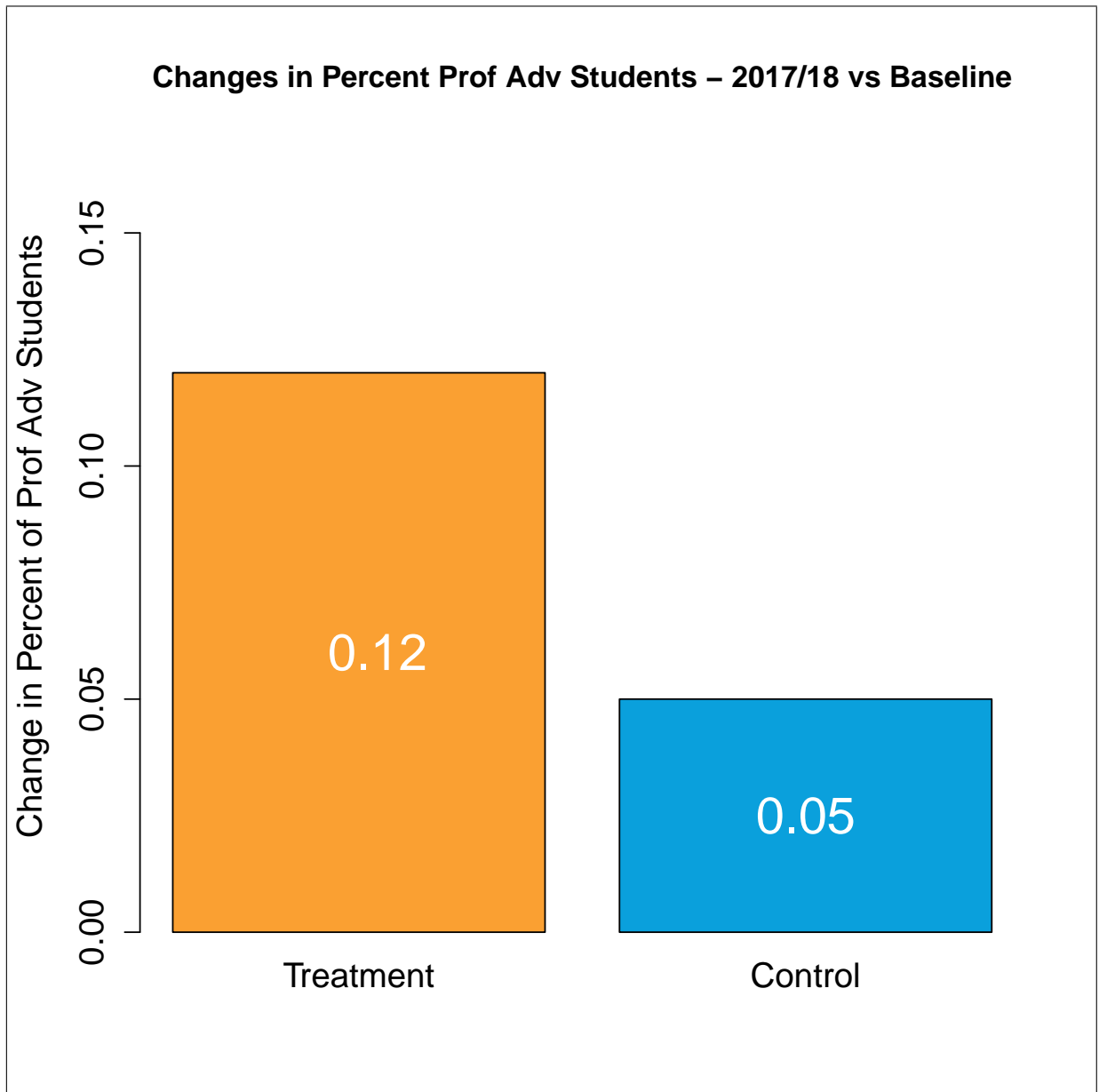


Figure 15: BADPQ7: Bar-chart All-grades Delta ProfAdv

Quartile 3: Progress $\geq 50\%$ & $< 75\%$:

