

Supplementary data belonging to:

Effects of exercise-based cardiac rehabilitation delivery modes on exercise capacity and health-related quality of life in heart failure: a systematic review and network meta-analysis

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Abbreviations:

6MWD – Six-minute walk distance, ISWD – Incremental shuttle walk distance, VO₂peak – Peak oxygen uptake, MLHFQ – Minnesota Living with Heart Failure Questionnaire, SF-36 MCS – Short Form Survey 36 mental component score, SF-36 PCS – Short Form Survey 36 physical component score, KCCQ – Kansas City Cardiomyopathy Questionnaire, HF – Heart failure

Supplement 1 Characteristics of the included studies

Study	Country of study	Exercise program	Follow-up	Sample size	ExCR delivery	NYHA class	HF type
		duration (weeks)	duration (weeks)		modes		
Ajiboye 2015 ⁸⁷	Nigeria	12	12	51	CB, UC	NYHA II - III	Not reported
Aksoy 2015 ⁸⁸	Turkey	10	10	45	CB, UC	NYHA II - III	Not reported
Andryukhin 2010 ¹⁴⁶	Russia	24	24	85	HB, UC	NYHA I - III	HFpEF
Austin 2005 ¹³³	UK	24	24	200	CB, UC	NYHA II - III	Not reported
Azhar 2020 ¹⁶¹	USA	12	12	11	CB, UC	NYHA II - III	HFpEF
Barrow 2007 ¹³¹	UK	16	16	65	CB, UC	NYHA II - III	Not reported
Beckers 2010 ¹⁶²	Netherlands	12	52	53	HB, CB, UC	NYHA II - III	Not reported
Belardinelli 1999 ¹⁴⁵	Italy	60	60	99	CB, UC	NYHA I - IV	Not reported
Belardinelli 2005 ⁹¹	Italy	8	8	59	CB, UC	NYHA II - III	Not reported
Belardinelli 2006 ⁸⁹	Italy	8	78	52	CB, UC	NYHA II - III	Not reported
Belardinelli 2012 ⁹⁰	Italy	520	520	123	CB, UC	NYHA II - III	Not reported
Bernocchi 2018 ¹⁵²	Italy	16	26	112	HB, UC	NYHA II - IV	Not reported
Blumenthal 2012 ¹⁴⁰	USA, Canada & France	12	208	2,322	CB, UC	NYHA I - IV	Not reported
Borland 2014 ³⁰	Sweden	12	12	48	UC, HB	NYHA II - III	Not reported
Brubaker 2009 ¹⁴²	USA	16	16	59	CB, UC	NYHA II - III	HFrEF
Brubaker 2020 ²⁸	USA	16	16	116	UC, CB	NYHA II - III	HFrEF
Butterfield 2008 ⁹²	Australia	12	12	19	HB, UC	Not reported	Not reported
Chen 2018c ⁹³	China	24	24	62	CB, UC	NYHA II - IV	Not reported

Study	Country of study	Exercise program	Follow-up	Sample size	ExCR delivery	NYHA class	HF type
		duration (weeks)	duration (weeks)		modes		
Chen 2018t ⁹⁴	Taiwan	12	12	37	HB, UC	NYHA I - III	HFrEF
Chen 2018ta ¹³⁵	Taiwan	12	12	80	HB, UC	NYHA I - II	Not reported
Chien 2011 ⁹⁵	Taiwan	8	8	51	HB, UC	NYHA I - III	Not reported
Chou 2019 ⁹⁶	Taiwan	12	12	34	CB, UC	NYHA II - III	Not reported
Cider 2003 ¹³⁸	Sweden	8	8	25	CB, UC	NYHA II - III	Not reported
Corvera-Tindel 2004 ⁹⁷	USA	12	12	79	HB, UC	NYHA II - IV	Not reported
Dalal 2019 ⁹⁸	UK	12	52	216	HB, UC	NYHA I - III	HFrEF
Daskapan 2005 ⁹⁹	Turkey	12	12	22	HB, CB	NYHA II - III	Not reported
Davidson 2010 ¹⁴¹	Australia	12	12	105	HY, UC	NYHA I - III	Not reported
deMeirelles 2014 ¹³⁷	Brazil	24	26	30	CB, UC	NYHA II - III	Not reported
deMelloFranco 2006 ⁶³	Brazil	16	16	29	CB, UC	NYHA II - III	Not reported
Dracup 2007 ⁶⁷	USA	52	52	173	HB, UC	NYHA II - IV	Not reported
Du 2018 ⁵⁷	Australia	24	26	132	HB, UC	NYHA II - III	Not reported
Dubach 1997 ⁶⁶	Switzerland	8	8	25	CB, UC	NYHA II - III	Not reported
Dziekan 1998 ⁶⁵	Switzerland	8	8	20	CB, UC	NYHA II - III	Not reported
Edelmann 2011 ⁷⁴	Germany	12	12	64	CB, UC	NYHA II - III	HFpEF
Ellis 2020 ¹⁰⁰	Australia	8	8	47	CB, UC	NYHA I - III	Not reported
Erbs 2010 ⁶²	Germany	12	12	37	HB, UC	NYHA III	Not reported
Evangelista 2006 ⁶⁹	USA	24	26	99	HB, UC	NYHA II - IV	Not reported
Evans 2010 ⁷¹	UK	7	7	57	HB, UC	NYHA II - IV	Not reported

Study	Country of study	Exercise program	Follow-up	Sample size	ExCR delivery	NYHA class	HF type
		duration (weeks)	duration (weeks)		modes		
Flynn 2009 ¹⁵⁵	USA, Canada & France	12	208	2,331	CB, UC	NYHA I - IV	Not reported
Fraga 2007 ¹⁴⁷	Brazil	16	16	27	CB, UC	NYHA II - III	Not reported
Fu 2013 ¹⁰¹	Taiwan	12	12	45	CB, UC	NYHA II - III	Not reported
Gary 2004 ⁴⁴	USA	12	12	32	HB, UC	NYHA II - III	Not reported
Gary 2007 ⁶⁸	USA	12	12	23	HB, UC	NYHA II - III	Not reported
Gary 2010 ¹³⁶	USA	12	24	37	HB, UC	NYHA II - III	Not reported
Gary 2012 ¹⁵⁷	USA	12	12	24	HB, UC	NYHA II - III	Not reported
Giannuzzi 2003 ¹⁴⁴	Italy	24	26	90	HB, UC	NYHA II - III	Not reported
Gielen 2003 ¹⁰²	Switzerland	24	26	20	HB, UC	NYHA II - III	Not reported
Glowczynska 2021 ¹⁵⁴	Poland	9	9	782	TE, UC	NYHA I - III	Not reported
Guazzi 2004 ³⁶	Italy	8	16	31	CB, UC	NYHA I - III	Not reported
Hambrecht 2000 ³⁹	Germany	24	26	73	HB, UC	NYHA I - III	Not reported
Hambrecht 2005 ³⁷	Germany	24	26	18	HB, UC	NYHA II - III	Not reported
Hasanpour-Dehkordi 2020 ¹⁶⁵	Iran	24	24	52	CB, UC	NYHA II - III	Not reported
Hollriegel 2016 ⁵³	Germany	52	52	37	HB, UC	NYHA III	Not reported
Hwang 2017 ³⁸	Australia	12	24	53	CB, TE	NYHA I - III	HFpEF & HFrEF
Jaarsma 2021 ¹²⁸	Sweden, Italy, Israel,	12	52	605	HB, UC	NYHA I - IV	Not reported
	Netherlands, Germany & USA						
Jolly 2009 ¹³⁴	UK	24	52	169	HB, UC	NYHA I - III	Not reported
Jones 2014 ¹³²	USA, Canada & France	12	208	90	CB, UC	NYHA I - IV	Not reported

