

Supplement 1: InS:PIRE intervention

Five week programme

During the first three weeks of the five-week programme, each patient and caregiver receive an individual appointment with either nursing and medical staff, the pharmacist and the physiotherapist (one per week over the first three weeks). These are deemed core outcomes and only patients who had received all three were included in the intervention cohort.

Nursing staff/medical staff appointment: Lay summary of the patient's critical care stay is given. Patients and their loved ones are given the opportunity to ask questions about the ICU experience and recovery. Personal goals are co-produced with staff and patients. These goals can be made in relation to any element of health and wellbeing. Patients and caregivers are also given the opportunity to visit the ICU.

Physiotherapy appointment: Full physical assessment is undertaken. A specific exercise programme is designed if appropriate. Onward referral to local organisations and exercise classes are made as needed.

Pharmacist appointment: All medicines reviewed in the context of the patient's past medical history and the ICU stay. Changes are made as needed, and any potential problems rectified. Primary care physicians are contacted about prescriptions as necessary.

Over the two final weeks, patients and caregivers have group sessions with their peers. Group sessions include: clinical psychology sessions which focus on coping skills and common reactions to recovery from critical illness (for example, low mood and anxiety) (1). Patients and caregivers are often (but not always) split for the psychology session. For those experiencing any issues with nutrition, the programme can refer patients to the dietician.

On the final week (and across the duration of the programme) there is access to information and support for the potential social problems which individuals may be experiencing (1). Information about community organisations is available. Linkage to carers support also available. Specific input from vocational rehabilitation for those wishing to return to the workforce can be accessed.

Each week there is also an education session available for patients and caregivers. Topics include sleep hygiene; pacing of activity and dietary advice. These sessions are very much directed by patients and caregivers and are undertaken as a group.

InS:PIRE was facilitated by a multi-professional team including a trained ICU Nurse, Physician, Physiotherapist and Pharmacist. A Consultant Clinical Psychologist provided psychological care and input as appropriate.

Peer support was developed by the patients and caregivers taking part. This was achieved through the generation of discussion at the group sessions and in waiting areas. Peer support was also fostered via patients and caregiver volunteers who were further along the recovery trajectory; they ran a social café area for participants¹.

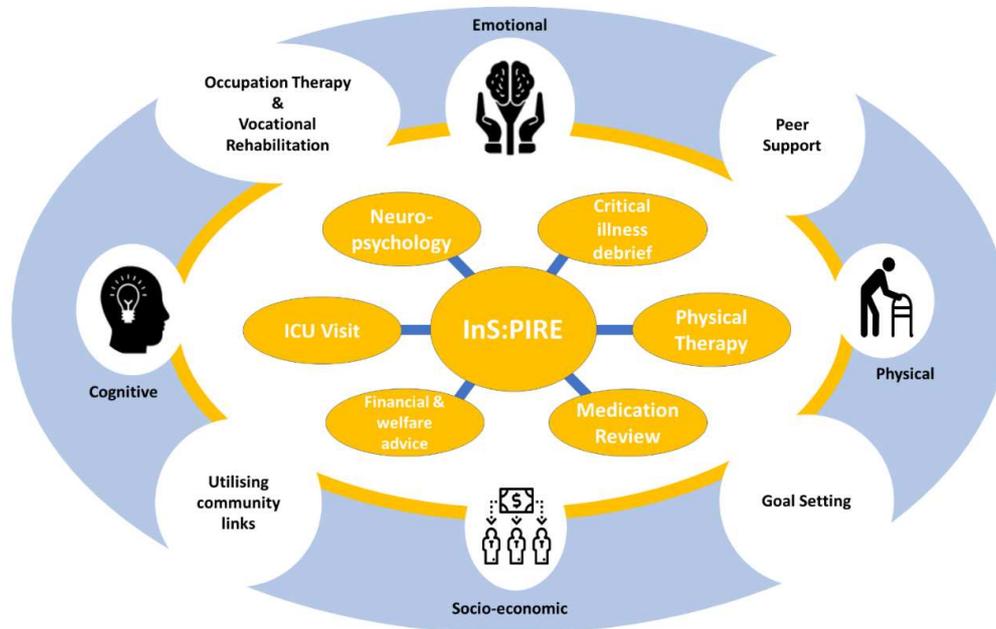


Figure S1: conceptual diagram of the InS:PIRE programme.

InS:PIRE: Intensive Care Syndrome: Promoting Independence and Return to Employment; ICU: Intensive Care Unit

1. McPeake, J. Shaw, M. Iwashyna, TJ. Et al (2017) Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE). Early evaluation of a complex intervention. PLOS ONE.

Supplement 2: Outcome measures descriptors

Outcome measures one year after ICU

Health Related Quality of Life (HRQoL)

The primary outcome for this study was HRQoL at one year measured by the EQ-5D-5L (EuroQol group 2009)^{1,2}. This survey generates two measures of HRQoL. Firstly, the health utility score (EQ-HUS) summarises five domains (mobility, self-care, usual activities, pain/discomfort, and anxiety/depression) into a single number with 1.0 representing the best possible health, 0.0 representing a health state equivalent to death and negative values representing a state worse than death. The minimal clinically important difference (MCID) for this score is usually quoted as 0.08^{3,4}. Secondly, EQ-VAS (EuroQol Visual Analogue Scale) records participants self-rated health on the day of testing by marking on a continuous vertical scale from 0 (worst health) to 100 (best health) with an MCID of 8%^{3,4}.

Self-Efficacy

Self-efficacy was measured using the General Self Efficacy Scale (GSE) which is a ten-item questionnaire generating a score with 31 levels (minimum 10 to maximum 40). MCID for GSE is not as well defined compared to EQ-5D-5L, however, for this study we used an MCID of 6%, representing an absolute change of 1.86, which corresponds to well established values for patients with chronic obstructive pulmonary disease⁵⁻⁶.

