Supplementary Materials 4: Full quality assessment for prioritised effectiveness studies.

Table 1. Full quality assessment for prioritised studies in effectiveness tranche

Study (First Author, Date)	Are the individuals selected to participate in the study likely to be representative of the target population? 1=Very Likely, 2=Somewhat likely, 3=Not likely, 4=CT	What percentage of selected Is agreed to participate? (1=80 - 100% agreement, 2=60 – 79% agreement, 3=< 60% agreement, 4=NA, 5=CT)	Section rating (1 Strong, 2 Moderate, 3 Weak)	Study design (1=RCT, 2=CCT, 3=CA, 4=CC, 5=C, 6=ITS, 7=Other 8=CT)	Was the study described as randomized? (Y/N)	Was the method of randomization described? (Y/N/NA)	Was method of randomization appropriate? (Y/N/NA)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were there important differences between Groups prior to the intervention (1=Yes, 2=No, 3= CT)	Indicate the % of confounders that were controlled	Section rating (1= Strong, 2= Moderate, 3= Weak)	Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants? (1=Yes, 2=N, 3= CT)	Were the study participants aware of the research question? (1=Yes, 2=No, 3= CT)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were data collection tools shown to be valid? (Answer this for the means of determining LOS)(1=Yes, 2=No, 3= CT)	Were means of determining LOS reliable? (1=Yes, 2=No, 3= CT)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group? (1=Yes, 2=No, 3= CT 4=NA)	Indicate the % of participants completing the study. (If the percentage differs by Gs, record the lowest) (1=80 -100%, 2=60 - 79%, 3= < 60%, 4=CT, 5=NA)	Section rating (1= Strong, 2= Moderate, 3= Weak)	What percentage of participants received the allocated intervention or exposure of interest? (1=80 -100%, 2=60 - 79%, 3= < 60%, 4=CT)	Was the consistency of the intervention measured? (1=Yes, 2=No, 3= CT)	Is it likely that subjects received an unintended intervention (contamination or co-intervention) (1=Yes, 2=No, 3= CT)	Indicate the unit of allocation (e.g. Community, Organisation/ institution, Individual)	Indicate the unit of analysis (e.g. Community, Organisation/ institution, Individual)	Are the statistical methods appropriate for the study design? (1=Yes, 2=No, 3= CT)	Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?(1=Yes, 2=No, 3= CT)	Is it clear how LOS is defined/calculated? (Y/N)
Abdominal surgery																												
Chen 2017[1]	2	2	2	1	Y	Y	Y	1	2	NA	1	2	3	2	3	3	3	1	1	1	1	1	2	R	R	1	1	N
Cardiac surgery																												
Arthur 2000[2]	2	2	2	1	Y	Y	Y	1	1	100 %	1	3	3	2	1	1	1	1	1	1	1	1	2	I	G	1	1	Y
Fleming 2016[3]	2	4	2	7 UB A	N	NA	NA	3	2	NA	1	3	3	2	3	3	3	2	4	3	1	2	2	C	I	1	2	Y
Furze, 2009[4]	2	3	3	1	Y	Y	Y	1	2	NA	1	1	3	2	3	3	3	1	1	1	1	2	1	I	I	1	1	Y

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Goodman, 2008[5]	2	3	3	1	Y	Y	Y	1	2	NA	1	3	3	2	1	1	1	1	1	1	1	2	2	I	I	1	1	Y
Probst 2014[6]	2	5	2	1	Y	Y	Y	1	1	0%	3	1	1	3	1	1	1	1	1	1	1	1	2	I	I	1	1	Y
Rosenfeldt, 2011[7]	2	1	2	1	Y	Y	Y	1	2	NA	1	3	1	2	3	3	3	1	1	1	1	2	2	I	G	1	2	N
Salhiyyah 2011[8]	2	1	2	2	N	NA	NA	3	2	NA	1	3	3	2	3	3	3	1	1	1	1	2	2	I	C	1	1	Y
van der Peijl 2004[9]	2	1	2	1	Y	Y	Y	1	1	0%	3	2	3	2	3	3	3	1	3	3	3	2	3	I	G	1	2	N
Colorectal surgery																												
Anderson 2003[10]	2	1	2	1	Y	Y	Y	1	3	NA	3	1	1	3	2	2	3	1	4	3	1	2	3	I	G	1	2	Y
Carli 2010[11]	2	1	2	1	Y	N	N	3	3	NA	3	3	3	2	3	3	3	1	1	1	2	1	2	I	G	1	1	N

