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Appendix 2

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The value of inpatient rehabilitation after uncomplicated knee arthroplasty: a propensity score analysis

Appendix 2

Supplementary regression analyses to explore the effect of 'hospital'

Results for multiple linear regression analyses on the <u>unmatched cohort</u> to determine whether 'hospital' influenced the effect of treatment group.

Three regression models were developed for each primary outcome at each point in time. Model 1 was the unadjusted effect of treatment. Model 2 included the effect of the propensity score for each person. Model 3 included 'hospital'.

The influence of adding 'hospital' as a covariate is demonstrated if the association between treatment group and outcome varies between Model 2 and Model 3; in other words; the addition of 'hospital' changes the significance level (from significant to non-significant, or vice versa) of treatment.

Table A2a. Day 35 EQVAS

Model	Variable	Beta coefficient	P-value
1	Inpatient Yes/No	-6.22	<0.0001
2	Inpatient Yes/No	-4.83	0.0003
	Propensity score	-17.56	0.0011
3	Inpatient Yes/No	-8.52	0.0004
	Propensity score	-16.65	0.0019
	Hospital	Not applicable*	0.054

*Hospital defined as categorical. There are too many categories so determination of 1 simple co-efficient is not possible. This applies to all the models presented in Appendix 2.

Interpretation - 'Hospital' is not influencing the association between treatment (Inpatient Yes/No) and the outcome.

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Table A2b. Day 90 EQVAS

Model	Variable	Beta coefficient	P-value
1	Inpatient Yes/No	-3.83	0.0053
2	Inpatient Yes/No	-2.72	0.0582
	Propensity score	-13.68	0.0043
3	Inpatient Yes/No	-6.72	0.0014
	Propensity score	-13.47	0.005
	Hospital	Not applicable	0.072

Interpretation – 'Hospital' is influencing the association between treatment (Inpatient Yes/No) and the outcome as indicated by the change in level of significance (non-significant to significant) when 'Hospital' is added. 'Hospital' has a negative effect on the Inpatient group for this outcome.

Table A2c. Day 365 EQVAS

Model	Variable	Beta coefficient	P-value
1	Inpatient Yes/No	-4.49	0.0023
2	Inpatient Yes/No	-2.63	0.0830
	Propensity score	-22.30	<0.0001
3	Inpatient Yes/No	-4.53	0.0410
	Propensity score	-22.60	< 0.0001
	Hospital	Not applicable	0.230

Interpretation – 'Hospital' is influencing the association between treatment (Inpatient Yes/No) and the outcome as indicated by the change in level of significance (non-significant to significant) when 'Hospital' is added. 'Hospital' has a negative effect on the Inpatient group for this outcome.

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Table A2d. Day 90 Oxford Knee Score

Model	Variable	Beta coefficient	P-value
1	Inpatient Yes/No	-1.70	0.027
2	Inpatient Yes/No	-1.17	0.148
	Propensity score	-4.84	0.069
3	Inpatient Yes/No	-1.78	0.134
	Propensity score	-3.81	0.158
	Hospital	Not applicable	0.480

Interpretation - 'Hospital' is not influencing the association between treatment (Inpatient Yes/No) and the outcome.

Table A2e. Day 365 Oxford Knee Score

Model	Variable	Beta coefficient	P-value
1	Inpatient Yes/No	-1.28	0.041
2	Inpatient Yes/No	-1.12	0.096
	Propensity score	-2.47	0.264
3	Inpatient Yes/No	-0.94	0.340
	Propensity score	-1.91	0.394
	Hospital	Not applicable	0.725

Interpretation - 'Hospital' is not influencing the association between treatment (Inpatient Yes/No) and the outcome.