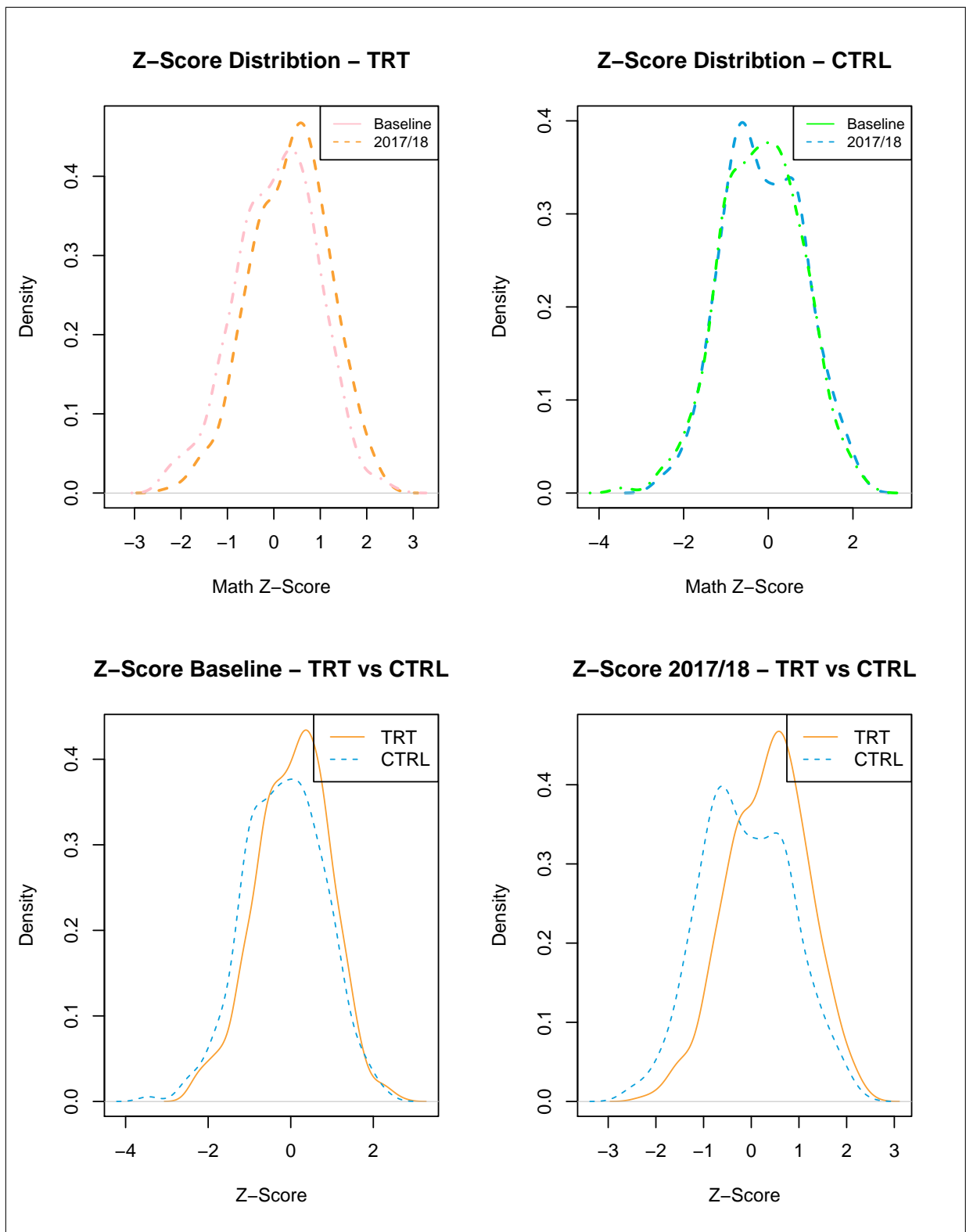


Figure 16: DAAPCTQ8: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

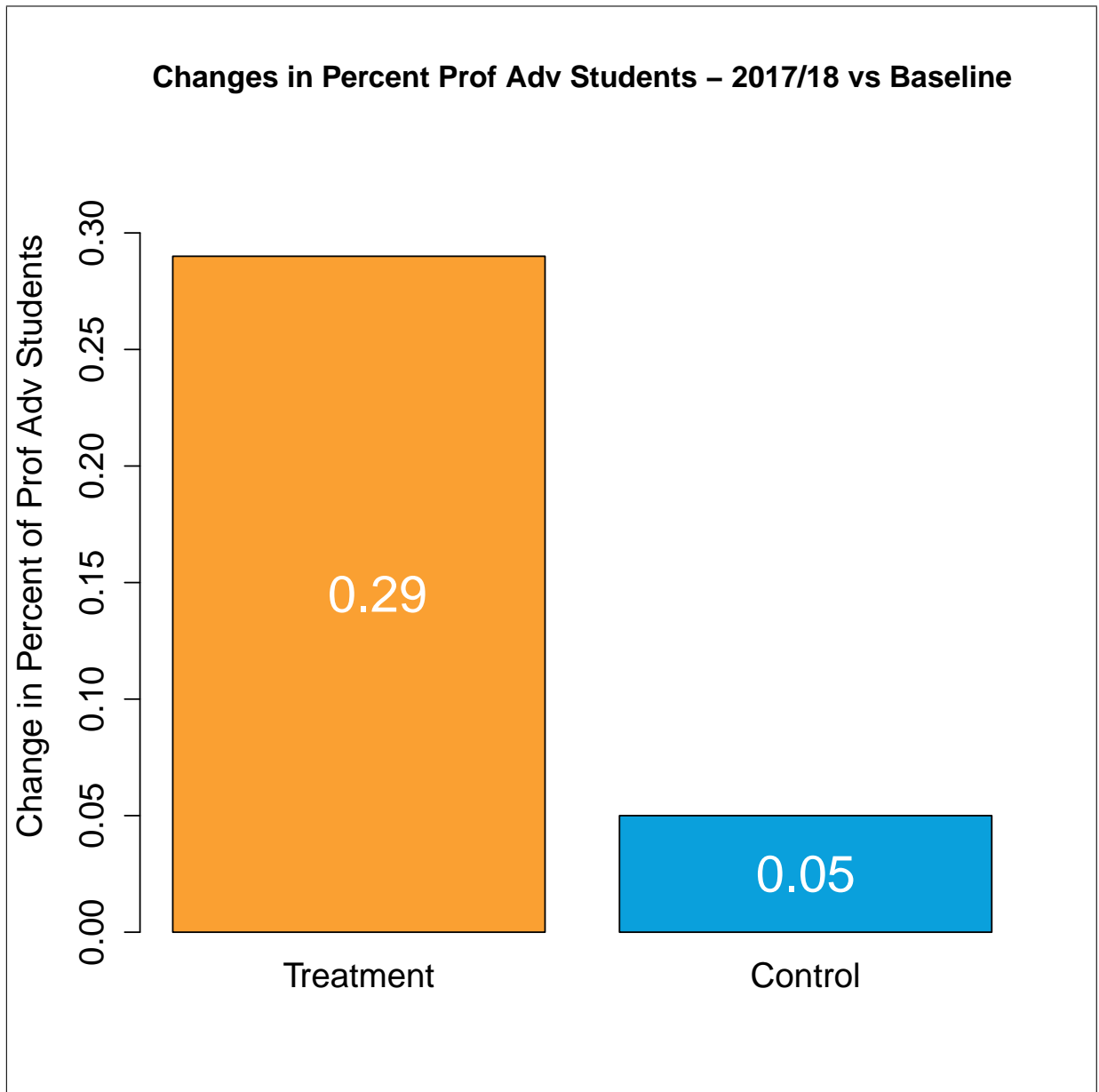


Figure 17: BADPQ8: Bar-chart All-grades Delta ProfAdv

Quartile 4: Progress $\geq 75\%$:

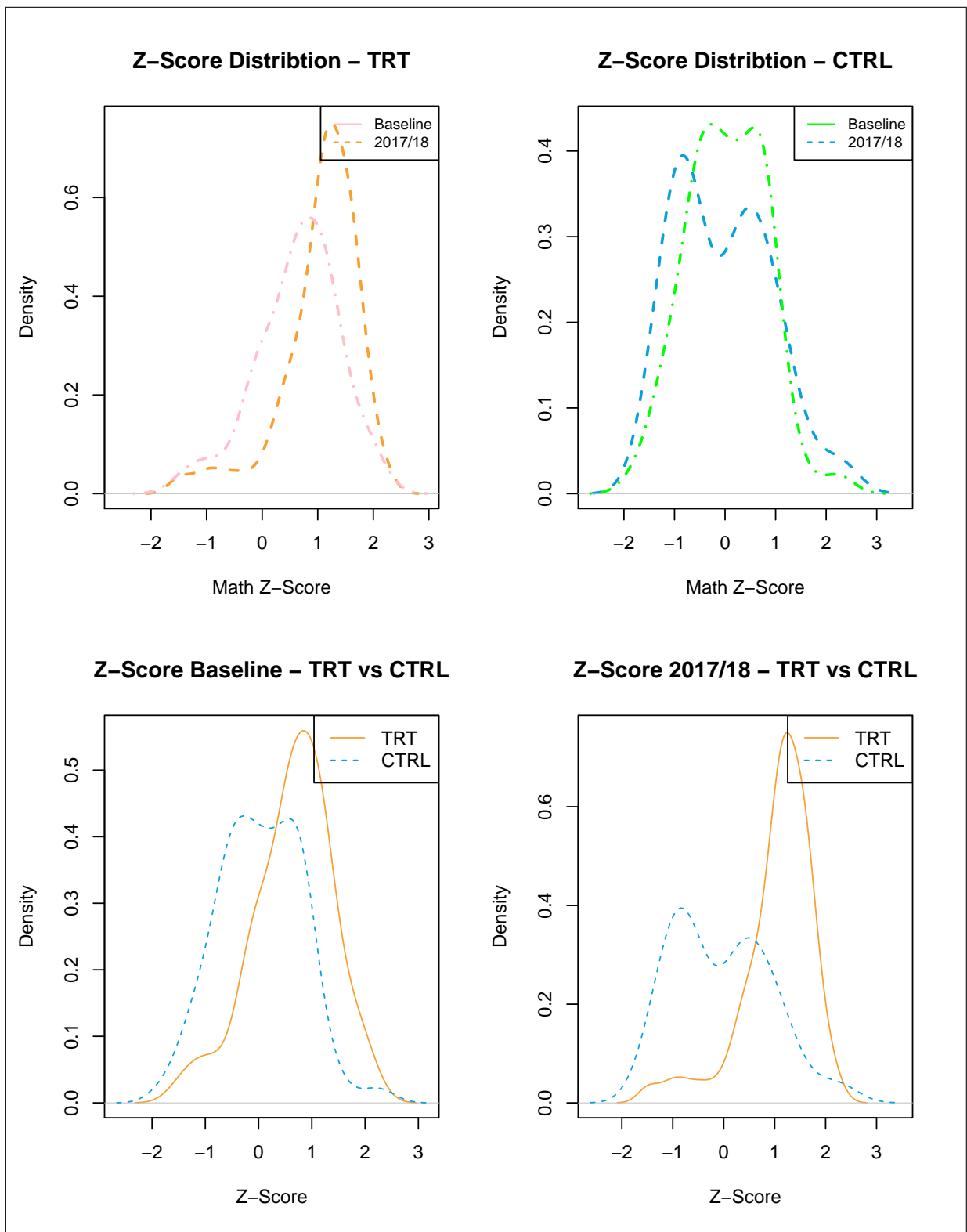


Figure 18: DAAPCTQ9: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

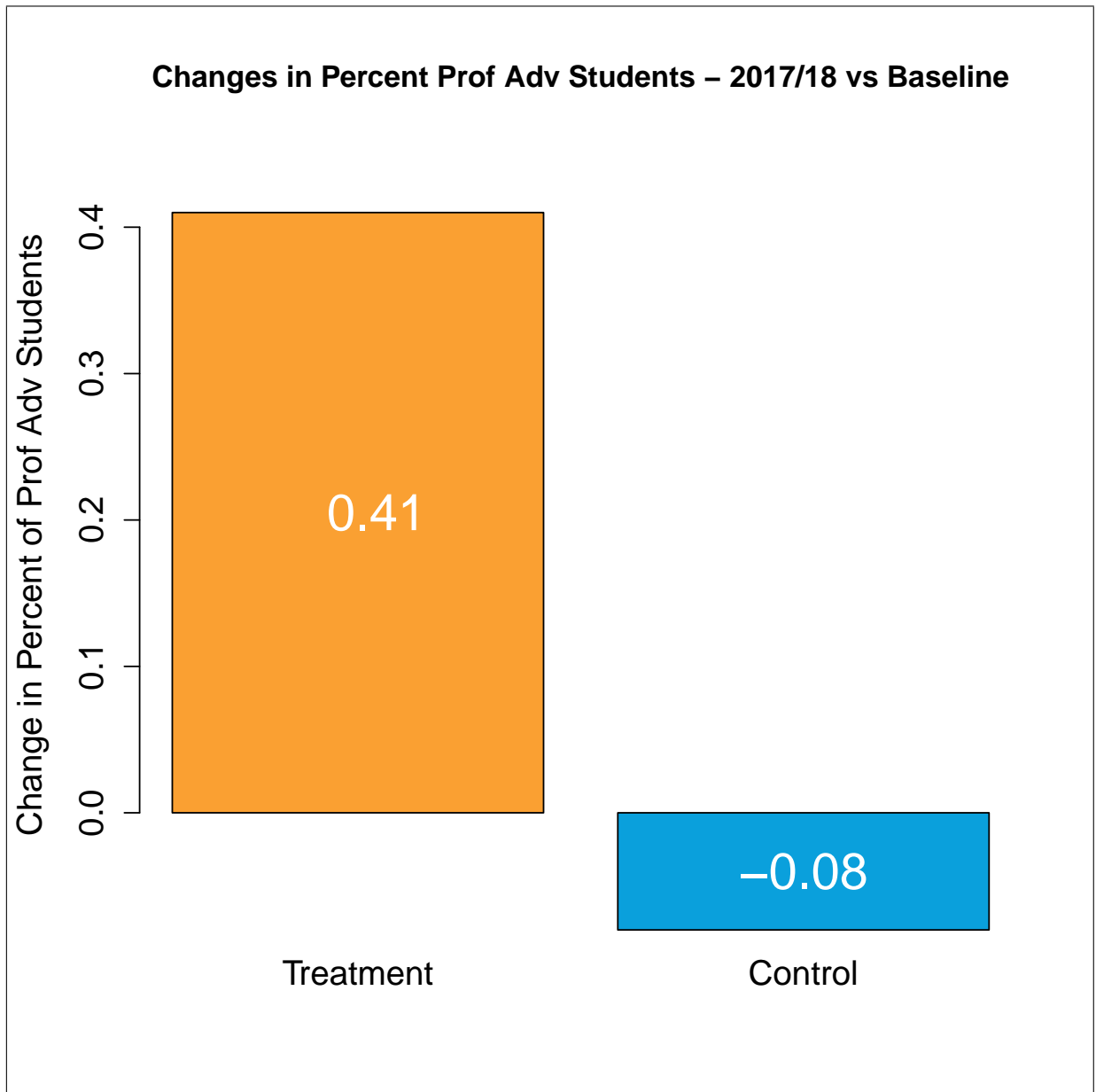


Figure 19: BADPQ9: Bar-chart All-grades Delta ProfAdv

Seven Quantiles:

	Number of TRT grades (Equal to Number of CTL grades)
Progress $\geq 20\%$	2058
Progress $\geq 30\%$	1490
Progress $\geq 40\%$	1046
Progress $\geq 50\%$	656
Progress $\geq 60\%$	315
Progress $\geq 70\%$	103
Progress $\geq 80\%$	33

Table 9: Number of TRT grades by Seven Different Quantiles

	Progress $\geq 20\%$	Progress $\geq 30\%$	Progress $\geq 40\%$	Progress $\geq 50\%$	Progress $\geq 60\%$	Progress $\geq 70\%$	Progress $\geq 80\%$
TRT.Baseline	-0.06	0.01	0.07	0.11	0.25	0.51	0.72
TRT.Current	0.10	0.22	0.32	0.41	0.60	0.88	1.26
CTL.Baseline	-0.14	-0.14	-0.15	-0.14	-0.07	0.02	0.20
CTL.Current	-0.11	-0.09	-0.09	-0.11	-0.11	-0.07	0.16

Table 10: Mean Math z-score - TRT vs CTRL - Baseline vs Current - by Quantiles

	Progress $\geq 20\%$	Progress $\geq 30\%$	Progress $\geq 40\%$	Progress $\geq 50\%$	Progress $\geq 60\%$	Progress $\geq 70\%$	Progress $\geq 80\%$
TRT % Growth	60.00	62.00	63.00	66.00	69.00	68.00	79.00
CTL % Growth	52.00	53.00	53.00	52.00	47.00	48.00	45.00

Table 11: Percentage of Positive Math Z-score Growth - TRT vs CTRL by Quantiles

	Z-score	Effect Size
Progress $\geq 20\%$		0.14
Progress $\geq 30\%$		0.18
Progress $\geq 40\%$		0.21
Progress $\geq 50\%$		0.28
Progress $\geq 60\%$		0.43
Progress $\geq 70\%$		0.52
Progress $\geq 80\%$		0.69

Table 12: Effect Size by Quantiles

Quantile: Progress $\geq 20\%$:

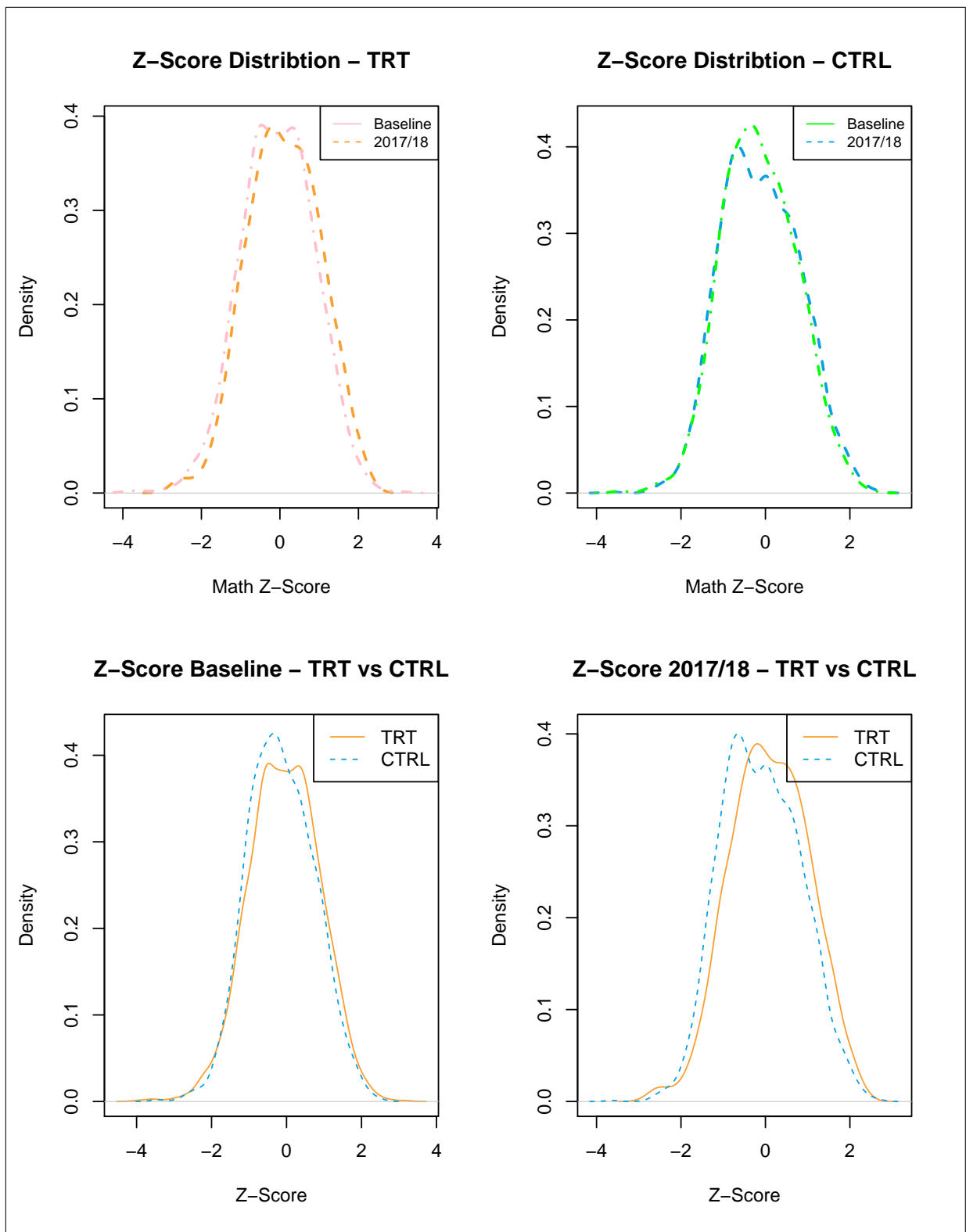


Figure 20: DAAPCTQ10: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

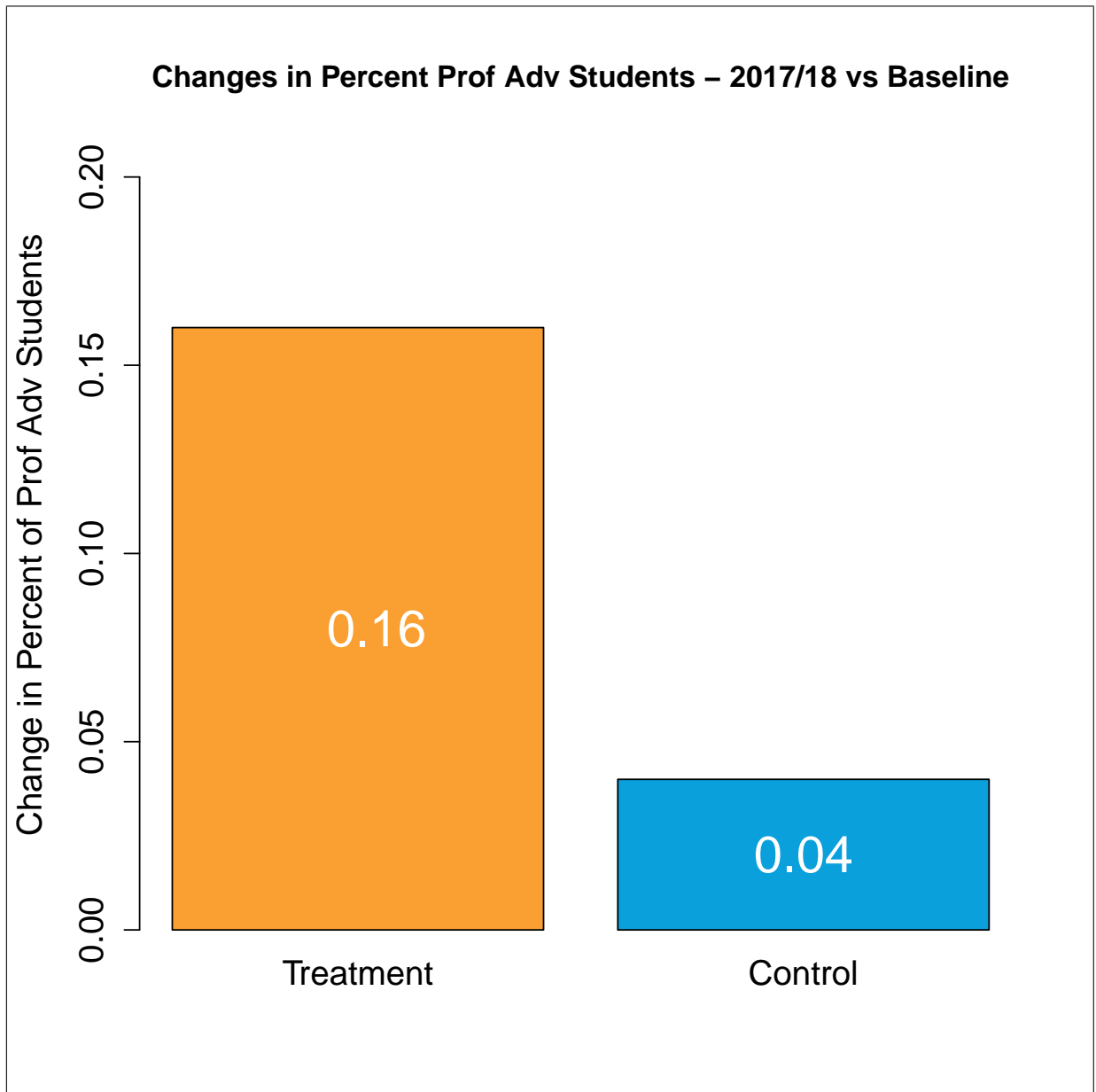


Figure 21: BADPQ10: Bar-chart All-grades Delta ProfAdv

Quantile: Progress $\geq 30\%$:

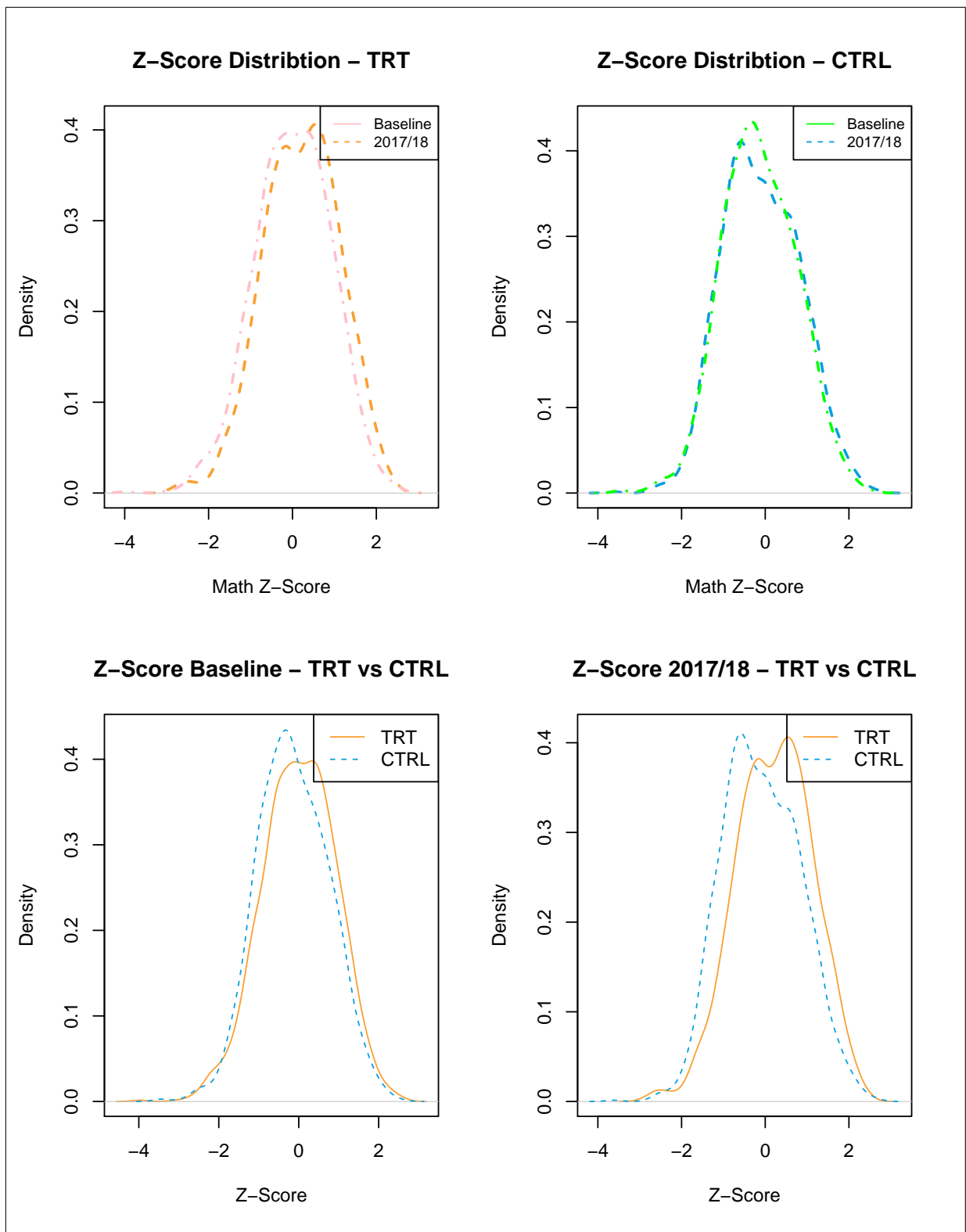


Figure 22: DAAPCTQ11: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

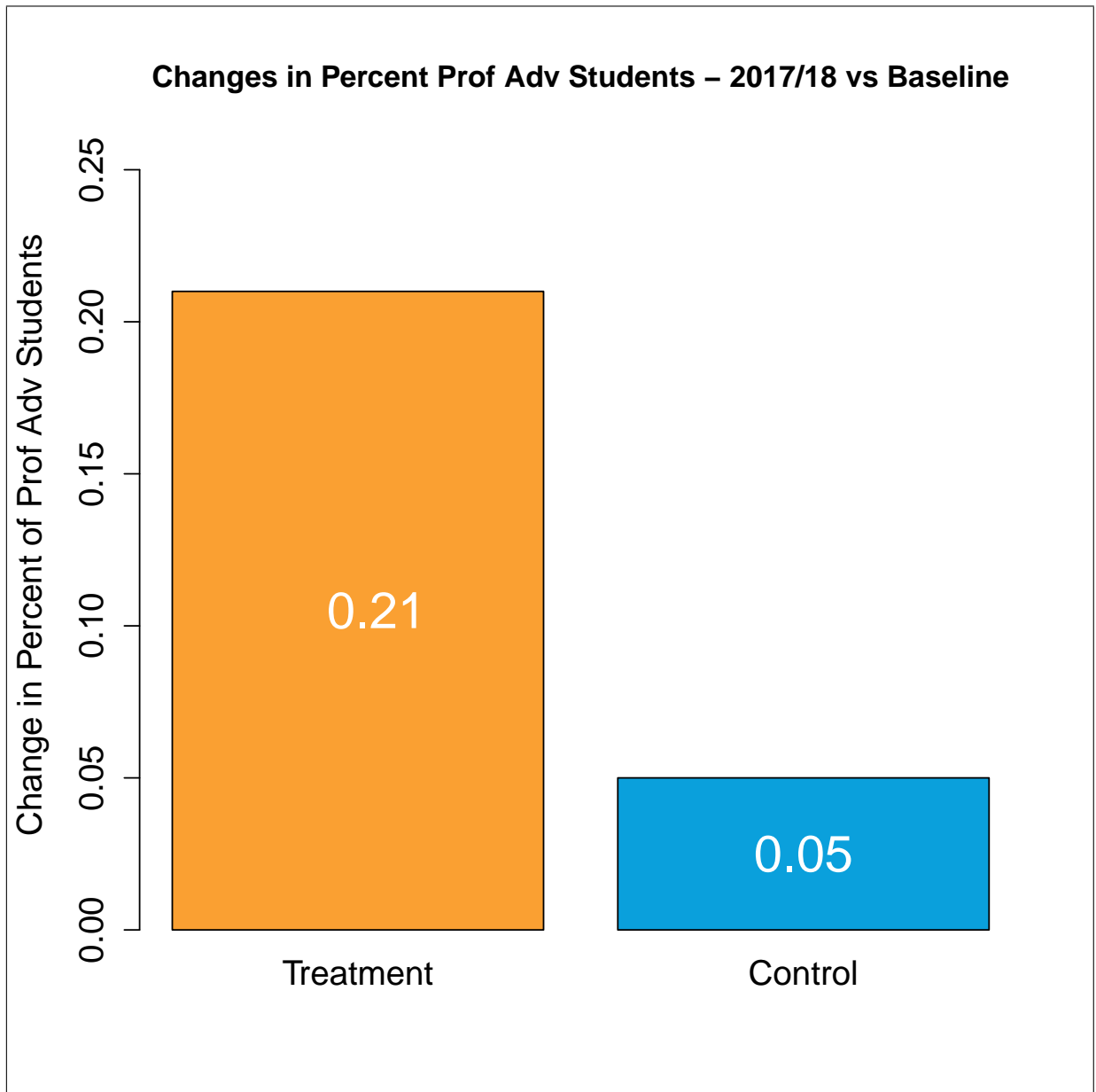


Figure 23: BADPQ11: Bar-chart All-grades Delta ProfAdv

Quantile: Progress $\geq 40\%$:

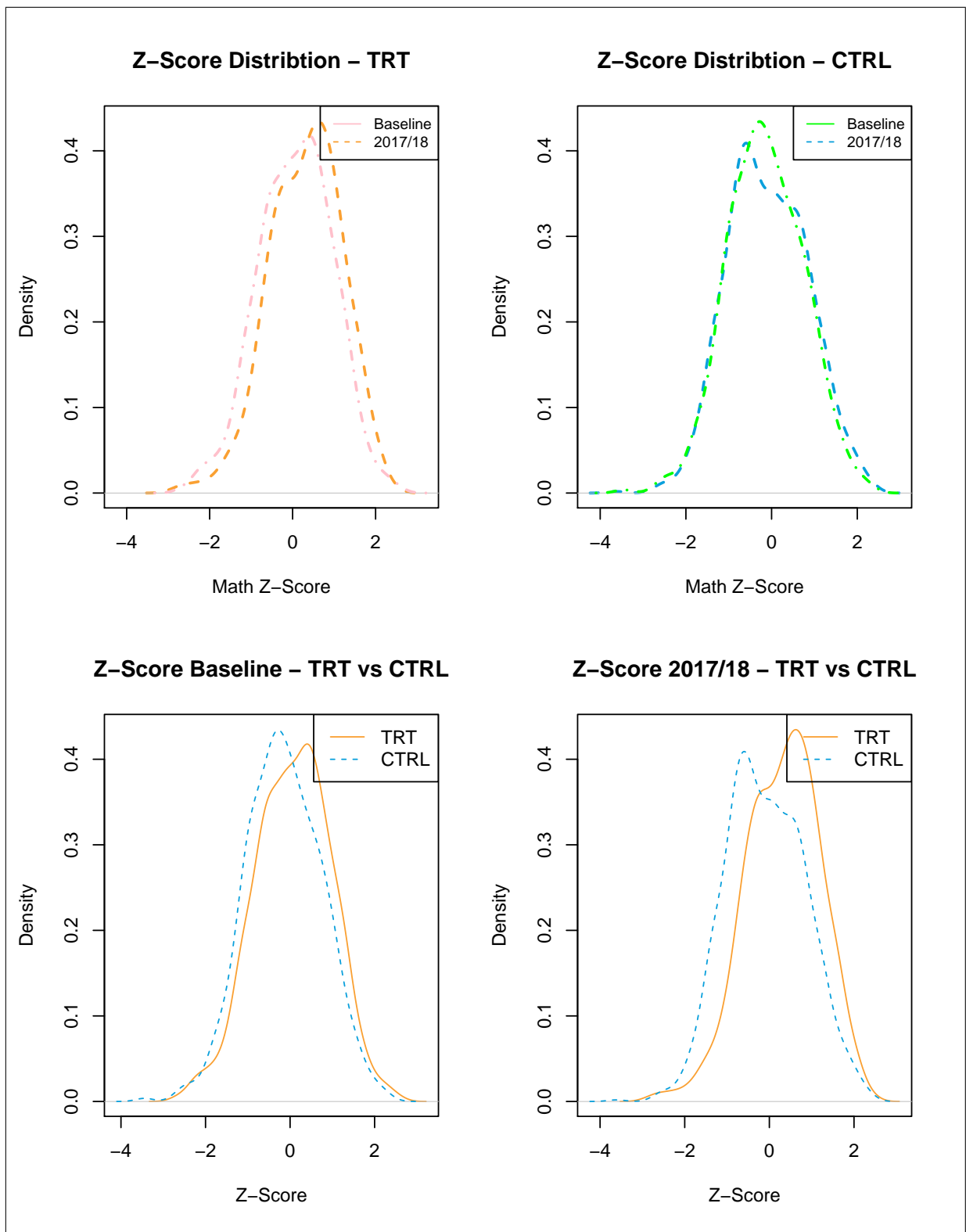


Figure 24: DAAPCTQ12: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

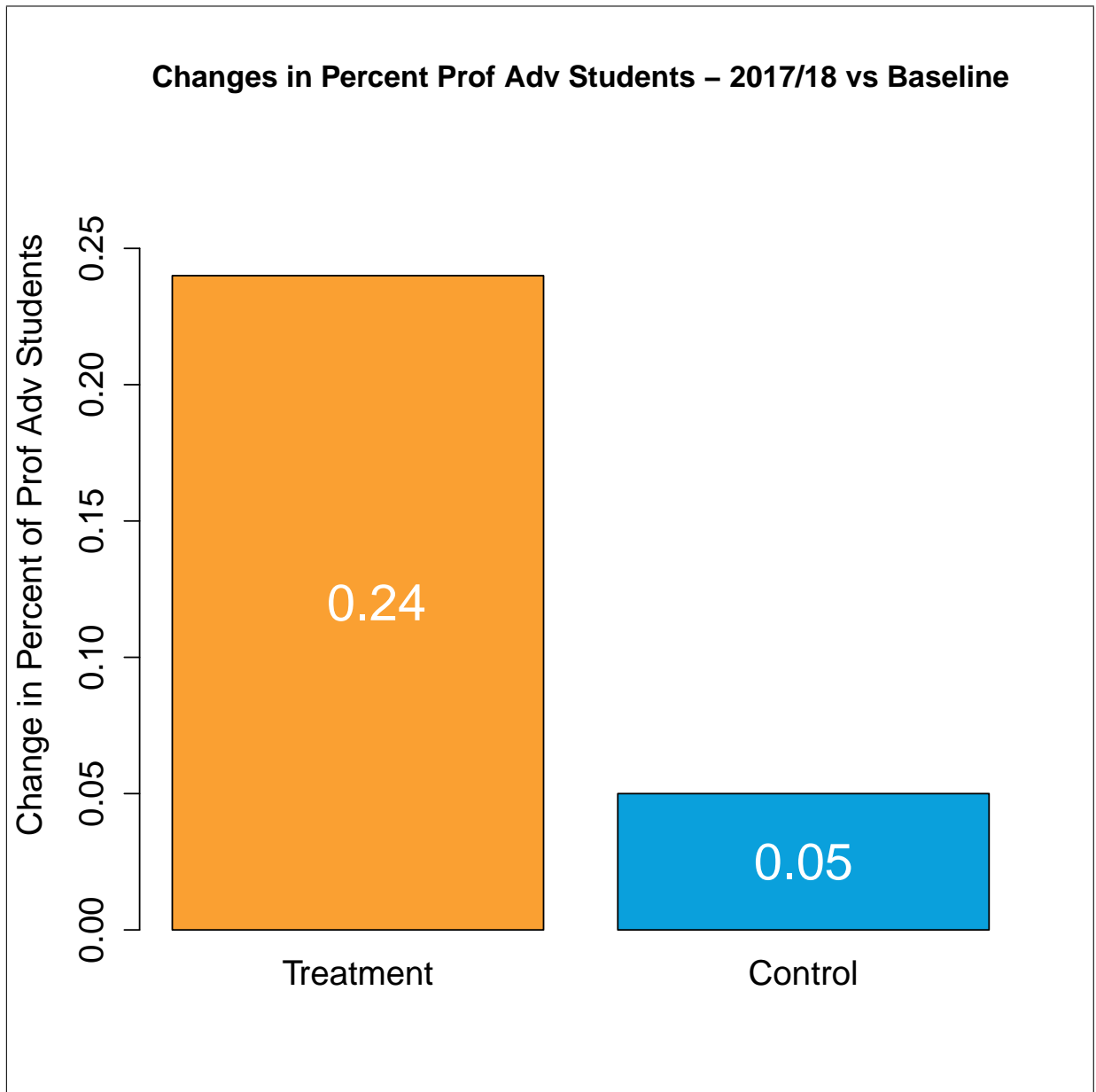


Figure 25: BADPQ12: Bar-chart All-grades Delta ProfAdv

Quantile: Progress $\geq 50\%$:

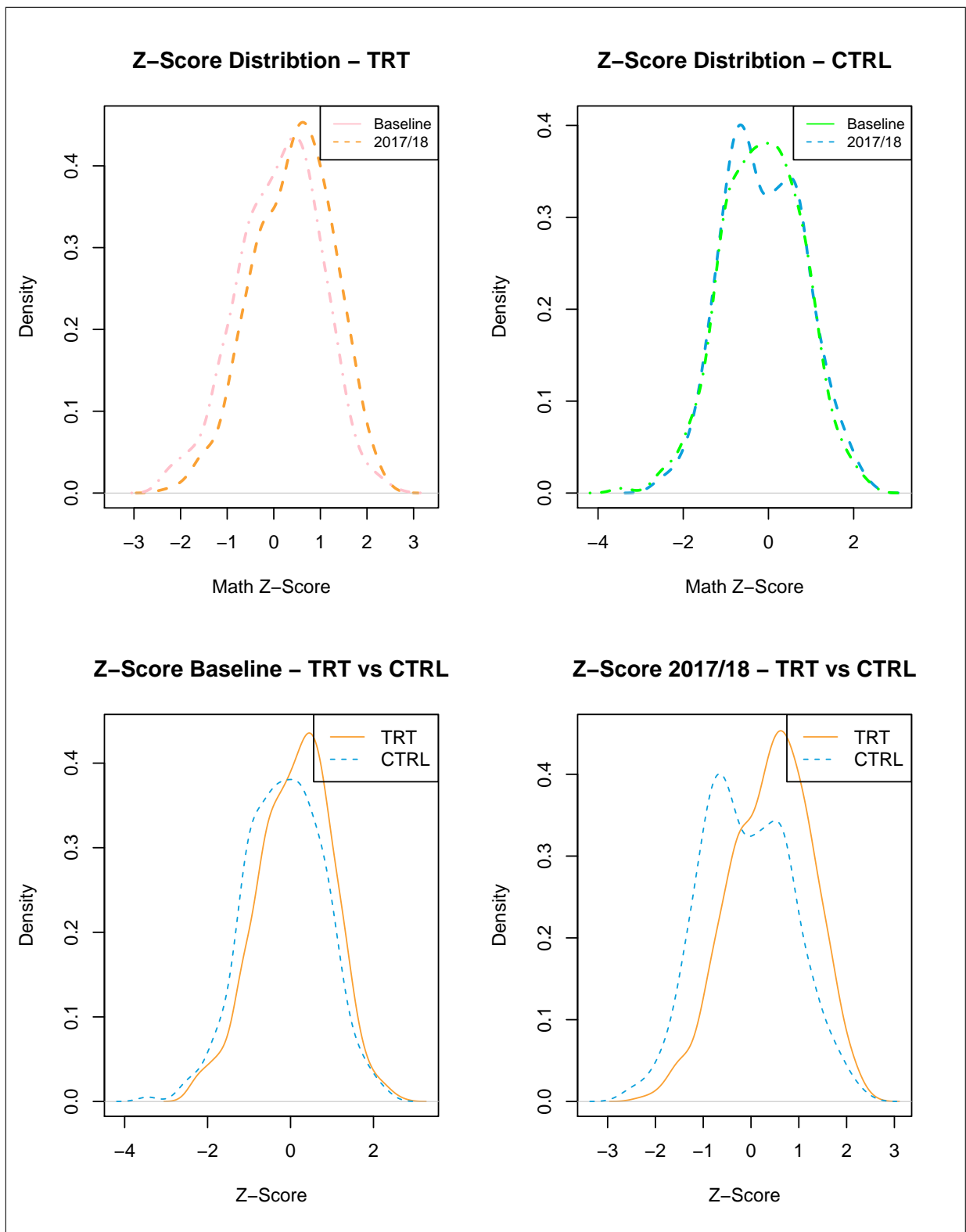


Figure 26: DAAPCTQ13: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

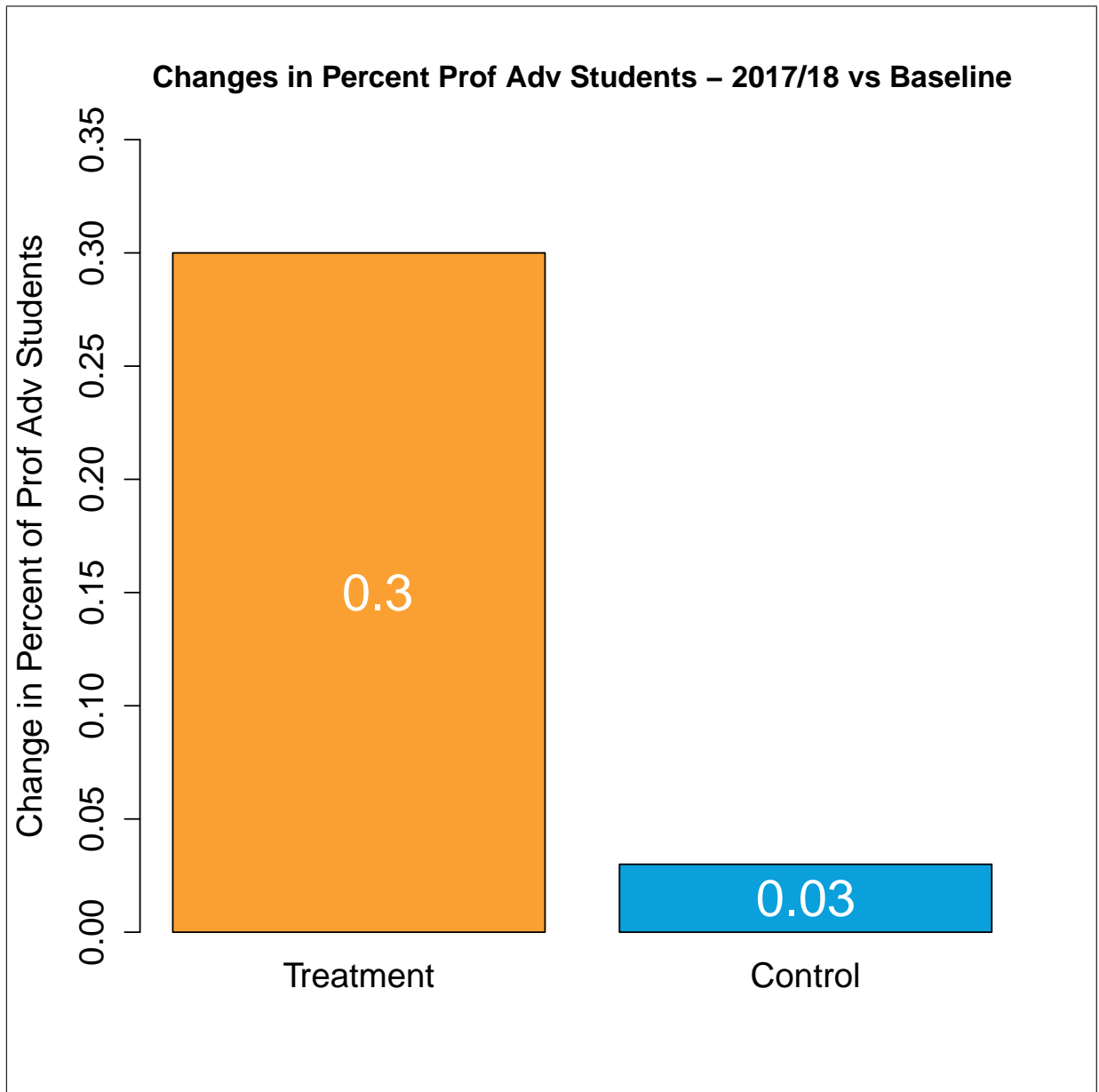


Figure 27: BADPQ13: Bar-chart All-grades Delta ProfAdv

Quantile: Progress $\geq 60\%$:

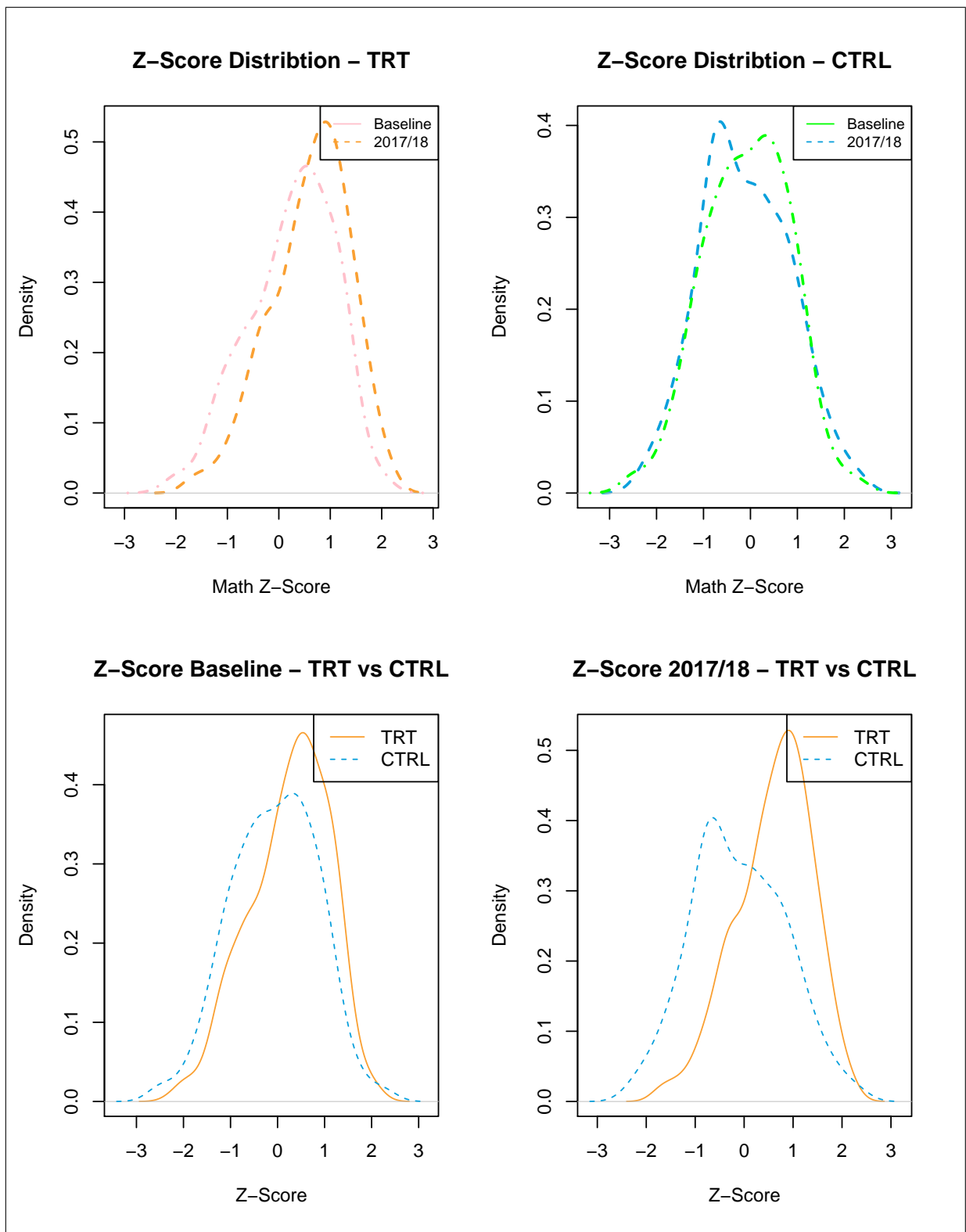


Figure 28: DAAPCTQ14: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

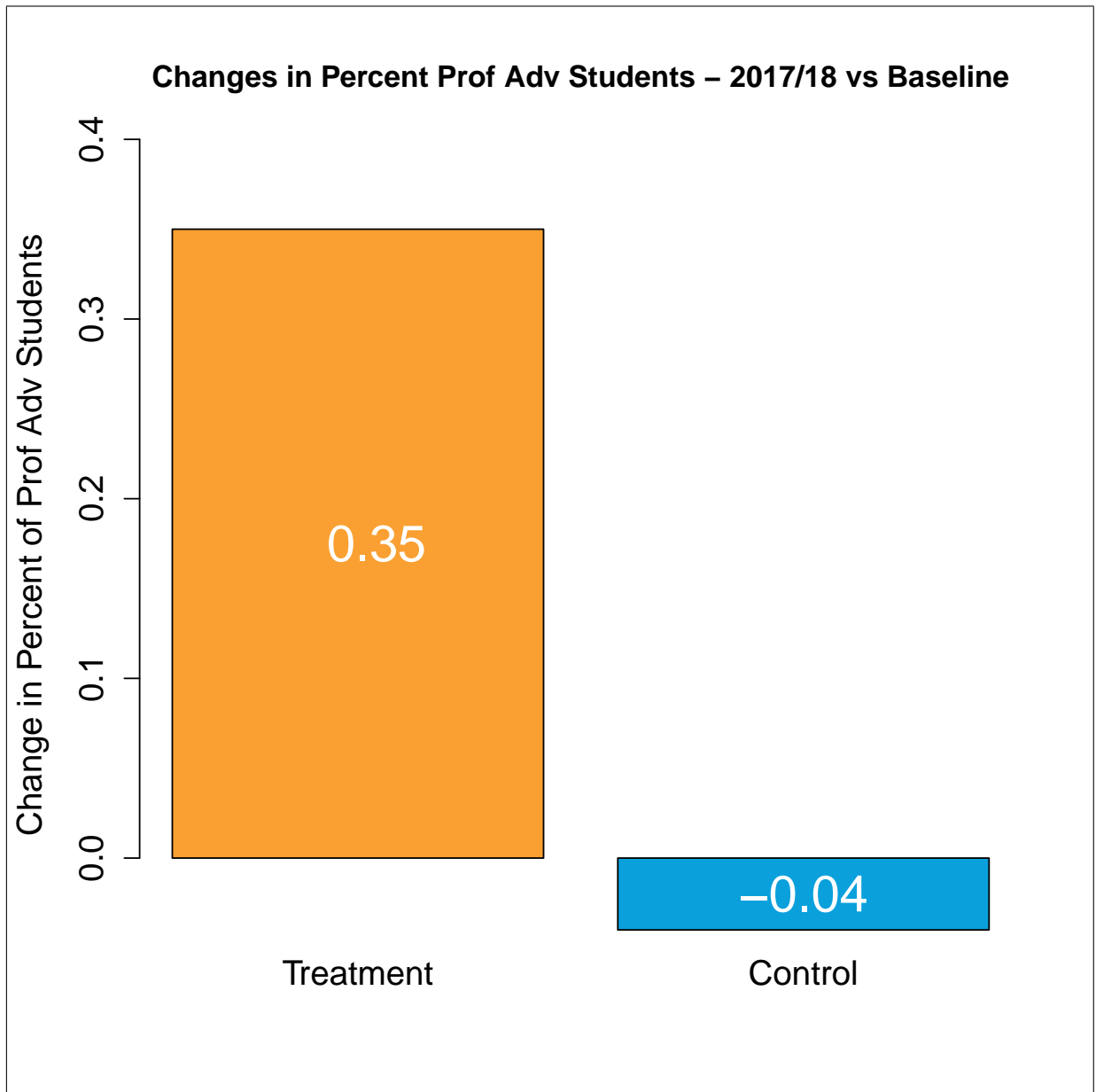


Figure 29: BADPQ14: Bar-chart All-grades Delta ProfAdv

Quantile: Progress $\geq 70\%$:

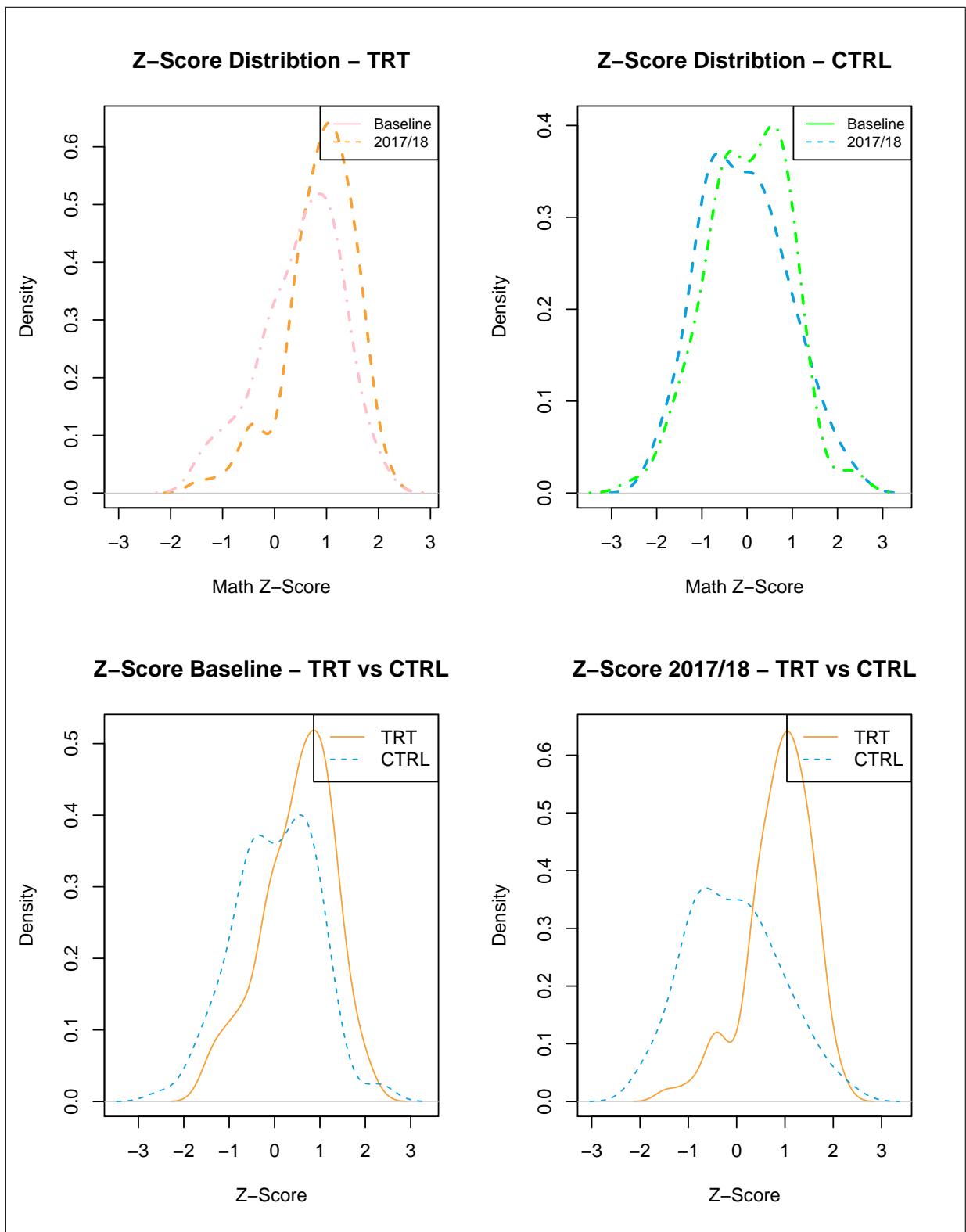


Figure 30: DAAPCTQ15: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

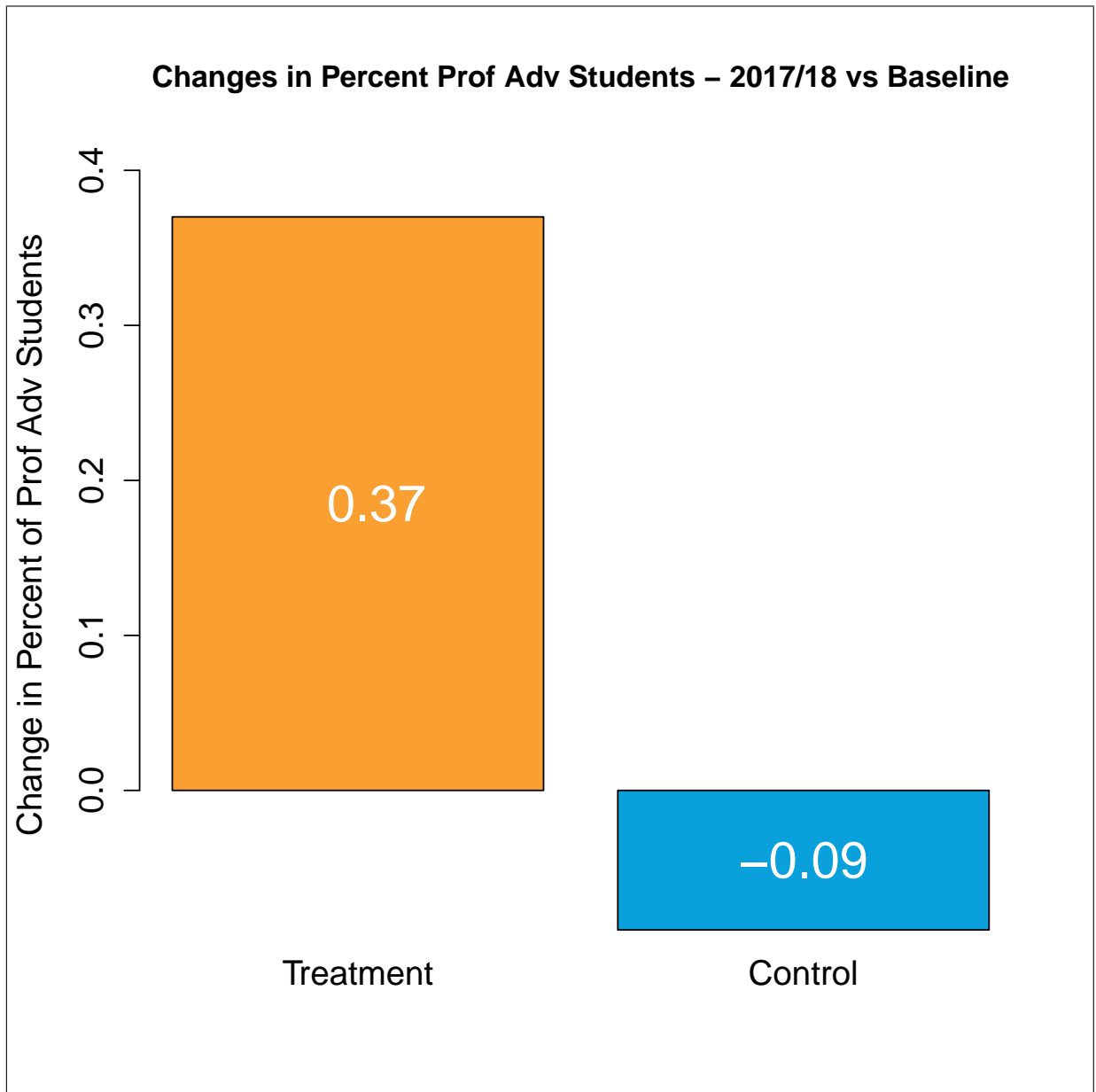


Figure 31: BADPQ15: Bar-chart All-grades Delta ProfAdv

Quantile: Progress $\geq 80\%$:

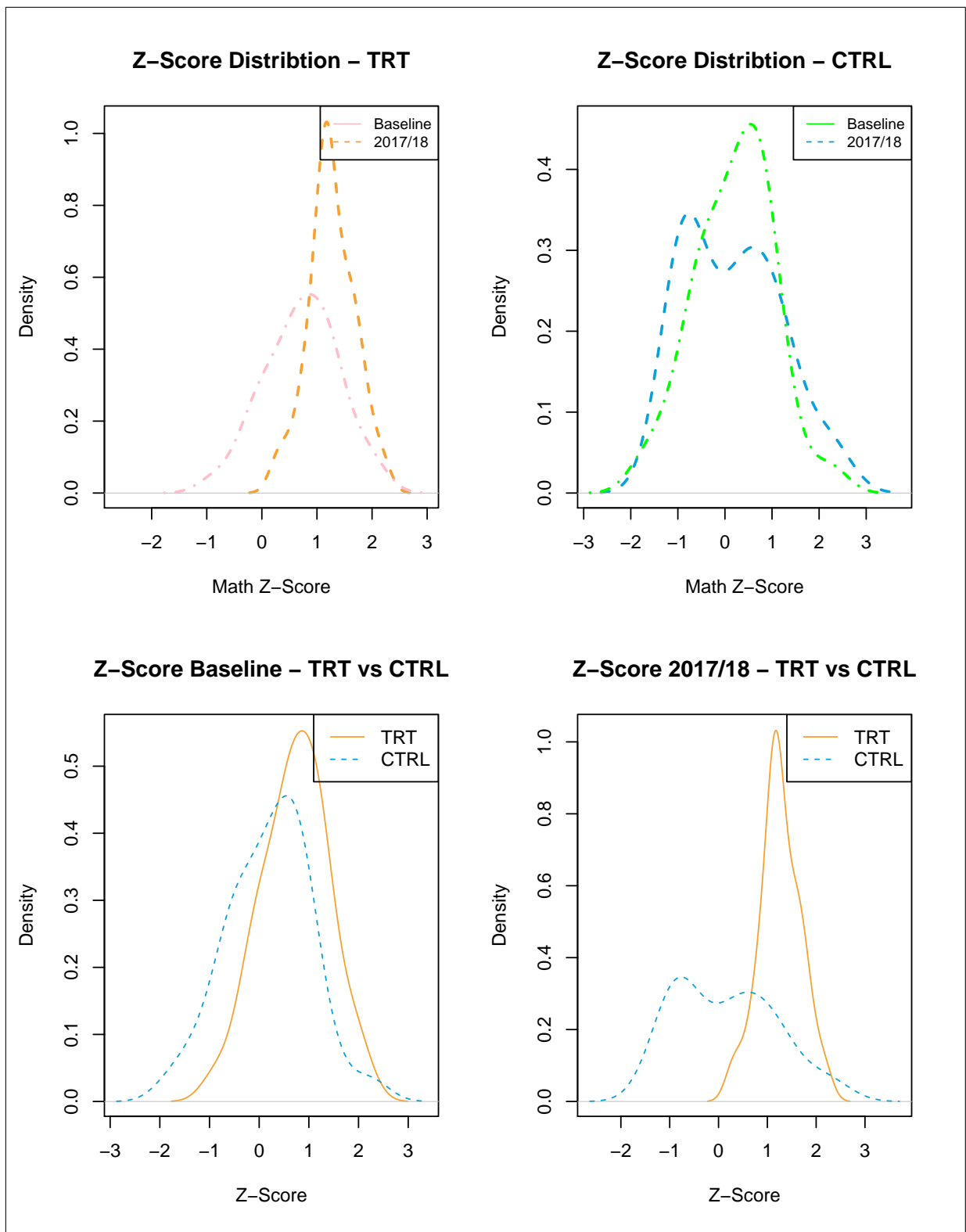


Figure 32: DAAPCTQ16: Density-plot All-grades Delta Z-score of ProfAdv TRT and Control

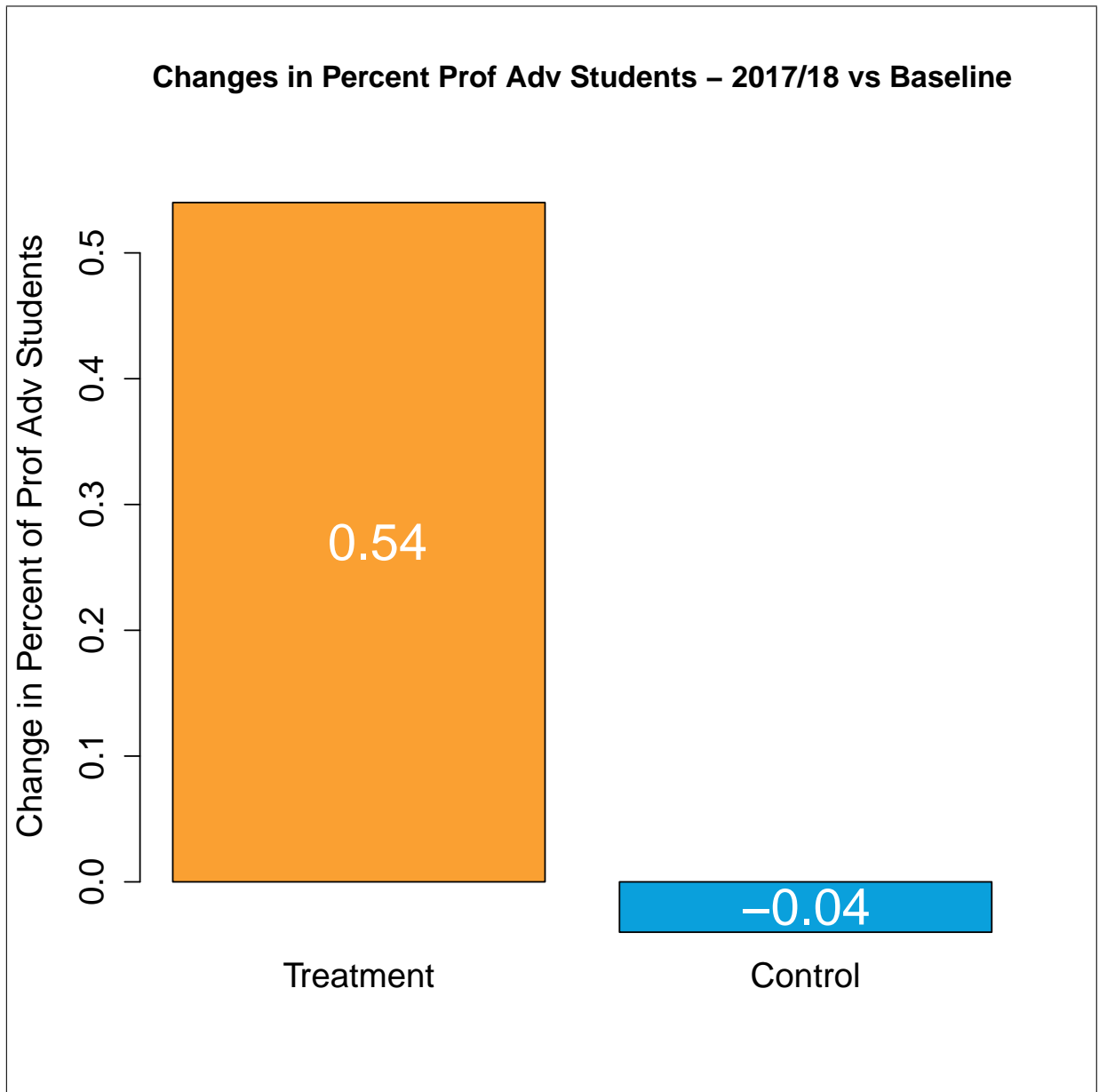


Figure 33: BADPQ16: Bar-chart All-grades Delta ProfAdv