Study	Country of study	Exercise program	Follow-up	Sample size	ExCR delivery	NYHA class	HF type
		duration (weeks)	duration (weeks)		modes		
Jonsdottir 2006 ⁴⁷	Iceland	20	52	43	CB, UC	NYHA II - III	Not reported
Kaltsatou 2014 ¹⁰³	Greek	32	34	51	CB, UC	NYHA II - III	Not reported
Karapolat 2009 ⁷⁰	Turkey	8	8	68	HB, CB	NYHA II - III	Not reported
Keteyian 1996 ³⁵	USA	24	24	29	CB, UC	NYHA II - III	Not reported
Kiilavuori 1999 ⁸¹	Finland	24	26	27	HY, UC	NYHA II - III	Not reported
Kitzman 2010 ⁴¹	USA	16	16	53	CB, UC	NYHA II - III	HFpEF
Kitzman 2013 ⁴⁰	USA	16	16	63	CB, UC	NYHA II - III	HFpEF
Kitzman 2016 ⁴³	USA	20	20	100	CB, UC	NYHA II - III	HFpEF
Kitzman 2021 ⁴²	USA	12	26	349	CB, UC	NYHA II - IV	Not reported
Klecha 2007 ⁸²	Poland	24	26	50	CB, UC	NYHA II - III	Not reported
Klocek 2005 ⁸⁵	Poland	24	26	42	CB, UC	NYHA II - III	Not reported
Koukouvou 2004 ⁷⁹	Greek	24	26	26	CB, UC	NYHA II - III	Not reported
Kulcu 2007 ⁷⁵	Turkey	8	8	44	CB, UC	NYHA II - III	Not reported
Lang 2018 ¹⁵⁹	UK	12	26	50	HB, UC	NYHA II - III	HFpEF
Lans 2018 ¹⁵⁰	Sweden	12	52	22	HB, CB	NYHA II - III	Not reported
Maiorana 2011 ³⁴	Australia	12	12	36	CB, UC	NYHA I - III	Not reported
Maldonado-Martin 2017 ¹³⁰	USA	16	16	47	CB, UC	NYHA II - III	HFpEF
Mandic 2009 ¹⁰⁴	Canada	12	12	42	CB, UC	NYHA I - III	Not reported
McKelvie 2002 ⁶⁰	Canada	52	52	181	HB, UC	NYHA I - III	Not reported
Mezzani 2013 ¹⁰⁵	Italy	12	12	30	HB, UC	NYHA II - III	Not reported

Study	Country of study	Exercise program duration (weeks)	Follow-up duration (weeks)	Sample size	ExCR delivery modes	NYHA class	HF type
Mudge 2018 ³¹	Australia	12	52	278	HB, HY	NYHA I - IV	HFpEF & HFrEF
Mueller 2007 ¹⁰⁶	Switzerland	4	322	50	CB, UC	Not reported	Not reported
Mueller 2021 ⁵⁶	Germany, Belgium & Norway	52	52	176	TE, UC	NYHA II - III	HFpEF
Muller 2009 ¹⁰⁷	Switzerland	4	322	16	CB, UC	NYHA II - III	Not reported
Myers 2001 ⁷⁶	Switzerland	8	8	24	CB, UC	NYHA II - III	Not reported
Myers 2007 ¹⁰⁸	Switzerland	8	8	24	CB, UC	NYHA II - III	Not reported
Myers 2012 ⁷³	Switzerland	8	8	50	CB, UC	NYHA II - III	Not reported
Nilsson 2008 ⁷⁸	Norway	16	16	80	CB, UC	NYHA II - III	Not reported
Nilsson 2010 ¹⁰⁹	Norway	16	16	78	CB, UC	NYHA II - III	Not reported
Nolte 2015 ¹¹⁰	Germany	12	12	64	CB, UC	NYHA II - III	HFpEF
Norman 2020 ¹⁵¹	USA	76	78	204	CB, UC	NYHA I - IV	Not reported
O'Connor 2009 ¹⁵⁸	USA, Canada & France	12	208	2,331	CB, UC	NYHA I - IV	Not reported
Oka 2000 ¹¹¹	USA	12	12	40	HB, UC	NYHA II - III	Not reported
Passino 2006 ¹¹²	Italy	36	39	85	HB, UC	NYHA I - III	Not reported
Passino 2008 ⁵⁸	Italy	36	39	90	HB, UC	NYHA I - III	Not reported
Patwala 2009 ¹¹³	UK	12	12	50	CB, UC	NYHA II - IV	Not reported
Peng 2018 ⁸⁴	China	8	16	98	TE, UC	NYHA I - III	Not reported
Piotrowicz 2010 ¹⁵³	Poland	8	8	131	CB, TE	NYHA II - III	Not reported
Piotrowicz 2015 ³³	Poland	8	8	107	TE, UC	NYHA II - III	Not reported