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Dhruva Rao 2015[12]	2	5	2	7-UBA	N	NA	NA	3	2	NA	1	3	3	2	3	3	3	1	1	1	2	1	2	C	C	1	1	N
Dronkers 2010[13]	2	5	2	1	Y	Y	Y	1	1	0%	3	2	3	2	3	3	3	1	1	1	1	1	2	I	G	1	1	N
Forsmo 2016[14]	2	1	2	1	Y	Y	Y	1	2	NA	1	1	1	3	3	3	3	1	1	1	1	1	2	I	C	1	2	Y
Garcia-Botello 2011[15]	2	1	2	1	Y	Y	Y	1	2	NA	1	3	3	2	3	3	3	1	1	1	1	2	3	I	G	1	2	N
Gatt, 2005[16]	2	1	2	1	Y	Y	Y	1	2	NA	2	1	3	2	3	3	3	1	1	1	3	2	2	I	I	1	2	N
Gillis 2014[17]	2	1	2	1	Y	y	Y	1	3	0%	3	2	3	2	3	3	3	1	1	1	1	1	2	I	G	1	2	N
Khan 2013[18]	2	5	2	3	N	NA	NA	3	2	NA	1	3	3	2	3	3	3	1	1	1	1	2	2	O	O	1	3	N
Khoo 2007[19]	2	3	3	1	Y	Y	Y	1	3	4	3	3	3	2	3	3	3	1	1	1	1	1	2	I	G	1	2	N
King 2006[20]	2	4	2	7 UB	N	NA	NA	3	2	NA	1	1	2	2	1	1	1	1	1	1	1	1	2	C	C	1	3	Y

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				A																								
Lee 2011[21]	2	1	2	1	Y	Y	Y	1	2	NA	1	3	3	2	3	3	3	1	1	1	1	1	3	I	C	1	3	Y
Lidder 2013[22]	2	3	3	1	Y	Y	Y	1	2	NA	1	2	3	2	3	3	3	1	4	3	4	2	2	I	G	1	1	N
Maggiori 2017[23]	2	1	2	1	Y	y	Y	1	2	NA	1	2	3	2	3	3	3	1	1	1	1	1	2	I	G	1	2	Y
Mari 2014[24]	2	1	2	1	Y	Y	Y	1	2	NA	1	3	3	2	3	3	3	1	1	1	1	2	3	I	G	1	2	N
Mari 2016[25]	2	1	2	1	Y	Y	Y	1	2	NA	1	3	3	2	3	3	3	1	1	1	1	2	3	I	G	1	2	N
Muller 2009[26]	2	5	2	1	Y	Y	Y	1	1	0%	3	1	1	3	3	3	3	1	1	1	1	1	3	I	G	1	1	N
Pappalardo 2016[27]	2	1	2	1	Y	N	NA	3	2	NA	1	2	3	2	3	3	3	2	4	3	1	1	2	I	G	1	3	Y

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Van Bree 2011[28]; Vlug 2011[29]	2	5	2	1	Y	Y	Y	1	2	NA	1	2	1	2	3	3	3	1	1	1	2	1	2	O	G	1	2	Y
Lower limb arthroplasty																												
Barlow 2013[30]	2	5	2	7 UB A	N	NA	NA	3	2	NA	1	3	2	2	3	3	3	1	1	1	1	2	1	C	C	1	2	Y
Borgwardt 2009[31]	2	5	2	1	Y	Y	Y	1	2	NA	1	3	3	2	3	3	3	1	1	1	1	2	2	I	G	1	2	N
Crowe 2003[32]	2	5	2	1	Y	Y	Y	1	1	0%	3	2	3	2	3	3	3	1	1	1	1	2	3	I	G	1	2	N
den Hertog 2012[33]	2	5	2	1	Y	Y	Y	1	2	NA	1	3	1	2	3	3	3	1	1	1	1	1	3	I	I	1	1	Y
Dwyer 2012[34]	2	5	2	7 UB A	N	NA	NA	3	1	100 %	1	3	3	2	3	3	3	4	1	1	1	2	2	C	C	1	2	Y

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Gordon 2011[35]	2	4	2	7 UBA	N	NA	NA	3	2	NA	1	1	3	2	3	3	3	4	1	1	1	2	2	C	C	1	1	N
Harari 2007[36]	2	5	2	7 UBA	N	NA	NA	3	1	100 %	1	1	2	2	3	3	3	4	1	1	1	2	2	C	C	1	1	N
Hoogeboom 2010[37]	2	3	3	1	Y	Y	Y	1	2	NA	1	2	1	2	3	3	3	2	1	1	1	1	2	I	G	1	1	N
Huang 2012[38]	2	1	2	1	N	Y	Y	1	2	NA	1	3	3	2	3	3	3	4	1	1	1	2	2	I	G	1	3	N
Huddleston 2004[39]	2	1	2	1	Y	Y	Y	1	2	NA	1	1	3	2	3	3	3	1	1	1	1	2	2	I	G	1	2	Y
Hunt 2009[40]; Salmon 2013[41]	2	1	2	2	N	NA	NA	3	1	100 %	1	3	3	2	3	3	3	1	1	1	1	2	2	O	G	1	2	Y
Khan 2014[42]	1	4	1	7 UB	N	NA	NA	3	1	0%	3	3	3	2	3	3	3	4	1	1	1	2	4	C	C	1	3	N

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				A																								
Larsen 2008[43, 44]	2	2	2	1	Y	Y	Y	1	2	NA	1	2	3	2	3	3	3	1	1	1	1	2	2	I	G	1	1	Y
Maempel 2015[45]	2	4	2	7 UB A	N	NA	NA	3	2	NA	1	3	2	2	3	3	3	1	1	1	1	2	2	C	C	1	2	N
Maempel 2016[46]	2	4	2	7U BA	N	NA	NA	3	1	0%	3	3	2	2	3	3	3	1	1	1	1	2	2	C	C	1	2	Y
Malviya 2011[47]	2	4	2	7 UB A	N	NA	NA	3	1	0%	3	3	2	2	3	3	3	4	1	1	1	2	3	C	C	1	2	N
McGregor 2004[48]	2	5	2	1	Y	N	NA	3	3	NA	3	3	3	2	3	3	3	2	1	1	1	2	3	I	G	1	3	N
Mertes 2013[49]	2	4	2	7 UB A	N	NA	NA	3	3	NA	3	3	3	2	3	3	3	3	4	3	1	3	2	C	C	1	2	N
Pengas 2015[50]	2	5	2	7 UB	N	N	N	3	3	NA	3	3	3	2	3	3	3	2	1	1	1	2	3	C	G	1	2	N

Study (First Author, Date)	Are the individuals selected to participate in the study likely to be representative of the target population? 1=Very Likely, 2=Somewhat likely, 3=Not likely, 4=CT	What percentage of selected Is agreed to participate? (1=80 - 100% agreement, 2=60 – 79% agreement, 3=< 60% agreement, 4=NA, 5=CT)	Section rating (1 Strong, 2 Moderate, 3 Weak)	Study design (1=RCT, 2=CCT, 3=CA, 4=CC, 5=C, 6=ITS, 7=Other 8=CT)	Was the study described as randomized? (Y/N)	Was the method of randomization described? (Y/N/NA)	Was method of randomization appropriate? (Y/N/NA)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were there important differences between Groups prior to the intervention (1=Yes, 2=No, 3= CT)	Indicate the % of confounders that were controlled	Section rating (1= Strong, 2= Moderate, 3= Weak)	Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants? (1=Yes, 2=N, 3= CT)	Were the study participants aware of the research question? (1=Yes, 2=No, 3= CT)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were data collection tools shown to be valid? (Answer this for the means of determining LOS)(1=Yes, 2=No, 3= CT)	Were means of determining LOS reliable? (1=Yes, 2=No, 3= CT)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group? (1=Yes, 2=No, 3= CT 4=NA)	Indicate the % of participants completing the study. (If the percentage differs by Gs, record the lowest) (1=80 -100%, 2=60 - 79%, 3= < 60%, 4=CT, 5=NA)	Section rating (1= Strong, 2= Moderate, 3= Weak)	What percentage of participants received the allocated intervention or exposure of interest? (1=80 -100%, 2=60 - 79%, 3= < 60%, 4=CT)	Was the consistency of the intervention measured? (1=Yes, 2=No, 3= CT)	Is it likely that subjects received an unintended intervention (contamination or co-intervention) (1=Yes, 2=No, 3= CT)	Indicate the unit of allocation (e.g. Community, Organisation/ institution, Individual)	Indicate the unit of analysis (e.g. Community, Organisation/ institution, Individual)	Are the statistical methods appropriate for the study design? (1=Yes, 2=No, 3= CT)	Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?(1=Yes, 2=No, 3= CT)	Is it clear how LOS is defined/calculated? (Y/N)
				A																								
Pour 2007[51]	2	2	2	1	Y	Y	Y	1	3	NA	3	3	1	2	3	3	3	1	1	1	1	2	2	I	C	1	2	N
Reilly 2005[52]	2	5	2	1	Y	Y	Y	1	2	NA	1	1	3	2	3	3	3	1	1	1	1	2	2	I	G	1	2	N
Siggeirsdottir 2005[53]	2	2	2	1	Y	Y	Y	1	3	NA	3	3	3	2	3	3	3	1	1	1	1	2	3	I	G	1	2	N
Starks 2014[54]	2	4	2	7 UB A	N	NA	NA	3	1	NA	1	2	2	1	3	3	3	4	1	1	1	2	2	C	C	1	3	N
Vesterby 2017[55]	2	2	2	1	Y	Y	Y	1	3	NA	3	1	3	2	1	1	1	1	1	1	1	2	2	I	G	1	2	N
Williamson 2007[56]	2	2	2	1	Y	Y	Y	1	2	NA	1	2	3	2	1	1	1	1	3	3	1	2	2	I	G	1	1	N
Pelvic surgery																												
Arumainayagam 2008[57]	2	4	2	7 UB A	N	NA	NA	3	2	NA	1	1	2	2	1	1	1	4	1	1	1	2	2	I	I	1	1	Y

Study (First Author, Date)	Are the individuals selected to participate in the study likely to be representative of the target population? 1=Very Likely, 2=Somewhat likely, 3=Not likely, 4=CT	What percentage of selected Is agreed to participate? (1=80 - 100% agreement, 2=60 – 79% agreement, 3=< 60% agreement, 4=NA, 5=CT)	Section rating (1 Strong, 2 Moderate, 3 Weak)	Study design (1=RCT, 2=CCT, 3=CA, 4=CC, 5=C, 6=ITS, 7=Other 8=CT)	Was the study described as randomized? (Y/N)	Was the method of randomization described? (Y/N/NA)	Was method of randomization appropriate? (Y/N/NA)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were there important differences between Groups prior to the intervention (1=Yes, 2=No, 3= CT)	Indicate the % of confounders that were controlled	Section rating (1= Strong, 2= Moderate, 3= Weak)	Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants? (1=Yes, 2=N, 3= CT)	Were the study participants aware of the research question? (1=Yes, 2=No, 3= CT)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were data collection tools shown to be valid? (Answer this for the means of determining LOS)(1=Yes, 2=No, 3= CT)	Were means of determining LOS reliable? (1=Yes, 2=No, 3= CT)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group? (1=Yes, 2=No, 3= CT 4=NA)	Indicate the % of participants completing the study. (If the percentage differs by Gs, record the lowest) (1=80 -100%, 2=60 - 79%, 3= < 60%, 4=CT, 5=NA)	Section rating (1= Strong, 2= Moderate, 3= Weak)	What percentage of participants received the allocated intervention or exposure of interest? (1=80 -100%, 2=60 - 79%, 3= < 60%, 4=CT)	Was the consistency of the intervention measured? (1=Yes, 2=No, 3= CT)	Is it likely that subjects received an unintended intervention (contamination or co-intervention) (1=Yes, 2=No, 3= CT)	Indicate the unit of allocation (e.g. Community, Organisation/ institution, Individual)	Indicate the unit of analysis (e.g. Community, Organisation/ institution, Individual)	Are the statistical methods appropriate for the study design? (1=Yes, 2=No, 3= CT)	Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?(1=Yes, 2=No, 3= CT)	Is it clear how LOS is defined/calculated? (Y/N)
Gralla 2007[58]/ Magheli 2011[59]	2	5	2	1	Y	N	NA	1	2	NA	1	3	1	2	3	3	3	4	1	1	1	2	3	I	G	1	2; 1	Y
Jensen 2015 Jensen 2015[60]	2	1	2	1	Y	Y	Y	1	2	NA	1	3	3	2	3	3	3	1	1	1	2	1	2	I	G	1	1	Y
Mukhtar 2013 Mukhtar 2013[61]	2	4	2	7 UBA	N	NA	NA	3	2	NA	1	2	2	1	3	3	3	4	1	1	1	1	2	C	C	1	3	Y
Thoracic surgery																												
Brunelli 2017[62]	1	4	2	7 UBA	N	NA	NA	3	1	100 %	1	2	2	1	3	3	3	4	1	1	1	1	2	C	C	1	1	Y
Gatenby 2015[63]	2	4	2	7 UBA	N	NA	NA	3	3	NA	3	3	3	2	3	3	3	4	1	1	4	1	2	C	C	1	2	N

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Karran 2016[64]	1	4	2	7 UB A	N	NA	NA	3	2	NA	1	3	2	2	3	3	3	4	1	1	1	2	3	C	G wit hin C	1	3	N
Muehling 2008[65]	4	5	3	1	Y	N	NA	1	2	NA	1	3	3	2	3	3	3	1	1	1	1	2	3	I	G	1	1	N
Tumour removal surgery																												
Hempenius, 2013[66]; 2016[67]	2	2	2	1	Y	Y	Y	1	2	NA	1	1	3	2	3	3	3	1	1	1	1	1	2	I	G	1	2	N
Upper abdominal surgery																												
Abu Hilal 2013[68]	1	5	2	7 UB A	N	NA	NA	3	2	NA	1	3	3	2	3	3	3	3	4	3	4	1	3	C	C	1	3	Y
Dasari 2015[69]	2	4	2	7 UB A	N	NA	NA	3	1	0%	3	3	2	2	3	3	3	1	1	1	1	2	3	C	C	1	2	Y

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Dunne 2016[70]	2	3	3	1	Y	Y	Y	1	2	NA	1	3	3	2	3	3	3	1	1	1	1	2	2	I	G	1	2	N
Jones 2013[71]	2	1	2	1	y	Y	Y	1	1	0	3	2	3	2	3	3	3	1	1	1	1	1	2	I	G	1	2	Y
Kapritsou 2017[72]	2	1	2	1	Y	Y	Y	1	2	NA	1	1	3	2	1	1	3	4	1	1	1	1	2	I	G	1	3	Y
Richardson 2015[73]	2	5	2	7 UBA	N	NA	NA	3	2	NA	1	2	2	2	1	3	2	3	4	3	1	1	2	C	C	1	3	Y
Sutcliffe 2015[74]	2	4	2	7 UBA	N	NA	NA	3	2	NA	1	3	3	2	3	3	3	1	1	1	1	2	2	C	C	1	2	N
Tanaka 2017[75]	2	5	2	1	Y	Y	Y	1	2	NA	1	1	1	3	1	1	1	1	1	1	1	1	3	I	G	1	2	Y
Various surgeries																												
Ellis 2012[76]	2	5	2	7 UBA	N	NA	NA	3	1	0%	3	3	3	2	2	2	3	4	1	1	1	2	2	C	C	1	1	N

Study (First Author, Date)	Are the individuals selected to participate in the study likely to be representative of the target population? 1=Very Likely, 2=Somewhat likely, 3=Not likely, 4=CT	What percentage of selected Is agreed to participate? (1=80 - 100% agreement, 2=60 – 79% agreement, 3=< 60% agreement, 4=NA, 5=CT)	Section rating (1 Strong, 2 Moderate, 3 Weak)	Study design (1=RCT, 2=CCT, 3=CA, 4=CC, 5=C, 6=ITS, 7=Other 8=CT)	Was the study described as randomized? (Y/N)	Was the method of randomization described? (Y/N/NA)	Was method of randomization appropriate? (Y/N/NA)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were there important differences between Groups prior to the intervention (1=Yes, 2=No, 3= CT)	Indicate the % of confounders that were controlled	Section rating (1= Strong, 2= Moderate, 3= Weak)	Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants? (1=Yes, 2=N, 3= CT)	Were the study participants aware of the research question? (1=Yes, 2=No, 3= CT)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were data collection tools shown to be valid? (Answer this for the means of determining LOS)(1=Yes, 2=No, 3= CT)	Were means of determining LOS reliable? (1=Yes, 2=No, 3= CT)	Section rating (1= Strong, 2= Moderate, 3= Weak)	Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group? (1=Yes, 2=No, 3= CT 4=NA)	Indicate the % of participants completing the study. (If the percentage differs by Gs, record the lowest) (1=80 -100%, 2=60 - 79%, 3= < 60%, 4=CT, 5=NA)	Section rating (1= Strong, 2= Moderate, 3= Weak)	What percentage of participants received the allocated intervention or exposure of interest? (1=80 -100%, 2=60 - 79%, 3= < 60%, 4=CT)	Was the consistency of the intervention measured? (1=Yes, 2=No, 3= CT)	Is it likely that subjects received an unintended intervention (contamination or co-intervention) (1=Yes, 2=No, 3= CT)	Indicate the unit of allocation (e.g. Community, Organisation/ institution, Individual)	Indicate the unit of analysis (e.g. Community, Organisation/ institution, Individual)	Are the statistical methods appropriate for the study design? (1=Yes, 2=No, 3= CT)	Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?(1=Yes, 2=No, 3= CT)	Is it clear how LOS is defined/calculated? (Y/N)
Vascular surgery																												
Muehling 2008[77]; 2009[78]; 2011[79],	2	5	2	1	Y	N	NA	3	2	NA	1	3	3	2	3	3	3	1	1	1	1	2	3	I	G	1	2; 1; 1	N
Partridge 2017[80]	1	1	1	1	1	Y	Y	1	1	100 %	1	1	3	2	2	2	1	1	1	1	1	2	3	I	G	1	1	N
C=Cohort; CA=C Analytic; CT=Can't Tell; CCT=Clinical Control Trial; G=Group; I=Individual; N=No; NA=Not Applicable; O=Organisation; R=Room; RCT=Randomised Controlled Trial; Y=Yes																												

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