Mental health outcomes

Hospital Anxiety and Depression Scale (HADS) was used to measure mental health at one-year post ICU. Comprising seven items each for anxiety and depression, HADS generates two separate scores for anxiety and depression from 0 to 21. Depression or anxiety are diagnosed with a cut off score of 8/21. Moderate and severe disease has cut off values of 11 and 15 respectively⁷.

Pain outcomes

Pain has not been a traditional focus within PICS research, although this issue was frequently raised at clinics prior to this study and has been reported in pharmacy interventions. To evaluate the extent of pain after critical illness the Brief Pain Inventory (BPI) short form was used. This comprises four sections: experience of pain in previous 24 hours, with binary yes/no response; body areas where pain is experienced (pictorial summary); pain severity score, four items, each scored from 0 to 10; and pain interference score, seven items each scored from 0 to 10. Two summary scores can be generated as an average pain severity and average pain interference (each scored from 0 to 10). The usual ways to report this are summary values for worst pain, average pain, and pain interference. MCIDs for BPI are not well established, especially after critical care, however, for this study a change of 2/10 will be considered clinically significant, in keeping with other pain intervention, e.g. those for fibromyalgia⁸⁻¹²

Tool Utilised	Description	Ranges
EQ-5D 5L (EuroQol: Quality of Life Group)	Measurement of HRQoL comprising two sections: a 5-question descriptive component exploring health domains (each scored 1 to 5) and a visual analogue scale describing quality of life on the day of questionnaire completion. Descriptive component can be converted to a 5-digit sequence and then used to determine a Health Utility Score (HUS).	In EQ-5D evaluations, a HUS of 1 equates to the best health state possible, 0 with death and a negative HUS equates to a state worse than death. Based on previous literature, the Minimally Important Clinical Difference (MCID) for the HUS for critical care and the UK time-trade-off "tariff," is approximately 0.08.
Hospital Anxiety and Depression Scale (HADS)	The HADS questionnaire contains 14 statements relating to mood, with 7 questions relating to depression and 7 to anxiety.	Scale Interpretation (scored separately for anxiety and depression): 0-7: Normal 8-10: Mild 11-14: Moderate 15-21: Severe
Generalised Self-Efficacy	10 item psychometric scale designed to assess an individual's belief in their ability to cope with different situations. Specifically, it explores personal agency.	Scale: minimum 10 to maximum 40. In this study we used an MCID of 6%, representing an absolute change of 1.86.
Brief Pain Inventory (BPI)	On the BPI, patients record the severity of their pain over the previous 24 hours as worst, least, mean and current pain, on a 0 to 10-point numerical rating scale (where 0 = no pain and 10 = worst pain imaginable).	Developers of the tool recommend that all 4 items be used in a mean score. The optimal cut off points for pain severity using the BPI are as follows: 0 = no pain, 1-3 = mild pain, 4-6 = moderate pain, and 7-10 = severe pain.

References

1. Herdman M, Gudex C, Lloyd A, et al. Development and preliminary testing of the new five-level version of EQ-5D (EQ-5D-5L). *Quality of life research* 2011; **20**(10): 1727-36.
2. Janssen M, Pickard AS, Golicki D, et al. Measurement properties of the EQ-5D-5L compared to the EQ-5D-3L across eight patient groups: a multi-country study. *Quality of Life Research* 2013; **22**(7): 1717-27.
3. Pickard AS, Neary MP, Cella D. Estimation of minimally important differences in EQ-5D utility and VAS scores in cancer. *Health and quality of life outcomes* 2007; **5**(1): 70.
4. Vainiola T, Pettilä V, Roine RP, Räsänen P, Rissanen AM, Sintonen H. Comparison of two utility instruments, the EQ-5D and the 15D, in the critical care setting. *Intensive care medicine* 2010; **36**(12): 2090-3.
5. Vincent E, Sewell L, Wagg K, Deacon S, Williams J, Singh S. Measuring a change in self-efficacy following pulmonary rehabilitation: an evaluation of the PRAISE tool. *Chest* 2011; **140**(6): 1534-9.

Supplement 3: Propensity score matching approach and adjusted outcome models

Propensity score matching methodology

After imputation with Multivariate Imputation by Chained Equations (MICE) propensity score matching was undertaken¹. We propensity matched the participants in the InS:PIRE to the usual care cohort, using nearest neighbor caliper matching (caliper = 0.1)². Covariate balance was reviewed between the InS:PIRE and usual care cohorts using Pearson's chi-squared test for categorical variables, and the Mann-Whitney U Test for continuous variables with baseline characteristic results described in **Figure 3** of the main paper. Covariates were iteratively included in the match until balance in the two cohorts was achieved. This process was completed before considering any outcome variables. The following covariates were included in the propensity score: surgery at admission or in the first week of ICU; time from hospital discharge to follow up; age; hospital length of stay; advanced respiratory support; ICU length of stay; history of harmful alcohol or drug use; pre-existing psychiatric diagnoses. We successfully matched almost two-thirds (65.2%) of the usual care cohort to the intervention cohort.

Once matching was complete the same outcome measures underwent the same modelling and adjustment strategies used in the primary analysis of the unmatched cohorts.

The following eleven tables summarise the completed models, with all covariates and intercepts.

Matched and adjusted tables
Health utility score model

Covariate	Effect estimate	P value	95% confidence interval
Intercept	0.79	<0.001	0.54 - 1.03
Intervention (InS:PIRE)	0.14	0.003	0.05 - 0.22
Male gender	0.04	0.23	-0.03 - 0.12
ICU length of stay	-0.01	<0.01	-0.01 - 0.00
APACHE II score	0.00	0.56	-0.01 - 0.01
Time to follow up (months)	-0.01	0.13	-0.02 - 0.00
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	0.00	0.94	-0.08 - 0.09
SIMD quintile 3	0.01	0.86	-0.11 - 0.13
SIMD quintile 4	0.14	0.02	0.02 - 0.25
SIMD quintile 5 (least deprived)	0.16	<0.01	0.07 - 0.25
Surgery at admission or within seven days of ICU	-0.02	0.69	-0.10 - 0.07
Charlson comorbidity index (CCI) score	0.00	0.61	-0.01 - 0.02
History of harmful alcohol or drug use	-0.12	0.06	-0.24 - 0.00
Pre-morbid history of chronic pain	-0.11	0.16	-0.26 - 0.05
Pre-existing psychiatric diagnosis	-0.17	<0.01	-0.26 - -0.08

Health utility score: EQ-5D-5L quality of life indicator with range of -0.594 to 1.0.

Adjusted linear regression model.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions on outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

EuroQol Visual Analogue Scale score

Covariate	Effect estimate	P value	95% confidence interval
Intercept	64.92	<0.001	42- 87.84
Intervention (InS:PIRE)	12.30	<0.001	7.46 - 17.15
Male sex	-0.52	0.85	-6.16 - 5.13
ICU length of stay	-0.36	<0.001	-0.59 - -0.13
APACHE II score	0.13	0.57	-0.36 - 0.62
Time to follow up (months)	-0.34	0.41	-1.21 - 0.53
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	2.86	0.44	-4.84 – 10.56
SIMD quintile 3	0.63	0.87	-6.98 – 8.24
SIMD quintile 4	-0.36	0.94	-10.05- 9.34
SIMD quintile 5 (least deprived)	12.47	<0.001	5.66 - 19.24
Surgery at admission or within seven days of ICU	6.41	0.08	-0.92 - 13.75
Charlson comorbidity index (CCI) score	-0.62	0.47	-2.44 - 1.20
History of harmful alcohol or drug use	-7.68	0.04	-15.08 - -0.27
Pre-morbid history of chronic pain	-3.11	0.36	-9.93 - 3.71
Pre-existing psychiatric diagnosis	-11.18	0.02	-20.39 - -1.96

EuroQol Visual Analogue Scale score: Range 0 to 100. Adjusted linear regression model.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions on outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Generalised Self-Efficacy

Covariate	Effect estimate	P value	95% confidence interval
Intercept	26.71	<0.001	19.25 - 34.16
Intervention (InS:PIRE)	2.86	0.001	1.24 - 4.47
Male sex	0.37	0.63	-1.17 - 1.91
ICU length of stay	-0.02	0.60	-0.10 - 0.06
APACHE II score	-0.02	0.79	-0.15 - 0.11
Time to follow up (months)	0.04	0.80	-0.31 - 0.39
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	0.86	0.47	-1.59 - 3.32
SIMD quintile 3	0.86	0.50	-1.73 - 3.46
SIMD quintile 4	2.33	0.25	-1.91 - 6.58
SIMD quintile 5 (least deprived)	3.10	0.01	0.78 - 5.42
Surgery at admission or within seven days of ICU	1.08	0.32	-1.17 - 3.33
Charlson comorbidity index (CCI) score	0.45	0.04	0.01 - 0.90
History of harmful alcohol or drug use	-2.06	0.11	-4.63 - 0.50
Pre-morbid history of chronic pain	-0.11	0.95	-4.34 - 4.12
Pre-existing psychiatric diagnosis	-3.75	<0.001	-5.60 - -1.90

Generalised self-efficacy: range 10 to 40. Adjusted linear regression model.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions on outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Depression odds ratios: Hospital Anxiety and Depression Scale score (HADS)

Covariate	Effect estimate	P value	95% confidence interval
Intercept	1.49	0.78	0.06 - 36.50
Intervention (InS:PIRE)	0.33	0.002	0.17 - 0.65
Male sex	0.97	0.93	0.45 - 2.09
ICU length of stay	1.02	0.16	0.99 - 1.06
APACHE II score	1.01	0.75	0.95- 1.07
Time to follow up (months)	1.01	0.84	0.88- 1.17
SIMD quintile 1 (most deprived)	1	NA	Reference quintile
SIMD quintile 2	0.80	0.62	0.30 - 2.09
SIMD quintile 3	0.40	0.04	0.17 – 0.98
SIMD quintile 4	0.72	0.53	0.24- 2.14
SIMD quintile 5 (least deprived)	0.08	0.01	0.01- 0.48
Surgery at admission or within seven days of ICU	0.33	0.03	0.12 - 0.89
Charlson comorbidity index (CCI) score	0.82	0.14	0.62 - 1.09
History of harmful alcohol or drug use	2.55	0.20	0.53 - 12.18
Pre-morbid history of chronic pain	0.64	0.49	0.15 – 2.74
Pre-existing psychiatric diagnosis	3.69	0.02	1.29 - 10.55

Hospital Anxiety and Depression Scale scores. Odds ratios of risk of screening positive for depression at one year. Depression defined as a component score of eight or greater. Adjusted logistic regression model.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions on outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Anxiety odds ratios: Hospital Anxiety and Depression Scale score (HADS)

Covariate	Effect estimate	P value	95% confidence interval
Intercept	0.75	0.76	0.11 – 5.06
Intervention (InS:PIRE)	0.59	0.05	0.35 - 1.00
Male sex	0.61	0.14	0.31 - 1.20
ICU length of stay	0.99	0.57	0.96 - 1.02
APACHE II score	0.99	0.47	0.95 - 1.02
Time to follow up (months)	1.10	0.08	0.99 - 1.23
SIMD quintile 1 (most deprived)	1	NA	Reference quintile
SIMD quintile 2	1.06	0.86	0.55 - 2.05
SIMD quintile 3	0.82	0.69	0.13 - 2.18
SIMD quintile 4	0.27	0.10	0.05 - 1.42
SIMD quintile 5 (least deprived)	0.70	0.58	0.16 – 2.99
Surgery at admission or within seven days of ICU	0.42	0.14	0.12 - 1.44
Charlson comorbidity index (CCI) score	0.90	0.36	0.72 - 1.14
History of harmful alcohol or drug use	4.20	<0.001	1.63 - 10.80
Pre-morbid history of chronic pain	1.62	0.42	0.46 – 5.68
Pre-existing psychiatric diagnosis	1.95	0.08	0.91- 4.17

Hospital Anxiety and Depression Scale scores. Odds ratios of risk of screening positive for anxiety at one year. Depression defined as a component score of eight or greater.**Adjusted logistic regression model.**

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions on outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

**Brief Pain Inventory (short form):
Effects on Summary (mean) pain score**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	3.21	<0.001	1.65 - 4.77
Intervention (InS:PIRE)	-0.80	0.02	-1.43 - -0.17
Male sex	-0.41	0.17	-1.00 - 0.18
ICU length of stay	0.04	0.06	0.00 - 0.09
APACHE II score	-0.07	<0.001	-0.11 - -0.03
Time to follow up (months)	0.10	0.11	-0.03 - 0.23
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.08	0.84	-0.89- 0.74
SIMD quintile 3	-0.77	0.13	-1.77 - 0.23
SIMD quintile 4	-1.00	0.11	-2.27 - 0.26
SIMD quintile 5 (least deprived)	-1.72	<0.001	-2.50 - -0.93
Surgery at admission or within seven days of ICU	-0.40	0.30	-1.19 - 0.40
Charlson comorbidity index (CCI) score	0.16	0.04	0.01 - 0.31
History of harmful alcohol or drug use	0.94	0.08	-0.14 -2.03
Pre-morbid history of chronic pain	0.96	0.10	-0.20 - 2.12
Pre-existing psychiatric diagnosis	0.77	0.12	-0.23 - 1.77

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions on outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

**Brief Pain Inventory (short form):
Effects on average pain score (single question from survey)**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	3.14	<0.001	1.64 - 4.64
Intervention (InS:PIRE)	-0.90	0.01	-1.59 - - 0.21
Male sex	-0.28	0.35	-1.87 - 0.31
ICU length of stay	0.04	0.12	-0.01 - 0.09
APACHE II score	-0.06	0.03	-0.12 - - 0.01
Time to follow up (months)	0.11	0.04	0.01 - 0.22
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.21	0.63	-1.09 - 0.68
SIMD quintile 3	-0.94	0.08	-2.00 - 0.11
SIMD quintile 4	-0.86	0.17	-2.11 - 0.40
SIMD quintile 5 (least deprived)	-1.90	<0.001	-2.82 - -0.98
Surgery at admission or within seven days of ICU	-0.31	0.42	-1.10 - 0.48
Charlson comorbidity index (CCI) score	0.22	0.02	0.04 - 0.40
History of harmful alcohol or drug use	1.12	0.05	0.00 - 2.25
Pre-morbid history of chronic pain	0.56	0.34	-0.68 - 1.81
Pre-existing psychiatric diagnosis	0.38	0.40	-0.55 - 1.32

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions on outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

**Brief Pain Inventory (short form):
Effects on worst pain score (single question from survey)**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	4.29	<0.001	2.74 – 5.83
Intervention (InS:PIRE)	-0.70	0.03	-1.33 - -0.06
Male sex	-0.61	0.10	-1.33- 0.12
ICU length of stay	0.04	0.08	-0.01 - 0.09
APACHE II score	-0.09	0.01	-0.15 - -0.03
Time to follow up (months)	0.10	0.05	0.00 - 0.21
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.36	0.44	-1.29 - 0.58
SIMD quintile 3	-0.90	0.14	-2.10 - 0.31
SIMD quintile 4	-0.64	0.43	-2.38 - 1.09
SIMD quintile 5 (least deprived)	-1.75	<0.001	-2.84 - -0.65
Surgery at admission or within seven days of ICU	-0.49	0.26	-1.36 - 0.39
Charlson comorbidity index (CCI) score	0.18	0.05	0.00 - 0.35
History of harmful alcohol or drug use	1.16	0.04	0.04-2.28
Pre-morbid history of chronic pain	1.39	0.03	0.14 - 2.65
Pre-existing psychiatric diagnosis	1.11	0.05	0.00 - 2.22

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions on outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Brief Pain Inventory (short form):**Effects on enjoyment in life: pain interference (single question from survey)**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	4.22	<0.001	2.15- 6.28
Intervention (InS:PIRE)	-1.36	0.02	-2.44- -0.28
Male sex	0.15	0.70	-0.62 - 0.93
ICU length of stay	0.04	0.15	-0.02 - 0.10
APACHE II score	-0.05	0.13	-0.13 - 0.02
Time to follow up (months)	0.07	0.28	-0.07 - 0.21
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.23	0.68	-1.38 - 0.92
SIMD quintile 3	-0.71	0.27	-1.98 - 0.56
SIMD quintile 4	-1.75	0.06	-3.63 - 0.13
SIMD quintile 5 (least deprived)	-2.54	<0.001	-3.91 - -1.16
Surgery at admission or within seven days of ICU	-0.23	0.64	-1.28 – 0.81
Charlson comorbidity index (CCI) score	-0.05	0.62	-0.27 - 0.16
History of harmful alcohol or drug use	0.85	0.18	-0.41 - 2.10
Pre-morbid history of chronic pain	1.43	0.01	0.32 - 2.54
Pre-existing psychiatric diagnosis	1.80	0.02	0.35 - 3.24

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions on outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Brief Pain Inventory (short form):**Effects on normal work: pain interference (single question from survey)**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	3.74	<0.001	1.79 - 5.70
Intervention (InS:PIRE)	-0.88	0.07	-1.84 - 0.07
Male sex	-0.19	0.65	-1.03 - 0.65
ICU length of stay	0.05	0.10	-0.01 - 0.12
APACHE II score	-0.06	0.08	-0.13 - 0.01
Time to follow up (months)	0.08	0.12	-0.02 - 0.18
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.20	0.71	-1.29 - 0.89
SIMD quintile 3	-0.97	0.14	-2.28 - 0.34
SIMD quintile 4	-1.42	0.12	-3.25 - 0.41
SIMD quintile 5 (least deprived)	-2.80	<0.001	-3.89 - -1.71
Surgery at admission or within seven days of ICU	-0.12	0.78	-1.02 - 0.77
Charlson comorbidity index (CCI) score	0.18	0.16	-0.07 - 0.43
History of harmful alcohol or drug use	0.68	0.45	-1.32 - 2.68
Pre-morbid history of chronic pain	0.92	0.25	-0.76 - 2.60
Pre-existing psychiatric diagnosis	1.97	<0.001	0.88 - 3.07

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions on outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Brief Pain Inventory (short form):**Pain interference summary: mean pain interference (summary score)**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	4.17	<0.001	2.54 - 5.79
Intervention (InS:PIRE)	-0.97	0.02	-1.75 - -0.18
Male sex	-0.13	0.69	-0.80 - 0.53
ICU length of stay	0.03	0.15	-0.01 - 0.08
APACHE II score	-0.06	0.05	-0.12 - 0.00
Time to follow up (months)	0.06	0.26	-0.05 - 0.16
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.35	0.50	-1.42 -0.72
SIMD quintile 3	-1.01	0.06	-2.08 -0.07
SIMD quintile 4	-1.64	0.06	-3.34- 0.07
SIMD quintile 5 (least deprived)	-2.48	<0.001	-3.51- -1.45
Surgery at admission or within seven days of ICU	-0.31	0.44	-1.12 - 0.51
Charlson comorbidity index (CCI) score	0.06	0.57	-0.14 - 0.25
History of harmful alcohol or drug use	1.04	0.09	-0.20 - 2.28
Pre-morbid history of chronic pain	1.31	0.07	-0.12 - 2.74
Pre-existing psychiatric diagnosis	1.55	0.01	0.53 - 2.57

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions on outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

References

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Supplement 4: Hospital site clustering analysis

As outlined in the main paper the intervention was conducted in five sites and the usual care group were recruited from four separate sites. To account for any variation between hospital types, a mixed effects analysis was used to account for the intra-site variation.

Hospital site spread

In the intervention cohort 71 (51.8%) participants had been treated in the large tertiary referral hospital delivering the intervention with the remaining 66 (48.2%) receiving the intervention from the four medium general acute hospitals. In the usual care cohort 70 (60.9%) participants were from the large tertiary referral hospital recruiting to usual care with the remaining 45 (39.1%) recruited from three medium general acute hospitals. The differences in spread between groups was not significant on assessment with Pearson's Chi-squared test.

Hospital site type	Usual care cohort	Intervention cohort	P value
			0.189
Medium general acute hospitals	45 / 115 (39.1%)	66 / 137 (48.2%)	
Large tertiary referral hospital	70 / 115 (60.9%)	71 / 137 (51.8%)	

Contingency table of hospital site type

Large tertiary referral hospital fixed effects were added to the previous multivariable regression model outlined in the main paper and supplement **S6**, with the reference being participants treated in an intensive care unit from a medium general acute hospital. The tables of these models with fixed effects are presented first. Tables with fixed and random effects, including the variance (standard deviation in intercept from hospital site) are presented after the standalone fixed effects models. The effects of hospital site is minimal on both fixed and random effects analyses.

Analysis with hospital site type, fixed effects**Health utility score model with hospital site fixed effects**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	0.76	<0.001	0.55 -0.98
Intervention (InS:PIRE)	0.12	<0.001	0.04 - 0.20
Large tertiary referral hospital	0.02	0.61	-0.06 – 0.10
Male sex	0.01	0.72	-0.06 - 0.09
ICU length of stay	0.00	0.01	-0.01 -0.00
APACHE II score	0.00	0.49	-0.01 - 0.00
Time to follow up (months)	0.06	0.26	-0.05 - 0.16
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.35	0.50	-1.42 -0.72
SIMD quintile 3	-1.01	0.06	-2.08 -0.07
SIMD quintile 4	-1.64	0.06	-3.34- 0.07
SIMD quintile 5 (least deprived)	-2.48	<0.001	-3.51- -1.45
Surgery at admission or within seven days of ICU	-0.31	0.44	-1.12 - 0.51
Charlson comorbidity index (CCI) score	0.00	0.93	-0.02 - 0.02
History of harmful alcohol or drug use	-0.09	0.08	-0.20 - 0.01
Pre-morbid history of chronic pain	-0.09	0.09	-0.20 - 0.01
Pre-existing psychiatric diagnosis	-0.17	<0.001	-0.26 - -0.08

Health utility score: EQ-5D-5L quality of life indicator with range of -0.594 to 1.0.**Adjusted linear regression model.**

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. Large tertiary referral hospital fixed effects added to the previous multivariable regression model outlined in the main paper and supplement S6, with the reference being participants treated in an intensive care unit from a medium general acute hospital. NA: not applicable.

Mixed effects sensitivity analysis for hospital clustering**Health utility score model with hospital site, mixed effects: hospital type cluster analysis**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	0.76	<0.001	0.55 - 0.98
Intervention (InS:PIRE)	0.12	<0.001	0.04- 0.20
Large tertiary referral hospital	0.02	0.61	-0.06 - 0.10
Male sex	0.01	0.72	-0.06 - 0.09
ICU length of stay	0.00	0.01	-0.01 - 0.00
APACHE II score	0.00	0.49	-0.01 - 0.00
Time to follow up (months)	-0.01	0.01	-0.02 -0.00
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD Quintile 2	0.02	0.64	-0.07 - 0.12
SIMD Quintile 3	0.08	0.23	-0.05 - 0.20
SIMD Quintile 4	0.14	0.03	0.02 - 0.27
SIMD Quintile 5 (least deprived)	0.21	<0.001	0.10 - 0.32
Surgery at admission or within seven days of ICU	0.02	0.69	-0.06 - 0.09
Charlson comorbidity index (CCI) score	0.00	0.93	-0.02 - 0.02
History of harmful alcohol or drug use	-0.09	0.08	-0.20- 0.01
Pre-morbid history of chronic pain	-0.09	0.09	-0.20 - 0.01
Pre-existing psychiatric diagnosis	-0.17	<0.001	-0.26 - -0.08
Random effects	Variance: random effects on intercept		
Large tertiary referral and medium general acute hospital	1.61 x10 ⁻⁰⁶		

Health utility score: EQ-5D-5L quality of life indicator with range of -0.594 to 1.0.**Adjusted linear regression model.**

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score;

time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. Large tertiary referral hospital fixed effects added to the previous multivariable regression model outlined in the main paper and supplement S6, with the reference being participants treated in an intensive care unit from a medium general acute hospital. Addition of hospital type cluster expressed as random effects on both large tertiary referral and medium general acute hospitals. NA: not applicable.

Supplement 5:
Comparison of eligible patients responding and not responding to the usual care postal survey

Demographic	Responders (N = 115)	Non-responders (N = 337)
Age, Years, Median (IQR)	63.5 (49.5 - 71.5)	53.7 (41.5 - 64.8)
Sex, Male (%)	67 / 115 (58.3)	207 / 336 (61.6)
Admitting specialty (%):		
Medical	53 / 115 (46.1)	208 / 336 (61.9)
Surgery	62 / 115 (53.9)	126 / 336 (37.5)
Other	0 / 115 (0.0)	2 / 336 (0.6)
Surgery at admission or within seven days of ICU (%)	50 / 106 (47.2)	112 / 329 (34.0)
ICU length of stay, Median days (IQR)	4.95 (2.5 - 9.5)	4.61 (2.21 - 9.14)
Hospital Length of stay, Median days (IQR)	18.0 (11.4 - 35.0)	17.0 (8.0 - 32.3)
APACHE II score, Median (IQR)	19 (14.2 - 25.0)	18 (14 - 24)
Advanced respiratory support (%)	100 / 112 (89.3)	301 / 334 (90.1)
Complex cardiovascular support requiring multiple vasoactive drugs (%)	21 / 112 (18.8)	39 / 336 (11.6)
Renal replacement therapy (%)	19 / 112 (17.0)	64 / 334 (19.2)
Deprivation index, SIMD 2016 (%):		
Quintile 1 (most deprived)	34 / 112 (30.4)	133 / 311 (42.765)
Quintile 2	27 / 112 (24.1)	75 / 311 (24.116)
Quintile 3	12 / 112 (10.7)	48 / 311 (15.434)
Quintile 4	18 / 112 (16.1)	27 / 311 (8.682)
Quintile 5 (least deprived)	21 / 112 (18.8)	28 / 311 (9.003)
Time from hospital discharge to first recruitment letter invitation, Median months (IQR)	13.9 (12.4 - 15.2)	13.6 (12.0 - 15.1)

IQR: Interquartile range; ICU: Intensive Care Unit; APACHE II: Acute Physiology and Chronic Health Evaluation Two; SIMD: Scottish Index of Multiple Deprivation. The usual care cohort was recruited by postal survey, 452 eligible patients were sent invitation letters alongside details of the study, consent forms, and the study questionnaires. Of these, 115 patient returned completed surveys and consent forms (responders), and 337 did not return surveys (non-responders). Recruitment numbers are outlined in **Figure 1**.

Supplement 6: details of all adjusted, multivariable models used for primary outcomes

The following 11 tables describe the covariates and their effects for all outcomes models.

Health utility score model

Covariate	Effect estimate	P value	95% confidence interval
Intercept	0.79	<0.001	0.57 -1.10
Intervention (InS:PIRE)	0.12	0.01	0.04 - 0.20
Male sex	0.01	0.72	-0.07 - 0.10
ICU length of stay	0.00	0.01	-0.01 – 0.00
APACHE II score	0.00	0.53	-0.01 -0.00
Time to follow up (months)	-0.01	<0.001	-0.02 -0.00
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	0.02	0.70	-0.08 - 0.12
SIMD quintile 3	0.07	0.28	-0.06 - 0.19
SIMD quintile 4	0.14	0.04	0.01 - 0.26
SIMD quintile 5 (least deprived)	0.21	<0.001	0.11 -0.30
Surgery at admission or within seven days of ICU	0.02	0.69	-0.07 - 0.11
Charlson comorbidity index (CCI) score	0.00	0.95	-0.02 - 0.02
History of harmful alcohol or drug use	-0.09	0.11	-0.21 - 0.02
Pre-morbid history of chronic pain	-0.09	0.21	-0.24 - 0.05
Pre-existing psychiatric diagnosis	-0.17	<0.001	-0.27 - -0.07

Health utility score: EQ-5D-5L quality of life indicator with range of -0.594 to 1.0.

Adjusted linear regression model. All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation, five quintiles (SIMD), effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

EuroQol Visual Analogue Scale score

Covariate	Effect estimate	P value	95% confidence interval
Intercept	65.38	<0.001	49.57 - 81.19
Intervention (InS:PIRE)	11.88	<0.001	5.91 - 17.86
Male sex	-0.10	0.97	-5.76 - 5.55
ICU length of stay	-0.20	0.12	-0.46 - 0.05
APACHE II score	0.03	0.88	-0.38 - 0.44
Time to follow up (months)	-0.52	0.14	-1.23 - 0.18
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	4.56	0.22	-2.81 - 11.93
SIMD quintile 3	5.25	0.26	-3.93 - 14.44
SIMD quintile 4	1.43	0.76	-7.83 - 10.69
SIMD quintile 5 (least deprived)	14.87	<0.001	6.52 - 23.22
Surgery at admission or within seven days of ICU	7.92	0.001	1.92 - 13.91
Charlson comorbidity index (CCI) score	-0.01	0.99	-1.35 - 1.32
History of harmful alcohol or drug use	-8.00	0.06	-16.33 - 0.34
Pre-morbid history of chronic pain	-4.40	0.26	-12.01 - 3.21
Pre-existing psychiatric diagnosis	-10.43	<0.001	-17.38 - -3.47

EuroQol Visual Analogue Scale score: Range 0 to 100. Adjusted linear regression model.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Generalised Self-Efficacy

Covariate	Effect estimate	P value	95% confidence interval
Intercept	29.49	<0.001	24.94- 34.03
Intervention (InS:PIRE)	2.32	0.02	0.32 - 4.31
Male sex	0.60	0.48	-1.06 - 2.26
ICU length of stay	-0.03	0.35	-0.10 - 0.04
APACHE II score	0.00	0.99	-0.13 - 0.13
Time to follow up (months)	-0.20	0.07	-0.42 - 0.02
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	1.22	0.33	-1.25- 3.69
SIMD quintile 3	3.04	0.02	0.45 - 5.63
SIMD quintile 4	2.63	0.08	-0.33 - 5.60
SIMD quintile 5 (least deprived)	3.62	<0.001	1.42 - 5.82
Surgery at admission or within seven days of ICU	1.73	0.05	0.03 - 3.43
Charlson comorbidity index (CCI) score	0.50	0.02	0.08 - 0.92
History of harmful alcohol or drug use	-2.44	0.10	-5.33 – 0.45
Pre-morbid history of chronic pain	-0.03	0.98	-2.90 - 2.84
Pre-existing psychiatric diagnosis	-3.16	<0.001	-5.24 - -1.08

Generalised self-efficacy: range 10 to 40. Adjusted linear regression model.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Depression odds ratios: Hospital Anxiety and Depression Scale score (HADS)

Covariate	Effect estimate	P value	95% confidence interval
Intercept	0.82	0.83	0.13 - 5.09
Intervention (InS:PIRE)	0.38	0.01	0.19 - 0.76
Male sex	1.07	0.85	0.54 - 2.11
ICU length of stay	1.03	0.06	1.00 -1.06
APACHE II score	1.00	1.00	0.95 - 1.05
Time to follow up (months)	1.05	0.16	0.98 - 1.14
SIMD quintile 1 (most deprived)	1	NA	Reference quintile
SIMD quintile 2	0.69	0.38	0.31 - 1.57
SIMD quintile 3	0.31	0.02	0.11- 0.85
SIMD quintile 4	0.81	0.64	0.34 - 1.96
SIMD quintile 5 (least deprived)	0.14	0.01	0.03 - 0.63
Surgery at admission or within seven days of ICU	0.33	<0.001	0.17 - 0.65
Charlson comorbidity index (CCI) score	0.83	0.05	0.70 - 1.00
History of harmful alcohol or drug use	2.06	0.09	0.88 -4.81
Pre-morbid history of chronic pain	0.86	0.78	0.30 -2.49
Pre-existing psychiatric diagnosis	3.36	<0.001	1.67 - 6.79

Hospital Anxiety and Depression Scale scores. Odds ratios of risk of screening positive for depression at one year. Depression defined as a component score of eight or greater. Adjusted logistic regression model.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Anxiety odds ratios: Hospital Anxiety and Depression Scale score (HADS)

Covariate	Effect estimate	P value	95% confidence interval
Intercept	0.93	0.96	0.18 - 4.82
Intervention (InS:PIRE)	0.58	0.11	0.30 - 1.13
Male sex	0.49	0.03	0.25 - 0.93
ICU length of stay	1.00	0.81	0.97 - 1.03
APACHE II score	1.00	0.90	0.96 - 1.5
Time to follow up (months)	1.07	0.06	1.00 - 1.15
SIMD quintile 1 (most deprived)	1	NA	Reference quintile
SIMD quintile 2	0.92	0.84	0.42 - 2.00
SIMD quintile 3	0.76	0.54	0.30 - 1.88
SIMD quintile 4	0.50	0.15	0.19 - 1.29
SIMD quintile 5 (least deprived)	0.50	0.14	0.20 - 1.27
Surgery at admission or within seven days of ICU	0.45	0.02	0.23 - 0.88
Charlson comorbidity index (CCI) score	0.87	0.12	0.73 - 1.04
History of harmful alcohol or drug use	3.37	<0.001	1.44 - 7.88
Pre-morbid history of chronic pain	1.19	0.72	0.47 - 2.98
Pre-existing psychiatric diagnosis	2.06	0.04	1.04 - 4.10

Hospital Anxiety and Depression Scale scores. Odds ratios of risk of screening positive for anxiety at one year. Depression defined as a component score of eight or greater.**Adjusted logistic regression model.**

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

**Brief Pain Inventory (short form):
Effects on Summary (mean) pain score**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	3.13	<0.001	1.38 - 4.89
Intervention (InS:PIRE)	-0.62	0.09	-1.35 - 0.11
Male sex	-0.28	0.42	-0.98 - 0.41
ICU length of stay	0.02	0.12	-0.01 - 0.05
APACHE II score	-0.06	0.02	-0.11 - -0.01
Time to follow up (months)	0.11	<0.001	0.05- 0.17
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.40	0.41	-1.35 - 0.56
SIMD quintile 3	-1.30	0.04	-2.52 - -0.08
SIMD quintile 4	-0.96	0.09	-2.09 - 0.16
SIMD quintile 5 (least deprived)	-2.24	<0.001	-3.10- -1.38
Surgery at admission or within seven days of ICU	-0.69	0.08	-1.47 - 0.09
Charlson comorbidity index (CCI) score	0.16	0.07	-0.01 - 0.34
History of harmful alcohol or drug use	1.18	0.02	0.18 - 2.17
Pre-morbid history of chronic pain	1.15	0.01	0.24 - 2.05
Pre-existing psychiatric diagnosis	0.53	0.21	-0.31 - 1.36

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

**Brief Pain Inventory (short form):
Effects on average pain score (single question from survey)**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	3.25	<0.001	1.42 - 5.08
Intervention (InS:PIRE)	-0.75	0.05	-1.50 - 0.00
Male sex	-0.22	0.56	-0.94 - 0.51
ICU length of stay	0.03	0.06	0.00- 0.06
APACHE II score	-0.05	0.04	-0.10 - 0.00
Time to follow up (months)	0.10	<0.001	0.03 - 0.17
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.39	0.44	-1.37 - 0.60
SIMD quintile 3	-1.30	0.04	-2.58 - -0.03
SIMD quintile 4	-0.80	0.20	-2.01 - 0.41
SIMD quintile 5 (least deprived)	-2.12	<0.001	-3.06 - -1.18
Surgery at admission or within seven days of ICU	-0.71	0.08	-1.50 - 0.09
Charlson comorbidity index (CCI) score	0.21	0.04	0.01 - 0.40
History of harmful alcohol or drug use	1.38	0.01	0.35 - 2.42
Pre-morbid history of chronic pain	0.80	0.09	-0.14 - 1.74
Pre-existing psychiatric diagnosis	0.26	0.56	-0.61 - 1.12

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

**Brief Pain Inventory (short form):
Effects on worst pain score (single question from survey)**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	4.64	<0.001	2.72 - 6.55
Intervention (InS:PIRE)	-0.59	0.16	-1.41 - 0.23
Male sex	-0.57	0.16	-1.38 - 0.23
ICU length of stay	0.03	0.14	-0.01 - 0.06
APACHE II score	-0.08	<0.001	-0.14 - -0.03
Time to follow up (months)	0.11	<0.001	0.04 - 0.17
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.59	0.26	-1.63 - 0.44
SIMD quintile 3	-1.60	0.03	-3.02 - -0.17
SIMD quintile 4	-0.84	0.22	-2.19 - 0.51
SIMD quintile 5 (least deprived)	-2.36	<0.001	-3.42 - -1.30
Surgery at admission or within seven days of ICU	-0.91	0.04	-1.77 - -0.14
Charlson comorbidity index (CCI) score	0.16	0.14	-0.05 - 0.37
History of harmful alcohol or drug use	1.47	0.01	0.39 - 2.55
Pre-morbid history of chronic pain	1.31	0.01	0.29 - 2.33
Pre-existing psychiatric diagnosis	0.75	0.12	-0.18 - 1.68

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Brief Pain Inventory (short form):**Effects on enjoyment in life: pain interference (single question from survey)**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	4.23	<0.001	2.00 - 6.46
Intervention (InS:PIRE)	-1.00	0.03	-1.89 - -0.11
Male sex	0.41	0.37	-0.48- 1.31
ICU length of stay	0.03	0.16	-0.01 - 0.07
APACHE II score	-0.06	0.07	-0.12 - 0.00
Time to follow up (months)	0.09	0.02	0.01- 0.17
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.54	0.37	-1.72 - 0.65
SIMD quintile 3	-1.67	0.02	-3.12 - -0.22
SIMD quintile 4	-1.47	0.04	-2.87 - -0.07
SIMD quintile 5 (least deprived)	-3.14	<0.001	-4.20 - -2.07
Surgery at admission or within seven days of ICU	-0.80	0.09	-1.71 - 0.12
Charlson comorbidity index (CCI) score	-0.07	0.57	-0.30 - 0.17
History of harmful alcohol or drug use	1.03	0.10	-0.22 - 2.27
Pre-morbid history of chronic pain	1.32	0.04	0.09- 2.54
Pre-existing psychiatric diagnosis	1.11	0.04	0.05 - 2.17

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

**Brief Pain Inventory (short form):
Effects on normal work: pain interference (single question from survey)**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	4.23	<0.001	1.90 - 6.56
Intervention (InS:PIRE)	-0.69	0.16	-1.66 - 0.28
Male sex	-0.13	0.78	-1.08 - 0.81
ICU length of stay	0.04	0.10	-0.01 - 0.08
APACHE II score	-0.06	0.09	-0.12 - 0.01
Time to follow up (months)	0.08	0.09	-0.01 - 0.17
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.43	0.53	-1.77 - 0.91
SIMD quintile 3	-1.69	0.03	-3.21 - -0.17
SIMD quintile 4	-1.42	0.07	-2.94 - 0.11
SIMD quintile 5 (least deprived)	-3.24	<0.001	-4.47 - -2.02
Surgery at admission or within seven days of ICU	-0.44	0.40	-1.45 - 0.25
Charlson comorbidity index (CCI) score	0.10	0.43	-0.14 - 0.33
History of harmful alcohol or drug use	1.00	0.16	-0.40 - 2.41
Pre-morbid history of chronic pain	1.06	0.10	-0.21 - 2.33
Pre-existing psychiatric diagnosis	1.43	0.01	0.29 - 2.57

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Brief Pain Inventory (short form):**Pain interference summary: mean pain interference (summary score)**

Covariate	Effect estimate	P value	95% confidence interval
Intercept	4.05	<0.001	2.09 - 60.20
Intervention (InS:PIRE)	-0.73	0.07	-1.52 - 0.06
Male sex	0.03	0.94	-0.73 - 0.78
ICU length of stay	0.03	0.07	0.00- 0.06
APACHE II score	-0.06	0.04	-0.11 - 0.00
Time to follow up (months)	0.08	0.04	0.00 - 0.16
SIMD quintile 1 (most deprived)	0	NA	Reference quintile
SIMD quintile 2	-0.65	0.22	-1.68 - 0.39
SIMD quintile 3	-1.80	<0.001	-3.03 - -0.57
SIMD quintile 4	-1.50	0.01	-2.71 - -0.30
SIMD quintile 5 (least deprived)	-2.91	<0.001	-3.79 - -2.04
Surgery at admission or within seven days of ICU	-0.60	0.15	-1.43 - 0.22
Charlson comorbidity index (CCI) score	0.00	0.98	-0.20 - 0.19
History of harmful alcohol or drug use	1.25	0.02	0.16 - 2.34
Pre-morbid history of chronic pain	1.37	0.01	0.36- 2.38
Pre-existing psychiatric diagnosis	1.07	0.02	0.18 - 1.96

Linear regression model: Brief Pain Inventory: score range 0 to 10.

All adjusted variables included in model: Intervention, Intensive Care Syndrome: Promoting Independence and Return to Employment (InS:PIRE), effects compared to the usual care cohort; male sex effects compared to female sex; Intensive Care Unit (ICU) length of stay, measured in days, effects per day; Acute Physiology and Chronic Health Evaluation II (APACHE II) score, effects per point increase in score; time to follow up measured in months, effects per additional month from hospital discharge to follow up; