

GRADE and GRADE-CERQual tables for review question: D.2a What are the best methods to deliver and coordinate rehabilitation services and social services for adults with complex rehabilitation needs after traumatic injury when they transfer from inpatient to outpatient rehabilitation services?

GRADE tables for quantitative evidence

Table 17: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: Multidisciplinary care versus Usual care

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multidisciplinary care	Usual care	Relative (95% CI)	Absolute		
Return to work or education (measured using number of participants who had returned to work) - At 6 months post-discharge												
1 (Browne 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	None	16/31 (51.6%)	26/35 (74.3%)	RR 0.69 (0.47 to 1.03)	230 fewer per 1000 (from 394 fewer to 22 more)	VERY LOW	CRITICAL
Length of hospital stay (days) (Better indicated by lower values)												
1 (Browne 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	None	31	35	-	MD 1.20 higher (4.55 lower to 6.95 higher)	VERY LOW	CRITICAL
Changes in ADL (measured using number of participants with impairment of ADL) - At 6 months post-discharge												
1 (Browne 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ³	None	16/31 (51.6%)	16/35 (45.7%)	RR 1.13 (0.69 to 1.85)	59 more per 1000 (from 142 fewer to 389 more)	VERY LOW	IMPORTANT
Changes in ADL (measured using FIM; range between 18-126; better indicated by higher values) - At 6 months post-discharge												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multidisciplinary care	Usual care	Relative (95% CI)	Absolute		
1 (Browne 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	None	31	35	-	MD 0.27 lower (2.38 lower to 1.84 higher)	VERY LOW	IMPORTANT

ADL: Activities of daily living; CI: Confidence interval; FIM: Functional Independence Measure; MD: Mean difference RR: Risk ratio

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 95% CI crosses 1 MID (for number of participants returned to work 0.8 or 1.25; for hospital length of stay +/- 5.415; for FIM +/- 1.99)

3 95% CI crosses 2 MIDs (0.8 and 1.25)

Table 18: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: MDT care + structured assessment and checklist versus MDT care only

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	MDT care + structured assessment + checklist	MDT care only	Relative (95% CI)	Absolute		
Patient satisfaction (measured using a 5-point Likert scale; range 15-75; better indicated by higher values) – At discharge												
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	85	64	-	MD 1.20 higher (1.48 lower to 3.88 higher)	LOW	CRITICAL
Overall quality of life (measured using SF-12 physical component; range 0-100; better indicated by higher values) - At 6 months												
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	85	64	-	MD 0.7 higher (2.31 lower to 3.71 higher)	LOW	IMPORTANT
Overall quality of life (measured using SF-12 physical component; range 0-100; better indicated by higher values) - At 12 months												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	MDT care + structured assessment + checklist	MDT care only	Relative (95% CI)	Absolute		
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	70	59	-	MD 0.2 lower (3.59 lower to 3.19 higher)	LOW	IMPORTANT
Overall quality of life (measured using SF-12 mental component; range 0-100; better indicated by higher values) - At 6 months												
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	85	64	-	MD 2.2 higher (0.8 lower to 5.2 higher)	VERY LOW	IMPORTANT
Overall quality of life (measured using SF-12 mental component; range 0-100; better indicated by higher values) - At 12 months												
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	70	59	-	MD 1.4 lower (5.17 lower to 2.37 higher)	LOW	IMPORTANT
Changes in ADL (measured using MBI score; range 0-100; better indicated by higher values) - At discharge (exact time point not reported)												
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	85	64	-	MD 1.7 lower (7.79 lower to 4.39 higher)	LOW	IMPORTANT
Changes in ADL (measured using MBI score; range 0-100; better indicated by higher values) - At 6 months												
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	75	54	-	MD 4.9 higher (2.41 lower to 12.21 higher)	VERY LOW	IMPORTANT
Changes in ADL (measured using MBI score; range 0-100; better indicated by higher values) - At 12 months												
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	50	-	MD 1.6 higher (5.99 lower to	LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	MDT care + structured assessment + checklist	MDT care only	Relative (95% CI)	Absolute		
										9.19 higher)		
Changes in ADL (measured using Montebello Rehab Factor score; scale not reported; better indicated by higher values) - At discharge (exact time point not reported)												
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	85	64	-	MD 3.4 lower (13.96 lower to 7.16 higher)	LOW	IMPORTANT
Changes in ADL (measured using Montebello Rehab Factor score; scale not reported; better indicated by higher values) - At 6 months												
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	75	54	-	MD 6 higher (7 lower to 19 higher)	LOW	IMPORTANT
Changes in ADL (measured using Montebello Rehab Factor score; scale not reported; better indicated by higher values) - At 12 months												
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	50	-	MD 1.9 lower (15.3 lower to 11.5 higher)	LOW	IMPORTANT

ADL: Activities of daily living; CI: Confidence interval; MDT: Multidisciplinary team; MBI: Modified Barthel Index; SF-12: 12-item short-form survey

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 95% CI crosses 1 MID (for SF-12 mental component at 6 months +/-4.6; for MBI score at 6 months +/-10.3)

Table 19: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: MDT care + structured assessment and checklist versus MDT care only

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	MDT + structured assessment + checklist	MDT only	MDT care + structured assessment + checklist	MDT care only		
Length of hospital stay in days (Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	MDT + structured assessment + checklist	MDT only	MDT care + structured assessment + checklist	MDT care only		
1 (Chong 2013)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	92	70	Median (range): 35.0 (5-402) ³	Median (range): 48.0 (10-382) ³	VERY LOW	CRITICAL

MDT: Multidisciplinary team

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 Imprecision could not be assessed using MIDAs due to no reporting of SD and no published MIDAs so was instead assessed using the sample size: The result was not downgraded if $n \geq 400$, if $n = 399-200$, the result was downgraded 1 level, and if $n < 200$ the result was downgraded by 2 levels.

3 According to the statistical analyses performed by the author, the median difference was statistically significantly shorter in the intervention group ($p = 0.009$, statistical test not reported). No mention was made of clinical importance.

Table 20: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: Multidisciplinary care pathway versus Standard care

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multidisciplinary care pathway	Standard care	Multidisciplinary care pathway	Standard care		
Length of hospital stay in days (Better indicated by lower values)												
1 (Flikweert 2014)	observational studies	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	256	145	Median (IQR): 7 (6-10) ²	Median (IQR): 11 (7-16) ²	MODE RATE	CRITICAL

IQR: Interquartile range

1 Serious risk of bias in the evidence contributing to the outcomes as per ROBINS-I

2 According to the statistical analyses performed by the author, the median difference was statistically significantly shorter in the intervention group ($p < 0.001$, unsure of statistical test*). No mention was made of clinical importance.

*The authors report in their tabulated results that they analysed these data with an independent t-test, which would be inappropriate for non-parametric data. However, the paper states in the Analysis section that "For continuous variables, the intervention and control groups were compared with the independent sample t-test or, if appropriate, the Mann-Whitney U-test." (page 4). Due to this sentence and the majority of estimates being reported as means, we have assumed this is simply a reporting oversight on behalf of the authors.

Table 21: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: Traumatic Clinical Care Coordination (TCCC) versus No TCCC

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	TCCC	No TCCC	Relative (95% CI)	Absolute		
Length of hospital stay in days (Better indicated by lower values)												
1 (Hall 2018)	observational studies	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	475	21207	-	MD 7 higher (5.82 to 8.18 higher)	LOW	CRITICAL

CI: Confidence interval; MD: Mean difference; TCCC: Traumatic Clinical Care Coordination

¹ Very serious risk of bias in the evidence contributing to the outcomes as per ROBINS-I

Table 22: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: Discharge planning with gerontological nurse versus Routine discharge planning

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Discharge planning with gerontological nurse	Routine discharge planning	Relative (95% CI)	Absolute		
Length of hospital stay (days) - At 3 months (Better indicated by lower values)												
1 (Huang 2005)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	63	63	-	MD 1.89 lower (3.06 to 0.72 lower)	LOW	CRITICAL
Overall quality of life (measured using SF-36; range 0-100; better indicated by higher values) - At discharge												
1 (Huang 2005)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	63	59	-	MD 6 higher (2.85 to 9.15 higher)	LOW	IMPORTANT
Overall quality of life (measured using SF-36; range 0-100; better indicated by higher values) - At 2 weeks post-discharge												
1 (Huang 2005)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	63	59	-	MD 7.46 higher (4.18 to	MODE RATE	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Discharge planning with gerontological nurse	Routine discharge planning	Relative (95% CI)	Absolute		
										10.74 higher)		
Overall quality of life (measured using SF-36; range 0-100; better indicated by higher values) - At 3 months post-discharge												
1 (Huang 2005)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	63	59	-	MD 9.52 higher (5.58 to 13.46 higher)	MODE RATE	IMPORTANT
Changes in ADL (measured using Barthel Index; range 0-100; better indicated by higher values) - At discharge												
1 (Huang 2005)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	63	59	-	MD 10.1 higher (4.86 to 15.34 higher)	MODE RATE	IMPORTANT
Changes in ADL (measured using Barthel Index; range 0-100; better indicated by higher values) - At 2 weeks post-discharge												
1 (Huang 2005)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	63	59	-	MD 14.68 higher (8.21 to 21.15 higher)	MODE RATE	IMPORTANT
Changes in ADL (measured using Barthel Index; range 0-100; better indicated by higher values) - At 3 months post-discharge												
1 (Huang 2005)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	63	59	-	MD 16.2 higher (8.95 to 23.45 higher)	MODE RATE	IMPORTANT

CI: Confidence interval; MD: Mean difference; SF-36: 36-item short-form survey

1 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 95% CI crosses 1 MID (for length of hospital stay +/-1.54; for SF-36 +/- 3.895)

Table 23: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: Comprehensive discharge planning versus Routine discharge planning

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Comprehensive discharge planning	Routine discharge planning	Relative (95% CI)	Absolute		
Patient satisfaction (measured using research designed questionnaire; range 14-70; better indicated by higher values) - Time point not reported												
1 (Lin 2009)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	26	24	-	MD 2.73 higher (3.74 lower to 9.2 higher)	VERY LOW	CRITICAL
Length of hospital stay in days - At 3 months (Better indicated by lower values)												
1 (Lin 2009)	randomised trials	serious ³	no serious inconsistency	no serious indirectness	serious ²	none	26	24	-	MD 0.25 lower (1.52 lower to 1.02 higher)	LOW	CRITICAL
Changes in ADL (measured using Functional Status Subscale; range 0-18; better indicated by higher values) - Before discharge												
1 (Lin 2009)	randomised trials	serious ³	no serious inconsistency	no serious indirectness	very serious ⁴	none	26	24	-	MD 0.15 higher (1.07 lower to 1.37 higher)	VERY LOW	IMPORTANT
Changes in ADL (measured using Functional Status Subscale; range 0-18; better indicated by higher values) - At 2 weeks post-discharge												
1 (Lin 2009)	randomised trials	serious ³	no serious inconsistency	no serious indirectness	very serious ⁴	none	26	24	-	MD 1.12 higher (0.92 lower to 3.16 higher)	VERY LOW	IMPORTANT
Changes in ADL (measured using Functional Status Subscale; range 0-18; better indicated by higher values) - At 3 months post-discharge												
1 (Lin 2009)	randomised trials	serious ³	no serious inconsistency	no serious indirectness	very serious ⁴	none	26	24	-	MD 0.09 higher (0.78 lower to 0.96 higher)	VERY LOW	IMPORTANT

CI: Confidence interval; MD: Mean difference

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 95% CI crosses 1 MID (for patient satisfaction +/- 6.305; for length of hospital stay +/- 1.085)

3 Serious risk of bias in the evidence contributing to the outcomes as per RoB2

4 95% CI crosses 2 MIDs (for Functional Status subscale +/- 0.355)

Table 24: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: Supported discharge team care versus Usual care

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Supported discharge team care	Usual care	Relative (95% CI)	Absolute		
Length of hospital stay in days (Better indicated by lower values)												
1 (Parsons 2019)	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	201	202	-	MD 5.7 lower (10.06 to 1.34 lower)	MODERATE	CRITICAL

CI: Confidence interval; MD: Mean difference

1 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 25: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: More intensive MDT care versus Less intensive MDT care

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	More intensive MDT care	Less intensive MDT care	More intensive MDT care	Less intensive MDT care		
Overall quality of life (measured using EQ-5D; scale not reported; better indicated by higher values) - At 3 months												
1 (Ryan 2006a)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	30	28	Median (IQR): 0.62 (0.52-0.77) ³	Median (IQR): 0.67 (0.59-0.79) ³	VERY LOW	IMPORTANT
Overall quality of life (measured using EQ-5D; scale not reported; better indicated by higher values) - At 12 months												
1 (Ryan 2006b)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	30	28	Median (IQR): 0.7 (0.59-8) ³	Median (IQR): 0.7 (0.62-0.74) ³	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	More intensive MDT care	Less intensive MDT care	More intensive MDT care	Less intensive MDT care		
Overall quality of life (measured using EQ-VAS; range 1-100; better indicated by higher values) - At 3 months												
1 (Ryan 2006a)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	30	28	Median (IQR): 0.71 (0.6-0.8) ³	Median (IQR): 0.7 (0.5-0.82) ³	VERY LOW	IMPORTANT
Overall quality of life (measured using EQ-VAS; range 1-100; better indicated by higher values) - At 12 months												
1 (Ryan 2006b)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	30	28	Median (IQR): 0.7 (0.5-0.78) ³	Median (IQR): 0.65 (0.5-0.8) ³	VERY LOW	IMPORTANT
Changes in ADL (measured using Barthel Index; range 0-100; better indicated by higher values) - At 3 months												
1 (Ryan 2006a)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	30	28	Median (IQR): 20 (19-20) ³	Median (IQR): 20 (19-20) ³	VERY LOW	IMPORTANT
Changes in ADL (measured using Barthel Index; range 0-100; better indicated by higher values) - At 12 months												
1 (Ryan 2006b)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	30	28	Median (IQR): 20 (19-20) ³	Median (IQR): 20 (19-20) ³	VERY LOW	IMPORTANT
Changes in ADL (measured using FAI; range 0-45; better indicated by higher values) - At 3 months												
1 (Ryan 2006a)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	30	28	Median (IQR): 19 (14-23) ³	Median (IQR): 19 (14-24) ³	VERY LOW	IMPORTANT
Changes in ADL (measured using FAI; range 0-45; better indicated by higher values) - At 12 months												
1 (Ryan 2006b)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	30	28	Median (IQR): 22 (16.5-29.5) ³	Median (IQR): 21 (13-26) ³	VERY LOW	IMPORTANT

ADL: Activities of daily living; EQ-VAS: EuroQol Visual Analogue Scale; EQ-5D: EuroQol 5 dimensions; FAI: Frenchay Activities Index; IQR: Interquartile range; MDT: Multidisciplinary team

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB

2 Imprecision could not be assessed using MIDIs due to no reporting of SD and no published MIDIs so was instead assessed using the sample size: The result was not downgraded if $n \geq 400$, if $n = 399-200$, the result was downgraded 1 level, and if $n < 200$ the result was downgraded by 2 levels.

3 According to the statistical analyses performed by the author, there was no significant difference between groups for any measure at any time point (for EQ-5D at 3 months $p=0.3$; for EQ-5D at 12 months $p=0.67$; for EQ-VAS at 3 months $p=0.98$; for EQ-VAS at 12 months $p=0.88$; for Barthel Index at 3 months $p=0.83$; for Barthel Index at 12 months $p=0.18$; for FAI at 3 months $p=0.81$ [unadjusted value]; for FAI at 12 months $p=0.27$, Mann-Whitney U test)

Table 26: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: MDT post-operative rehabilitation versus Conventional post-operative rehabilitation

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	MDT post-operative rehabilitation	Conventional post-operative rehabilitation	Relative (95% CI)	Absolute		
Changes in ADL (measured using number of participants achieving Independence in P-ADL at each time point) - At 4 months post-operative follow-up												
1 (Stenvall 2007)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	35/102 (34.3%)	23/97 (23.7%)	RR 1.45 (0.93 to 2.26)	107 more per 1000 (from 17 fewer to 299 more)	VERY LOW	IMPORTANT
Changes in ADL (measured using number of participants achieving Independence in P-ADL at each time point) - At 12 months post-operative follow-up												
1 (Stenvall 2007)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	33/102 (32.4%)	17/97 (17.5%)	RR 1.85 (1.1 to 3.09)	149 more per 1000 (from 18 more to 366 more)	VERY LOW	IMPORTANT
Changes in ADL (measured using number of participants achieving Katz ADL scores at each time point) - Grade A at 12 month post-operative follow-up												
1 (Stenvall 2007)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	34/84 (40.5%)	17/76 (22.4%)	RR 1.46 (0.94 to 2.29)	103 more per 1000 (from 13 fewer to 289 more)	VERY LOW	IMPORTANT
Changes in ADL (measured using number of participants achieving Katz ADL scores at each time point) - Grade B at 12 month post-operative follow-up												
1 (Stenvall 2007)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	14/84 (16.7%)	21/76 (27.6%)	RR 0.6 (0.33 to 1.1)	111 fewer per 1000 (from 185 fewer to 28 more)	VERY LOW	IMPORTANT
Changes in ADL (measured using number of participants achieving Katz ADL scores at each time point) - Grade C at 12 month post-operative follow-up												
1 (Stenvall 2007)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ³	none	8/84 (9.5%)	3/76 (3.9%)	RR 2.41 (0.66 to 8.77)	56 more per 1000 (from 13 fewer to 307 more)	VERY LOW	IMPORTANT
Changes in ADL (measured using number of participants achieving Katz ADL scores at each time point) - Grade D at 12 month post-operative follow-up												
1 (Stenvall 2007)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ³	none	1/84 (1.2%)	2/76 (2.6%)	RR 0.45 (0.04 to 4.89)	14 fewer per 1000 (from 25	VERY LOW	IMPORTANT

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	MDT post-operative rehabilitation	Conventional post-operative rehabilitation	Relative (95% CI)	Absolute		
										fewer to 102 more)		
Changes in ADL (measured using number of participants achieving Katz ADL scores at each time point) - Grade E at 12 month post-operative follow-up												
1 (Stenvall 2007)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ³	none	5/84 (6%)	4/76 (5.3%)	RR 1.13 (0.32 to 4.06)	7 more per 1000 (from 36 fewer to 161 more)	VERY LOW	IMPORTANT
Changes in ADL (measured using number of participants achieving Katz ADL scores at each time point) - Grade F at 12 month post-operative follow-up												
1 (Stenvall 2007)	randomised trial	very serious ¹	no serious inconsistency	no serious indirectness	very serious ³	none	17/84 (20.2%)	17/76 (22.4%)	RR 0.9 (0.5 to 1.64)	22 fewer per 1000 (from 112 fewer to 143 more)	VERY LOW	IMPORTANT
Changes in ADL (measured using number of participants achieving Katz ADL scores at each time point) - Grade G at 12 month post-operative follow-up												
1 (Stenvall 2007)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	4/84 (4.8%)	11/76 (14.5%)	RR 0.33 (0.11 to 0.99)	97 fewer per 1000 (from 1 fewer to 129 fewer)	VERY LOW	IMPORTANT
Changes in ADL (measured as the number of participants returning to at least same Katz ADL level as before trauma) - At 4 months post-operative follow-up												
1 (Stenvall 2007)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	56/92 (60.9%)	39/82 (47.6%)	RR 1.28 (0.97 to 1.69)	133 more per 1000 (from 14 fewer to 328 more)	VERY LOW	IMPORTANT
Changes in ADL (measured as the number of participants returning to at least same Katz ADL level as before trauma) - At 12 months post-operative follow-up												
1 (Stenvall 2007)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	49/84 (58.3%)	27/76 (35.5%)	RR 1.64 (1.15 to 2.34)	227 more per 1000 (from 53 more to 476 more)	VERY LOW	IMPORTANT

ADL: Activities of daily living; CI: Confidence interval; P-ADL: Personal activities of daily living; RR: Risk ratio

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 95% CI crosses 1 MID (0.8 or 1.25)

3 95% CI crosses 2 MIDs (0.8 and 1.25)

Table 27: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: Multidisciplinary outpatient treatment versus Usual care by GP (continuous variables)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multidisciplinary outpatient treatment	Usual care by GP	Multidisciplinary outpatient treatment	Usual care		
Changes in ADL (measured using Glasgow Outcome Scale; range 1-8; better indicated by higher values) - At 12 months post-injury												
1 (Vikane 2017)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	69	56	Median (range): 7 (5-8) ³	Median (range): 7 (5-8) ³	VERY LOW	IMPORTANT

ADL: Activities of daily living

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 Imprecision could not be assessed using MIDs due to no reporting of SD and no published MIDs so was instead assessed using the sample size: The result was not downgraded if $n \geq 400$, if $n = 399-200$, the result was downgraded 1 level, and if $n < 200$ the result was downgraded by 2 levels.

3 According to the statistical analyses performed by the author, there was no significant difference between groups ($p = 0.193$, Mann-Whitney U test). No mention was made of clinical importance.

Table 28: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: Multidisciplinary outpatient treatment versus Usual care by GP (categorical variables)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multidisciplinary outpatient treatment	Usual care by GP	Relative (95% CI)	Absolute		
Return to work or education (measured using number of participants returning to work) - At 12 months post-injury (follow-up 12 months)												
1 (Vikane 2017)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	49/81 (60.5%)	50/70 (71.4%)	RR 0.85 (0.67 to 1.07)	107 fewer per 1000 (from 236 fewer to 50 more)	VERY LOW	CRITICAL

CI: Confidence interval; RR: Risk ratio

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 95% CI crosses 1 MID (0.8 or 1.25)

Table 29: Clinical evidence profile for coordination of rehabilitation and social services when transferring from inpatient to outpatient services: Extended care practitioner + telephone calls versus Standard outpatient care

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Extended care practitioner + telephone calls	Standard outpatient care	Relative (95% CI)	Absolute		
Patient satisfaction (measured using author patient satisfaction survey; scale not reported; better indicated by higher values) - At 6 months												
1 (Wiechman 2015)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	40	38	-	MD 0.5 higher (0.33 lower to 1.33 higher)	VERY LOW	CRITICAL
Patient satisfaction (measured using author patient satisfaction survey; scale not reported; better indicated by higher values) - At 12 months												
1 (Wiechman 2015)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	40	38	-	MD 0.9 higher (0.25 lower to 2.05 higher)	VERY LOW	CRITICAL
Overall quality of life (measured using SF-12 physical component score; range 0-100; better indicated by higher values) - At 6 months												
1 (Wiechman 2015)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	40	38	-	MD 4.7 higher (0.18 to 9.22 higher)	VERY LOW	IMPORTANT
Overall quality of life (measured using SF-12 physical component score; range 0-100; better indicated by higher values) - At 12 months												
1 (Wiechman 2015)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	40	38	-	MD 3.6 lower (9.69 lower to 2.49 higher)	VERY LOW	IMPORTANT
Overall quality of life (measured using SF-12 mental component score; range 0-100; better indicated by higher values) - At 6 months												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Extended care practitioner + telephone calls	Standard outpatient care	Relative (95% CI)	Absolute		
1 (Wiechman 2015)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	40	38	-	MD 1.9 higher (2.62 lower to 6.42 higher)	VERY LOW	IMPORTANT
Overall quality of life (measured using SF-12 mental component score; range 0-100; better indicated by higher values) - At 12 months												
1 (Wiechman 2015)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	40	38	-	MD 4.4 higher (0.64 lower to 9.44 higher)	VERY LOW	IMPORTANT
Changes in ADL (measured using GAS; scale not reported, better indicated by higher values) – At 6 months												
1 (Wiechman 2015)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	40	38	-	MD 2.6 lower (8.9 lower to 3.7 higher)	VERY LOW	IMPORTANT
Changes in ADL (measured using GAS; scale not reported, better indicated by higher values) – At 12 months												
1 (Wiechman 2015)	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	40	38	-	MD 1.1 higher (5.07 lower to 7.27 higher)	LOW	IMPORTANT

ADL: Activities of daily living; CI: Confidence interval; GAS: Goal Attainment Score; MD: Mean difference; SF-12: 12-item short-form survey

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 95% CI crosses 1 MID (for patient satisfaction +/-1.05; for SF-12 physical component +/- 5.95; for SF-12 mental component +/-5.75; for GAS +/- 7.4)

GRADE-CERQual tables for qualitative evidence

Table 30: Summary of evidence (GRADE-CERQual): 1 Service commissioning

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
1.1 Commission a full service							
5 ¹	Semi-structured interviews (3), semi-structured interviews and focus groups (2)	<p>Staff believe that co-ordination of rehabilitation services during the transfer from inpatient to outpatient rehabilitation services needs to be led by service coordinators and commissioners. Services need to be funded and available for the entire journey of a service user - along with guidelines and a clear vision for how these services should co-ordinate, communicate and standardise in order to meet the needs of their local population. Guidelines and pathways are helpful but also need to allow for flexibility.</p> <p><i>“So we actually didn’t have a model of care or any ... policies and procedures in place and we’ve kind of been working them out on the fly as well go. [OT] [P19]” (Kornhaber 2019, p716)</i></p>	No or very minor concerns	Moderate concerns ²	Minor concerns ³	No or very minor concerns	MODERATE
1.2 Community services and facilities							
7 ⁴	Semi-structured interviews (4), semi-structured interviews and focus groups (1), free-text questionnaire and semi-structured interviews (1), semi-structured interviews, focus groups and observations of inter-professional meetings (1)	<p>Both staff and adults with rehabilitation needs feel that the availability and accessibility of community and social services is just as important for overall rehabilitation as rehabilitative medical services are. Such services include social care, housing, home-adaptation, transport services, and sports/recreational facilities. Such services should be properly funded and promoted. Adults with rehabilitation needs may need to be directed to them as an integral part of their rehabilitation and their discharge planning.</p> <p><i>“We’ve got meals on wheels coming so that takes a lot of stress off, we’ve got a house cleaner that comes so that takes a lot of stress off. In the first month it was hard because we didn’t have anything prepared so the house was just getting messier, there wasn’t meal organization but now that’s all come into place [P13, 3]” (Turner 2011, p823)</i></p>	Minor concerns ⁵	Minor concerns ⁶	No or very minor concerns	No or very minor concerns	HIGH
1.3 Workload and demand							