Study	Country of study	Exercise program duration (weeks)	Follow-up duration (weeks)	Sample size	ExCR delivery modes	NYHA class	HF type
Piotrowicz 2015b ¹⁶⁶	Poland	8	8	131	CB, TE	NYHA II - III	Not reported
Piotrowicz 2016 ¹³⁹	Poland	8	8	69	TE, UC	NYHA II - III	Not reported
Piotrowicz 2020 ¹⁶³	Poland	9	104	850	TE, UC	NYHA I - III	Not reported
Pourhabib 2018 ⁵⁹	Iran	12	12	53	CB, UC	NYHA II - III	Not reported
Pozehl 2010 ³²	USA	12	12	42	CB, UC	NYHA II - III	Not reported
Pullen 2008 ¹¹⁴	USA	8	8	19	HY, UC	NYHA I - III	Not reported
Pullen 2010 ²⁹	USA	8	8	40	CB, UC	NYHA I - III	Not reported
Quittan 1999 ⁵⁴	Austria	12	12	25	CB, UC	NYHA I - III	Not reported
Redwine 2019 ¹¹⁵	USA	16	16	70	CB, UC	Not reported	HFpEF & HFrEF
Reeves 2017 ¹⁵⁶	USA	12	26	27	CB, UC	Not reported	Not reported
Ricca-Mallada 2017 ⁵¹	Uruguay	24	24	34	CB, UC	NYHA I - III	Not reported
Roveda 2003 ⁵⁵	Brazil	16	16	16	CB, UC	NYHA II - III	Not reported
Sabelis 2004a ¹¹⁶	Netherlands	26	26	29	HY, UC	NYHA II - III	Not reported
Sabelis 2004b ¹¹⁷	Netherlands	26	26	61	HY, UC	NYHA II - III	Not reported
Sadek 2020 ¹¹⁸	Lebanon	12	12	20	CB, UC	NYHA II - III	Not reported
Safiyari-Hafizi 2016 ⁵⁰	Canada	12	12	40	HB, UC	NYHA I - III	Not reported
Santa-Clara 2019 ⁸⁰	Portugal	24	26	37	CB, UC	NYHA II - IV	Not reported
Santos 2010 ¹¹⁹	Brazil	16	16	23	CB, UC	NYHA I - III	Not reported

Study	Country of study	Exercise program	Follow-up	Sample size	ExCR delivery	NYHA class	HF type
		duration (weeks)	duration (weeks)		modes		
Senden 2005 ¹²⁰	Netherlands	26	26	61	HY, UC	NYHA II - III	Not reported
Servantes 2012 ¹²¹	Brazil	12	12	45	HB, UC	NYHA II - III	Not reported
Servantes 2018 ⁴⁸	Brazil	12	12	37	CB, UC	NYHA II - III	Not reported
Shoemaker 2017 ⁸⁶	USA	12	39	10	HB, UC	NYHA II - III	Not reported
Silva 2002 ¹⁶⁴	Brazil	12	12	24	CB, UC	NYHA I - III	Not reported
Smart 2012 ⁴⁹	Australia	16	16	25	CB, UC	NYHA I - II	HFpEF
Smolis-Bak 2015 ⁶¹	Poland	12	52	52	TE, UC	NYHA III	Not reported
Smolis-Bak 2017 ⁴⁶	Poland	24	78	84	CB, UC	NYHA III	Not reported
Spee 2016 ¹⁴³	Netherlands	12	12	26	CB, UC	NYHA I - III	Not reported
Spee 2020 ¹²²	Netherlands	12	12	24	CB, UC	NYHA II - III	Not reported
Sturm 1999 ¹⁴⁸	Austria	12	12	26	CB, UC	NYHA II - III	Not reported
Tyni-Lenne 1996 ⁵²	Sweden	12	8	21	CB, UC	NYHA II - III	Not reported
Tyni-Lenne 2001 ⁸³	Sweden	8	8	24	CB, UC	NYHA II - III	Not reported
Vordos 2017 ⁷⁷	Greek	12	12	33	CB, UC	NYHA I - II	Not reported
Wielenga 1999 ⁷²	Netherlands	12	12	67	CB, UC	NYHA II - III	Not reported
Willenheimer 1998 ¹⁶⁰	Sweden	16	16	49	CB, UC	NYHA I - III	Not reported
Willenheimer 2001 ¹²³	Sweden	16	43	37	CB, UC	NYHA I - IV	Not reported
Williams 2007 ¹²⁴	Australia	12	12	13	CB, UC	NYHA II - III	Not reported
Witham 2005 ¹²⁶	UK	24	26	82	HY, UC	NYHA II - III	Not reported
Witham 2007 ¹²⁵	UK	24	82	82	HY, UC	NYHA II - III	Not reported

Study	Country of study	Exercise program duration (weeks)	Follow-up duration (weeks)	Sample size	ExCR delivery modes	NYHA class	HF type
Xueyu 2017 ¹²⁷	China	12	12	78	HB, UC	NYHA II - III	Not reported
Yeh 2004 ⁴⁵	USA	12	12	30	CB, UC	NYHA I - IV	Not reported
Yeh 2008 ⁶⁴	USA	12	12	30	HY, UC	NYHA I - IV	Not reported
Yeh 2011 ¹⁴⁹	USA	12	12	100	CB, UC	NYHA I - III	Not reported
Zeitler 2015 ¹²⁹	USA, Canada & France	12	208	1,213	CB, UC	NYHA II – IV	Not reported

CB – Centre-based ExCR, HB – Home-based ExCR, HY – Hybrid ExCR, TE – Technology-enabled ExCR and UC – Usual care

HFpEF – Heart Failure with preserved Ejection Fraction, and HFrEF – Heart Failure with reduced Ejection Fraction

NYHA – New York Heart Association Functional Classification

Supplement 2 GRADE assessments

Comparison	Within-study bias	Reporting bias	Indirectness	Imprecision	Heterogeneity	Incoherence	Confidence rating
6MWD							
CB vs HB	Some concerns	No concerns	No concerns	No concerns	No concerns	No concerns	High
CB vs TE	Some concerns	No concerns	No concerns	No concerns	No concerns	No concerns	High
CB vs UC	Some concerns	No concerns	No concerns	No concerns	No concerns	No concerns	High
HB vs TE	Some concerns	No concerns	No concerns	No concerns	No concerns	No concerns	High
HB vs HY	Major concerns	No concerns	Some concerns	No concerns	No concerns	No concerns	Moderate
HB vs UC	Some concerns	No concerns	No concerns	No concerns	Major concerns	No concerns	Moderate
HY vs UC	Major concerns	Some concerns	Some concerns	No concerns	No concerns	No concerns	Moderate
TE vs UC	Major concerns	Some concerns	No concerns	Some concerns	No concerns	No concerns	Moderate
CB vs HY	Major concerns	Some concerns	No concerns	Some concerns	No concerns	No concerns	Moderate
HY vs TE	Major concerns	Some concerns	No concerns	Some concerns	No concerns	No concerns	Moderate
ISWD							
HB vs UC	Some concerns	No concerns	No concerns	No concerns	Major concerns	No concerns	Moderate
CB vs UC	Major concerns	Some concerns	No concerns	Major concerns	No concerns	No concerns	Low
CB vs HB	Major concerns	Some concerns	No concerns	Major concerns	No concerns	No concerns	Low
VO₂peak							
CB vs UC	Some concerns	No concerns	Some concerns	No concerns	No concerns	No concerns	High
CB vs HY	Some concerns	No concerns	Some concerns	No concerns	No concerns	No concerns	High
CB vs HB	Major concerns	No concerns	Some concerns	Some concerns	No concerns	No concerns	Moderate
CB vs TE	Major concerns	No concerns	Some concerns	Some concerns	No concerns	No concerns	Moderate
HB vs UC	Major concerns	No concerns	Some concerns	No concerns	No concerns	No concerns	Moderate

HY vs UC	Major concerns	Some concerns	No concerns	Some concerns	No concerns	No concerns	Moderate
HB vs TE	Major concerns	No concerns	Some concerns	Some concerns	No concerns	No concerns	Moderate
TE vs UC	Major concerns	Some concerns	Some concerns	No concerns	Major concerns	No concerns	Low
HB vs HY	Major concerns	Some concerns	Some concerns	Major concerns	No concerns	No concerns	Low
HY vs TE	Major concerns	Some concerns	Some concerns	Major concerns	No concerns	No concerns	Low
MLHFQ							
CB vs UC	Some concerns	No concerns	No concerns	No concerns	No concerns	No concerns	High
HY vs UC	Some concerns	Some concerns	No concerns	No concerns	No concerns	No concerns	High
TE vs UC	Some concerns	No concerns	No concerns	Some concerns	No concerns	No concerns	High
CB vs TE	Some concerns	No concerns	Some concerns	Major concerns	No concerns	No concerns	Moderate
CB vs HB	Some concerns	No concerns	Some concerns	No concerns	Major concerns	No concerns	Moderate
CB vs HY	Some concerns	Some concerns	No concerns	Major concerns	No concerns	No concerns	Moderate
HB vs HY	Some concerns	Some concerns	No concerns	Major concerns	No concerns	No concerns	Moderate
HB vs TE	Some concerns	Some concerns	No concerns	Major concerns	No concerns	No concerns	Moderate
HY vs TE	Some concerns	Some concerns	No concerns	Major concerns	No concerns	No concerns	Moderate
HB vs UC	Major concerns	Some concerns	No concerns	No concerns	Major concerns	No concerns	Low
KCCQ							
CB vs UC	Some concerns	No concerns	No concerns	Some concerns	No concerns	No concerns	High
HB vs UC	Major concerns	No concerns	No concerns	No concerns	Some concerns	No concerns	Moderate
TE vs UC	Major concerns	No concerns	Some concerns	No concerns	Some concerns	No concerns	Moderate
CB vs HB	Some concerns	No concerns	Some concerns	No concerns	Major concerns	No concerns	Moderate
CB vs TE	Major concerns	Some concerns	Some concerns	Major concerns	No concerns	No concerns	Low
HB vs TE	Major concerns	Some concerns	Some concerns	Major concerns	No concerns	No concerns	Low

SF-36 mental component							
CB vs HB	Some concerns	No concerns	No concerns	No concerns	No concerns	No concerns	High
CB vs TE	Major concerns	No concerns	No concerns	No concerns	No concerns	No concerns	Moderate
CB vs UC	Some concerns	No concerns	Some concerns	No concerns	Major concerns	No concerns	Moderate
HB vs TE	Major concerns	No concerns	No concerns	No concerns	No concerns	No concerns	Moderate
HB vs UC	Some concerns	No concerns	Some concerns	No concerns	No concerns	No concerns	High
TE vs UC	Major concerns	No concerns	No concerns	No concerns	No concerns	No concerns	Moderate
SF-36 physical component							
CB vs HB	Some concerns	No concerns	No concerns	No concerns	Some concerns	No concerns	High
CB vs TE	Major concerns	No concerns	Some concerns	No concerns	No concerns	No concerns	Moderate
CB vs UC	Some concerns	No concerns	Some concerns	No concerns	Major concerns	No concerns	Moderate
HB vs UC	Some concerns	No concerns	No concerns	No concerns	No concerns	No concerns	High
HB vs TE	Some concerns	No concerns	Some concerns	No concerns	No concerns	No concerns	High
TE vs UC	Major concerns	No concerns	Some concerns	No concerns	No concerns	No concerns	Moderate
HF-related hospitalization							
CB vs UC	Some concerns	No concerns	No concerns	No concerns	Some concerns	No concerns	High
HB vs UC	Some concerns	No concerns	No concerns	No concerns	Some concerns	No concerns	High
CB vs HB	Some concerns	No concerns	No concerns	No concerns	Some concerns	No concerns	High
CB vs HY	Some concerns	No concerns	No concerns	Major concerns	No concerns	No concerns	Moderate
CB vs TE	Major concerns	No concerns	No concerns	Some concerns	No concerns	No concerns	Moderate
HB vs TE	Major concerns	No concerns	No concerns	Some concerns	No concerns	No concerns	Moderate
HY vs TE	Major concerns	No concerns	No concerns	Some concerns	Some concerns	No concerns	Moderate
HY vs UC	Major concerns	No concerns	Some concerns	Some concerns	No concerns	No concerns	Moderate

HB vs HY	Major concerns	No concerns	Some concerns	Major concerns	No concerns	No concerns	Low
TE vs UC	Major concerns	No concerns	Some concerns	No concerns	Major concerns	Some concerns	Low
HF-related mortality							
CB vs UC	Major concerns	No concerns	No concerns	No concerns	No concerns	No concerns	Moderate
HB vs UC	Some concerns	No concerns	No concerns	Major concerns	No concerns	No concerns	Moderate
CB vs HB	Some concerns	No concerns	No concerns	Major concerns	No concerns	No concerns	Moderate
HY vs UC	Major concerns	No concerns	No concerns	Major concerns	No concerns	No concerns	Low
HB vs HY	Major concerns	Some concerns	No concerns	Major concerns	No concerns	No concerns	Low
CB vs HY	Major concerns	Some concerns	No concerns	Major concerns	No concerns	No concerns	Low

CB – Centre-based ExCR, HB – Home-based ExCR, HY – Hybrid ExCR, TE – Technology-enabled ExCR and UC – Usual care

GRADE rating ²⁵:

High —high confidence the true effect is similar to the estimated effect

Moderate —the true effect is probably close to the estimated effect

Low —the true effect may be substantially different from the estimated effect

Very low —the true effect is likely to be substantially different from the estimated effect

Downgrading GRADE domains: No concerns, Some concerns, and Major concerns

1) Within-study bias

In the GRADE assessment table, high risk of bias obtained from the risk of bias assessment was taken as “**Major concerns**”, some concerns as “**Some concerns**”, and low risk of bias as “**No concerns**”.

2) Reporting bias

The “Reporting bias” domain refers to biases that can occur due to publication bias. Judgement of reporting bias was based on asymmetry in funnel plot and Egger’s regression test.

- **No concerns:** No asymmetry in funnel plot and Egger’s test doesn’t indicate funnel plot asymmetry
- **Some concerns:** Asymmetry in funnel plot, but Egger’s test doesn’t indicate funnel plot asymmetry
- **Major concerns:** Asymmetry in funnel plot, and Egger’s test indicates funnel plot asymmetry

3) Indirectness

Indirectness is measured based on differences in population/intervention/outcome measurement that could modify treatment effect.

- **No concerns:** No difference in population or intervention or outcome measurement.
- **Some concerns:** If there is difference in one of the three characteristics (study populations, interventions, and outcome measurement)
- **Major concerns:** If there are two or more differences in any combination (study populations, interventions, and outcome measurement)

4) Imprecision

Imprecision is assessed by 95% confidence intervals which may include values that could lead to different clinical conclusions. The rules for judging imprecision are based on whether the confidence interval includes the line of no-effect and the clinically important values.

- **No concerns:** Confidence interval lies entirely between the two clinically important values or only include the clinically important value that favours the same intervention as the point estimate
- **Some concerns:** Confidence interval crosses the line of no-effect and extends into clinically important effect
- **Major concerns:** Confidence interval crosses the line of no-effect and extends into clinically important effects in **both** directions

5) Heterogeneity

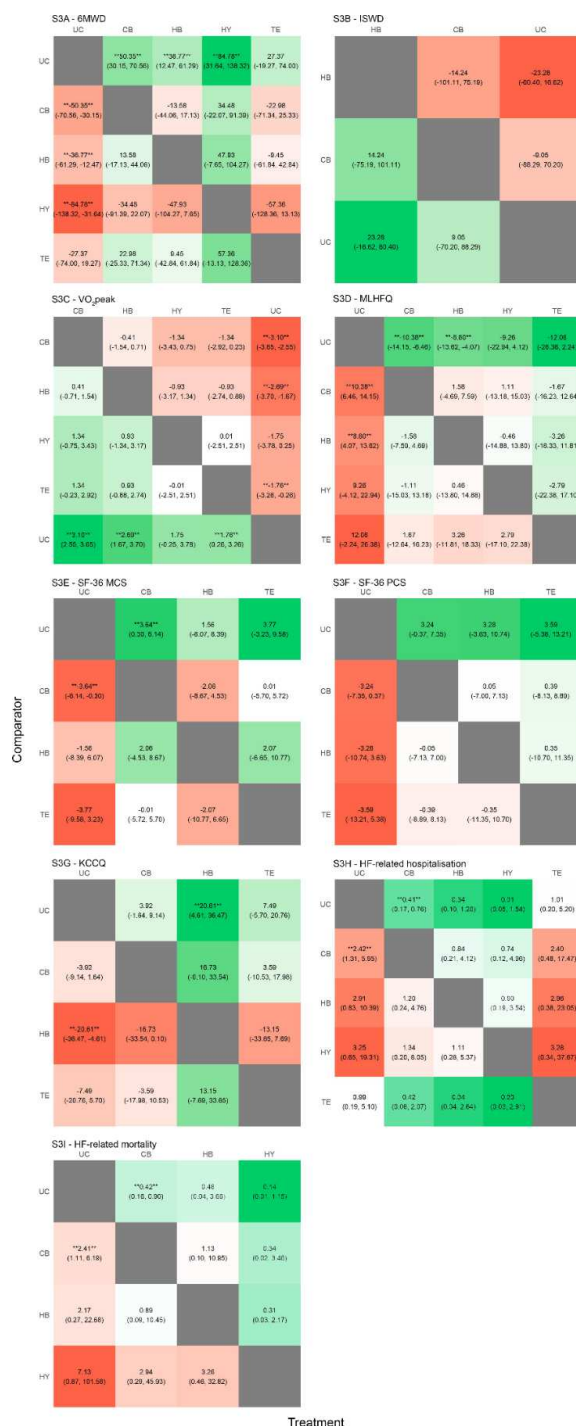
Heterogeneity was judged based on confidence and prediction intervals in relation to the null effect and the clinically important effect on the opposite direction to the point estimate.

- **No concerns:** Confidence and prediction intervals **agree** in relation to clinically important effect
- **Some concerns:** Prediction interval **extends into clinically important or unimportant effects**
- **Major concerns:** Prediction interval extends into clinically important effects in **both** directions

6) Incoherence

Incoherence (the disagreement between direct and indirect evidence) was assessed based on three factors: similarity of point estimates, overlap of confidence intervals and statistical test comparing these two estimates. This was determined by the *p* value: if the *p* value is <0.05 then “**Major concerns**”, if between 0.05 and 0.10 then “**Some concerns**”, otherwise “**No concerns**”.

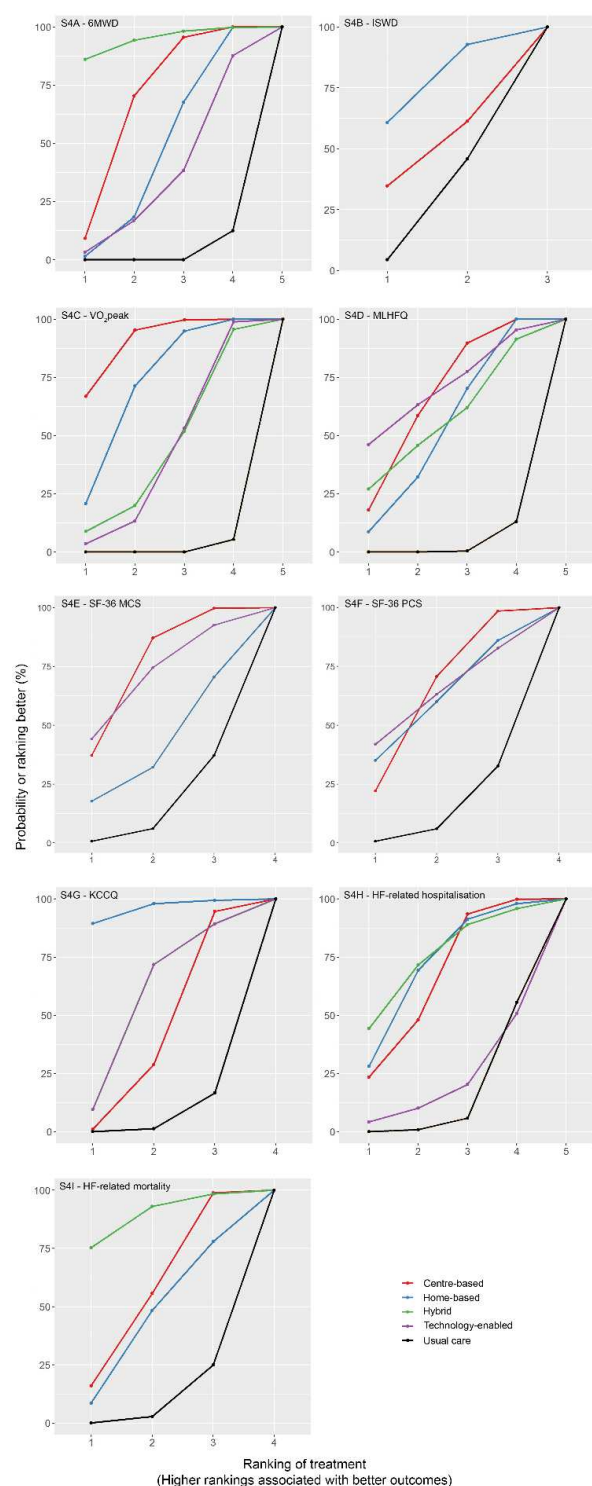
Supplement 3 League table heatmaps of mean differences and/or odds ratios with 95% credible intervals



CB – Centre-based ExCR, HB – Home-based ExCR, HY – Hybrid ExCR, TE – Technology-enabled ExCR and UC – Usual care

Green: good effect, White: no effect, Red: bad effect, **: statistically significant (P<0.05)

Supplement 4 Cumulative ranking probability (SUCRA) plots



CB – Centre-based ExCR, HB – Home-based ExCR, HY – Hybrid ExCR, TE – Technology-enabled ExCR
and UC – Usual care