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
3 ⁷	Semi-structured interviews (2), Free-text questionnaire and semi-structured interviews (1)	Some staff in rehabilitation services report being overworked and underfunded. This leads to long waiting lists and cases may be missed as a result. It may also mean caseworkers don't have time to see their service users properly. Caseloads should be considerate of demand plus increasing requirements to do paperwork and to network with other professionals. <i>"Our rehabilitation case managers have picked up a lot of work. They need to attend case conferences, which for me working part-time takes away their availability to us. So it does have a reciprocal effect on the team. They may need increased hours to support that inpatient role. (I1, community team, T2)" (Kennedy 2012, p69)</i>	Minor concerns ⁸	Minor concerns ⁶	No or very minor concerns	No or very minor concerns	HIGH
1.4 Rural services							
5 ⁹	Semi-structured interviews (3), open interviews (1), free-text questionnaire and semi-structured interviews (1)	Both staff and adults with rehabilitation needs report that those living in rural areas are often underserved. Extra effort is needed to coordinate the resources available in rural community, including utilising communication technology, and providing training for generalist services to meet specialist needs. <i>"There is not a specialist service operating in our area and therefore these clients are missing out on specialist rehab. [S31]" (Odumuyiwa 2019, p170)</i>	No or very minor concerns	No or very minor concerns	Minor concerns ¹⁰	No or very minor concerns	HIGH

1 Christiaens 2015, Jeyaraj 2013, Kornhaber 2019, Lindahl 2013, Stolee 2019.

2 The evidence was downgraded for coherence of findings as the theme was a composite of several findings, not all fully related, but with an overall theme in common.

3 Evidence was downgraded for applicability as none of the evidence came from the UK, and this may be especially relevant to a finding about service coordination and commissioning.

4 Jeyaraj 2013, Jourdan 2019, Kornhaber 2019, Odumuyiwa 2019, Sena Martins 2017, Slomic 2017, Turner 2011

5 The methodological limitations of the studies ranged from very minor to serious as per the CASP qualitative study checklist, with most of the supporting data coming from studies that were vague in description in at least one key area such as describing recruitment, data collection, or potential risks of bias.

6 The evidence was downgraded for coherence of findings as the theme was amalgamated from a few varying but related service needs or issues.

7 Kennedy 2012, Stolee 2019, Odumuyiwa 2019.

8 The methodological limitations of the studies ranged from minor to moderate as per the CASP qualitative study checklist, with some analysis problems in one study and vague reporting of methods in the other, which may be masking issues that may have affected the findings.

9 Jourdan 2019, Kornhaber 2019, O'Callaghan 2012, Odumuyiwa 2019, Turner 2011.

10 Evidence was downgraded for applicability as the evidence was relating to adults with burns or with brain injury only, and it is unclear if this may generalise to other populations or be quite specific to these. Additionally, although the data were consistent, one study included views of family and friends which is not included in the review's population.

Table 31: Summary of evidence (GRADE-CERQual): 2 Integrating multiple services

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
2.1 Integrated multidisciplinary team approach							
5 ¹	Semi-structured interviews (3), free-text questionnaire and semi-structured interviews (1), semi-structured interviews, focus groups and observations of inter-professional meetings (1)	Both staff and adults with rehabilitation needs feel that a multidisciplinary team approach to medical and social support needs is important upon transfer from inpatient to outpatient rehabilitation services. The overall delivery should feel integrated and united. <i>"the strength is all of us working together. We all want what's best for the patient ... there was a lot of silo functioning before and ... we're getting a lot better, working together as a team and being able to listen to each other and what the concerns are. (N) (P18)" (Kornhaber 2019, p715)</i>	Minor concerns ²	No or very minor concerns	No or very minor concerns	No or very minor concerns	HIGH
2.2 Inter-service awareness and relationships							
3 ³	Semi-structured interviews (2), semi-structured interviews, focus groups and observations of inter-professional meetings (1)	Staff suggest that it is easier for agencies to work together as a multidisciplinary team when they know a bit about what each other does, and have been able to network together as professionals. The opportunity to meet in person, or occasional video conferences, and build a working relationship may facilitate better overall service delivery for service users. <i>"When we know each other (employees across sectors) you get a larger framework of understanding for each other. You can easier agree that we want to solve this together. Instead, we use a lot of time on the phone and mail with people we do not know and maybe from day to day new therapists have to engage in new cases again [physiotherapist, hospital]" (Lindahl 2013, p183)</i>	Minor concerns ⁴	No or very minor concerns	Minor concerns ⁵	No or very minor concerns	HIGH
2.3 Inter-service communication of information							

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
6 ⁶	Semi-structured interviews (3), Semi-structured interviews and direct observation (1), Semi-structured interviews and focus groups (1), Semi-structured interviews, focus groups and observations of interprofessional meetings (1)	<p>Some adults with rehabilitation needs report finding it distressing if they have to repeat their history or recall their treatments and symptoms to multiple staff, or if there are delays with information. Both staff and adults with rehabilitation needs believe it is important that the services should communicate in a timely fashion and share relevant information easily with each other. It is expected that a relevant history of the patient's events, injuries, treatments, and results (e.g. x-rays) should be passed on to services in advance.</p> <p><i>"I remember a doctor coming in the room and he said: 'Tell me, what happened?' I thought: 'Are you serious? After all this time you want us to tell our story?' Isn't there something like a patient medical record? It does not give you the impression that this physician will be able to effectively evaluate whether the injuries evolve well" (Christiaens 2015, p6)</i></p>	Minor concerns ²	Minor concerns ⁷	Minor concerns ⁵	No or very minor concerns	MODERATE
2.4 Case coordinator							
3 ⁸	Semi-structured interviews (2), Semi-structured interviews and focus groups (1)	<p>A case manager or coordinator was considered useful by other staff in the multidisciplinary team as it meant they could direct enquiries to one source. Adults with rehabilitation needs also appreciated the coordination and continuity a case coordinator offered.</p> <p><i>"It was really effective having the case manager Cc'ing me into those communications. I felt that I was really up to date. It has also been helpful because it has alerted me to some possible issues before the client came home, rather than finding them out as difficult surprises. (115, external service provider, T2)" (Kennedy 2012, p68)</i></p>	Minor concerns ²	No or very minor concerns	Minor concerns ⁵	No or very minor concerns	HIGH
2.5 Interdisciplinary consistency							
3 ⁹	Semi-structured interviews (2), semi-structured interviews and focus groups (1)	<p>Information, actions and instructions from different parts of the multidisciplinary team should be compatible, complimentary and consistent. Otherwise its confusing to the patient and erodes trust.</p>	Moderate concerns ¹⁰	No or very minor concerns	Minor concerns ⁵	No or very minor concerns	MODERATE

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
		<i>"The discharge summaries, the one I got from (name of rehabilitation) and one I got from (name of hospital), are completely different in explaining what happened and what I can do now [Male, 17–29yrs. road traffic injury #860]" (Braaf 2018, p7)</i>					

1 Isbel 2017, Kornhaber 2019, Odumuyiwa 2019, Sena Martins 2017, Slomic 2017.

2 The methodological limitations of the studies ranged from very minor to moderate as per the CASP qualitative study checklist, with most of the supporting data coming from studies that were vague in description in at least one key area such as describing recruitment, data collection, or potential risks of bias.

3 Lindahl 2013, Slomic 2017, Stolee 2019.

4 The methodological limitations of the studies ranged from very minor to moderate as per the CASP qualitative study checklist, with most of the supporting data coming from studies that were vague in description in at least one key area such as describing recruitment and potential risks of bias, or for analytical methodological approach taken.

5 Evidence was downgraded for applicability as none of the evidence came from the UK service context, and this may be especially relevant to a finding about service coordination.

6 Braaf 2018, Christensen 2018, Christiaens 2015, Lindahl 2013, Slomic 2017, Stolee 2019.

7 The evidence was downgraded for coherence of findings as the theme was amalgamated from a few varying but related service needs.

8 Braaf 2018, Christiaens 2015, Kennedy 2012

9 Barclay 2019, Braaf 2018, Jeyaraj 2013

10 The methodological limitations of the studies ranged from moderate to serious as per the CASP qualitative study checklist, due to some serious concerns about risk of bias due to vague descriptions or unclear justifications for some of the methodological choices.

Table 32: Summary of evidence (GRADE-CERQual): 3 Delivery

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
3.1 Continuity of staff							
4 ¹	Semi-structured interviews (3), semi-structured interviews and focus groups (1)	Both staff and adults with rehabilitation needs report that it is better when service users continue to see the same staff wherever possible, Trust and rapport is built over time with staff which is calming and motivating during rehabilitation. Changes in staff is discouraging, costs time to share history and details, and cause mistakes where information is not passed on. <i>"You cannot build-up a trusting relationship. I remember a doctor coming in the room and he said: 'Tell me, what happened?' I thought: 'Are you serious? After all this time you want us to tell our story?' Isn't there something like a patient medical record? It does not give you the impression that this</i>	No or very minor concerns	No or very minor concerns	No or very minor concerns	Minor concerns ²	HIGH

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
		<i>physician will be able to effectively evaluate whether the injuries evolve well</i> " (Christiaens 2015, p6)					
3.2 Include family							
9 ³	Semi-structured interviews (6), semi-structured interviews and focus groups (2), free-text questionnaire and semi-structured interviews (1)	Both staff and adults with rehabilitation needs report that family can play a significant role in rehabilitation and care in general around the time of discharge to the community. Where it is appropriate and willingly provided, families should be included in plans, conversations and information sharing as this can promote smoother delivery of and adherence to rehabilitation. This central role means rehabilitative education and support may need to include family members. Laws and guidelines should be followed for involving family. <i>"Part of the other agenda is how you blend in the family into the rehabilitation. I think that's another area that could be worked on"</i> (Isbel 2017, p1027)	No or very minor concerns	Minor concerns ⁴	No or very minor concerns	No or very minor concerns	HIGH
3.3 Point of contact							
5 ⁵	Semi-structured interviews (5), semi-structured interviews and direct observation (1)	Adults with rehabilitation needs report wanting a single, identifiable point of communication for information, support, and for the coordination of plans as they transfer from inpatient to outpatient rehabilitation settings. <i>"I didn't have one particular person giving you all the information. It was just the medical staff as they came through. It was only at the end that I recall, that I got the information all put together."</i> (Braaf 2018, p7)	Minor concerns ⁶	Minor concerns ⁴	No or very minor concerns	No or very minor concerns	HIGH
3.4 Peer support							
1 (Barclay 2019)	Semi-structured interviews (1)	Staff report that it can be helpful to include peer mentors with lived experience in the delivery of rehabilitation services at this time, as they can encourage the patient, be a role-model and answer questions. <i>"Because they're in the building and you can refer to them pretty easily, often they'll identify somebody to be a peer mentor and to be their go-to if they have questions on the clients, and they'll often visit that</i>	Serious concerns ⁷	No or very minor concerns	Moderate concerns ⁸	Moderate concerns ⁹	VERY LOW

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
		<i>person while in inpatients but sometimes in outpatients as well.” (Barclay 2019, p6)</i>					
3.5 Deliver at home							
2 ¹⁰	Semi-structured interviews (1), semi-structured interviews and focus groups (1)	Staff report that it is increasingly easy to deliver rehabilitation at home instead of keeping adults in hospital. Greater precision of medical tests and the efficacy of post-injury care means that adults with traumatic injuries do not to be hospitalised for such a long time, and videoconferencing and telehealth technology mean that delivery in homes may be easier. <i>“they reported that the evolution of medicine, including the precision of medical tests, and the efficacy of post-TBI acute care delivery, greatly facilitates the management of cases referred for outpatient TBI rehabilitation” (Jeyaraj 2013, p1343)</i>	Minor concerns ⁶	Moderate concerns ⁴	Minor concerns ¹¹	Minor concerns ¹²	LOW
3.6 Technology							
3 ¹³	Semi-structured interviews (2), Free-text questionnaire (1)	Both staff and adults with rehabilitation needs report that technology can be useful for the delivery of rehabilitative support. Videoconferencing and telemedicine can be useful to reach people who find it hard to leave their homes, or who live rurally, or who need additional flexibility because they work etc. Apps can also be useful for alerts or reminders. <i>““We have been working a lot with pressure ulcers the last years, so we now have a videoconferencing service for some of the patients that are living at home, where we have a videoconference to the patient’s home, together with the nurses in the municipality, who are treating the pressure ulcers from day to day” (Barclay 2019, p6)</i>	Minor concerns ¹⁴	Moderate concerns ⁴	Minor concerns ¹¹	No or very minor concerns	LOW

1 Christiaens 2015, Kennedy 2012, Lindahl 2013, Turner 2011.

2 The evidence was downgraded for adequacy as there were not many clear first-order quotes presented by the authors to support these second order findings.

3 Christiaens 2015, Glenny 2013, Isbel 2017, Jeyaraj 2013, Kornhaber 2019, Odumuyiwa 2019, Sena Martins 2017, Stolee 2019, Turner 2011.

4 The evidence was downgraded for coherence of findings as the theme was amalgamated from a few varying but related experiences.

5 Braaf 2018, Christensen 2018, Graff 2018, Kennedy 2012, Turner 2011

6 The methodological limitations of the studies ranged from very minor to moderate as per the CASP qualitative study checklist, with studies being flagged for a risk of bias related to the participants or the interviewers which could have influenced a theme asking about service received.

- 7 The methodological limitations of the study were rated as serious as per the CASP qualitative study checklist due to problems with the recruitment methods, problems with involvement of 1st author, and a lack of discussion on credibility
- 8 The finding was downgraded for applicability as the evidence only came from a population with spinal cord injury and in a non-UK setting, and may not generalise well to other conditions or a UK service/cultural context.
- 9 Evidence was downgraded for adequacy of data, as the statement was based on one study only with a moderate sample size and only moderate descriptive detail relating to this theme.
- 10 Jeyaraj 2013, Kornhaber 2019.
- 11 The finding was downgraded for applicability as the evidence only came from a non-UK setting, and may not generalise well to a UK service/cultural context.
- 12 Evidence was downgraded for adequacy of data, as the statement was based on two studies only with a moderate sample size and little descriptive detail relating to this theme.
- 13 Barclay 2019, Kornhaber 2019, Singh 2018.
- 14 The methodological limitations of the studies ranged from very minor to serious as per the CASP qualitative study checklist, with studies being flagged for a risk of bias related to the recruitment, participants and the interviewers, which could have influenced a theme that is asking about service experiences and preferences.

Table 33: Summary of evidence (GRADE-CERQual): 4 Information

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
4.1 Inform about services and plan							
7 ¹	Semi-structured interviews (5), semi-structured interviews and focus groups (1), open interviews (1)	Some adults with rehabilitation needs report that transitions can be smoothed by increasing information available, but sometimes after discharge they don't know what will happen next and when. They need information about the services available to them, as well as how to access and use these services to meet their needs – including their GP. They also need to know about the arrangements that have been made for them and their ongoing treatment plan, or what they will need to arrange themselves. This information is empowering and improves treatment adherence. “Even if they had have been able to give us a list of services, it may have saved us a lot of drama and hassle and heartache. They need to make you aware of this may happen and if that happens, do this and give you a checklist or something” (O'Callaghan 2012, p1607)	No or very minor concerns	No or very minor concerns	Minor concerns ²	No or very minor concerns	HIGH
4.2 Prognosis							
3 ³	Semi-structured interviews (1), semi-structured interviews and focus groups (1),	Adults with rehabilitation needs want information about their condition and the likely long-term prognosis as they leave inpatient services, and how this will affect their lives in future.	Minor concerns ⁴	No or very minor concerns	No or very minor concerns	No or very minor concerns	HIGH

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
	free-text questionnaire and semi-structured interviews (1)	<i>"It is perhaps a silly detail, but at the start it is very difficult to estimate. You get a certificate for a three to six months leave and you think: "I will have a hard time during six months, but then it will all be over." Over... now I know that with burn injuries it will never be over." (Christiaens 2015, p8)</i>					
4.3 Format							
1 (Braaf 2018)	Semi-structured interviews (1)	Adults with rehabilitation needs may find information more accessible if it is given to them in plain, accessible language. Providing written information can help them to understand and retain this information. <i>"For me it would have been no good telling me anything at (hospital name). Perhaps if (hospital name) issued you ... a (written) summary of what your injuries were when you were brought in, what you were diagnosed with and resulting treatments that they performed. [Male, 17–29yrs, road traffic injury #581]" (Braaf 2018, p8)</i>	Moderate concerns ⁵	No or very minor concerns	Moderate concerns ⁶	Moderate concerns ⁷	VERY LOW

1 Braaf 2018, Christiaens 2015, Graff 2018, Kornhaber 2019, O'Callaghan 2012, Stolee 2019, Turner 2011

2 Evidence was downgraded for applicability as none of the evidence came from the UK service context, and there may be relevant difference about how information is disseminated in a UK service context.

3 Braaf 2018, Christiaens 2015, Odumuyiwa 2019

4 The methodological limitations of the studies ranged from very minor to moderate as per the CASP qualitative study checklist, with most of the supporting data coming from studies that were vague in description in at least one key area such as describing recruitment, data collection, or potential risks of bias.

5 The methodological limitations of the study were rated moderate as per the CASP qualitative study checklist, due to a high risk of recall bias (interviews were 3 years post-injury), and vague descriptions about recruitment methods and the relationships between researcher and participants which may be masking further risks of bias

6 Evidence was downgraded for applicability as none of the evidence came from the UK service context, and was only identified in a study of people with brain injury – which may be more likely to have problems with memory than the traumatic injury population in general.

7 Evidence was downgraded for adequacy of data, as the statement was based on one study only with a moderate sample size only and only moderate descriptive detail relating to this theme.

Table 34: Summary of evidence (GRADE-CERQual): 5 Individual factors

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
5.1 Personalisation							

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
6 ¹	Semi-structured interviews (5), semi-structured interviews and focus groups (1)	<p>Both staff and adults with rehabilitation needs suggested that the rehabilitation should be delivered in a way that is adaptable to the circumstances and needs of individuals. Rehabilitation should take into account needs related to age, and symptoms or comorbidities such as chronic pain, or disabilities which may limit mobility. Some adults (e.g. with other responsibilities or who return to work) will need rehabilitation that is flexible to their availability. Rehabilitation planning will also need to take into account vulnerabilities such as housing and financial situation, risk of substance misuse and risk of coercion.</p> <p><i>"I think they should focus on the best rehabilitation plan to optimize the patient's potential, this is my only complaint. They have offered me rehabilitation in a gym on an exercise bike, which can be great for some people, but not for a young person with a traumatic brain injury. I want a good life later and I have more cognitive problems than physical. Then it's not enough."</i> (Graff 2018, p931)</p>	Minor concerns ²	Moderate concerns ³	Minor concerns ⁴	No or very minor concerns	LOW
5.2 Admission criteria							
3 ⁵	Semi-structured interviews (3)	<p>Inflexible admission criteria may mean that rehabilitative support is not offered to certain adults. Financial/income factors or postcode may limit rehabilitation access. In some cases adults also may not be offered necessary rehabilitation services because their difficulties are less severe, or are perceived as less severe, or may be less obvious (e.g. cognitive problems).</p> <p><i>No quotes presented for this theme.</i></p>	No or very minor concerns	Moderate concerns ³	Minor concerns ⁶	Minor concerns ⁷	LOW
5.3 Specialists							
5 ⁸	Semi-structured interviews (1), semi-structured interviews and focus groups (2), open interviews (1), free-text	<p>Upon discharge and de-escalation of specialized treatment it is reported that services and staff often become more generic, and the staff that are seen (including gatekeepers to services such as GPs) don't have specialist knowledge about particular disabilities or conditions. Both staff and adults with rehabilitation needs suggest it is important for the</p>	No or very minor concerns	Minor concerns ⁹	No or very minor concerns	No or very minor concerns	HIGH

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
	questionnaire and semi-structured interviews (1)	delivery of an individual's rehabilitation ongoing care team to include some staff with specialist knowledge. “..such as family doctors or professionals working in CLSCs (community healthcare services in Quebec), [who] don't know the issues related to TBI” (Jeyaraj 2013, p1343)					
5.4 Home adjustments							
1 (Lindahl 2013)	Semi-structured interviews (1)	Some adults with rehabilitation needs require physical aids and small adjustments in their home. These adjustments may be vital to the discharge process and progression with rehabilitation. “Then they suggested that I had a toilet chair placed in the living room, and we were speechless. I couldn't sit and . . . you know, in here where we eat and so. Then we worked it through, but my wife had to say – well you can send him home, but I am not sure I'll be here. I really had to get rough on them. Then we got through and it was okay” (Lindahl 2013, p181)	Minor concerns ¹⁰	No or very minor concerns	Minor concerns ⁴	Moderate concerns ¹¹	LOW
5.5 Advocacy							
3 ¹²	Semi-structured interviews (2), semi-structured interviews and direct observation (1)	Some adults with rehabilitation needs report needing their family to take the lead in researching options and initiating conversations with staff about rehabilitation, or in some cases the adult may do it for themselves. Some individuals and/or their families may not be able to advocate for themselves as strongly as others. “My dad has since the day I was run down struggled with the municipality to get me to the proper rehabilitation. While I was in the program my dad helped me to get two months of rehabilitation.” (Graff 2018, p930)	No or very minor concerns	No or very minor concerns	Minor concerns ⁴	No or very minor concerns	HIGH

1 Graff 2018, Jeyaraj 2013, Kornhaber 2019, Lindahl 2013, Sena Martins 2017, Stolee 2019.

2 The methodological limitations of the studies ranged from very minor to moderate as per the CASP qualitative study checklist, with most downgrading due to vagueness around participant recruitment methods or analysis methods, which may have some impact on confidence in this finding.

3 The evidence was downgraded for coherence of findings as the theme was a composite of several findings, not all closely related, but with the headline theme in common.

4 Evidence was downgraded for applicability as none of the evidence came from the UK service context, and there may be relevant difference about how to meet such individual needs within a UK social/support context.

5 Graff 2018, Stolee 2019, Turner 2011.

6 Evidence was downgraded for applicability as none of the evidence came from the UK service context, and there may be relevant difference about how to meet such individual needs within a UK social/support context. Additionally, although the data were consistent, 1 study included views of family and friends which is not included in the review's population.

7 The evidence was downgraded for adequacy as there were not many clear first-order quotes presented by the authors to support their second order findings.

8 Christiaens 2015, Jeyaraj 2013, Kornhaber 2019, O'Callaghan 2012, Odumuyiwa 2019.

9 The evidence was downgraded for coherence of findings as the theme was amalgamated from a few varying but clearly related experiences.

10 The methodological limitations of the study were rated minor as per the CASP qualitative study checklist, with downgrading due to a lack of information on recruitment, or risks of researcher's bias and influence, or ethical considerations.

11 Evidence was downgraded for adequacy of data, as the statement was based on one study only with a moderate sample size only and only moderate descriptive detail relating to this theme.

12 Christensen 2018, Glenny 2013, Graff 2018.

Table 35: Summary of evidence (GRADE-CERQual): 6 Rehabilitation journey

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
6.1 Gradual							
8 ¹	Semi-structured interviews (5), semi-structured interviews and focus groups (1), open interviews (1), Semi-structured interviews, focus groups and observations of interprofessional meetings (1)	Both staff and adults with rehabilitation needs state that rehabilitation and the return to the community should be a gradual and incremental process. There may need to be several rehabilitative stages to the return to community including pre-visits to home, moving from more to less intensive wards, time in supported community accommodation. This also includes follow-up visits or contact upon return home as abrupt endings or the sudden loss of support can be distressing and lead to further problems. "We try to transfer patients from the burn centre to a general hospital ward to learn to function more autonomously, and go home after that" (Christiaens 2015, p6)	No or very minor concerns	Minor concerns ²	Minor concerns ³	No or very minor concerns	HIGH
6.2 Start early							
5 ⁴	Semi-structured interviews (4), open interviews (1)	Both staff and adults with rehabilitation needs believe that conversations about rehabilitation and discharge planning should start early. Last-minute conversations about needs and rehabilitation close to the time discharge are distressing. Discussions about needs, plans and ideas for life after discharge	Moderate concerns ⁵	Minor concerns ²	Minor concerns ³	Minor concerns ⁶	LOW

Study information		Description of Theme or Finding	CERQUAL Quality Assessment				
Number of studies	Design (Number of studies)		Methodological Limitations	Coherence of findings	Applicability of evidence	Adequacy of Data	Overall Confidence
		<p>can be incorporated into recovery from early on to avoid abruptness.</p> <p><i>“The return to work happens at inpatient, actually. They really like to start as early as they can, so the primary OT puts in a referral and the patient meets one-on-one with one of our community reintegration therapists - and they’re typically OT by background - and what they do is they start speaking to the employer early on about what kind of adaptations and modifications they might need to return to work.” (Barclay 2019, p6)</i></p>					
6.3 Gap in service							
6 ⁷	Semi-structured interviews (5), semi-structured interviews and focus groups (1)	<p>Some adults with rehabilitation needs report that after returning to the community they experienced gaps and long waiting times before their rehabilitation commenced. These gaps and waiting times can be confusing and distressing, and in some cases being sedentary could also be detrimental to longer-term recovery. Some of the distress of service gaps can be eased if they had been given some approximate dates and warning and to expect a gap. In the intervening time some contact from professionals was appreciated.</p> <p><i>“I came out of rehab on a very strong course of medication, and I really didn’t know who I should be speaking to about that... I wasn’t sure I needed it anymore but couldn’t get a definitive answer anywhere on that.” (Braaf 2018, p6)</i></p>	Moderate concerns ⁵	Minor concerns ²	Minor concerns ³	No or very minor concerns	LOW

1 Barclay 2019, Christiaens 2015, Graff 2018, Kornhaber 2019, Lindahl 2013, O’Callaghan 2012, Sims-Gould 2012, Slomic 2017

2 The evidence was downgraded for coherence of findings as the finding was an amalgamation of a some varying but related experiences.

3 Evidence was downgraded for applicability as none of the evidence came from the UK service context, and there may be relevant difference about how timings are organised or experienced in a UK context.

4 Barclay 2019, Braaf 2018, Kennedy 2012, Kornhaber 2019, O’Callaghan 2012

5 The methodological limitations of the studies ranged from very minor to serious as per the CASP qualitative study checklist, with some downgrading occurring due to the an introduction of bias from the relationship between researcher and participant, and recall bias as participants were being asked to recall past events from a traumatic time.

6 The evidence was downgraded for adequacy as there were not many clear first-order quotes presented by the authors to support these second order findings.

7 Braaf 2018, Isbel 2017, Jeyaraj 2013, Jourdan 2019, Lindahl 2013, Turner 2011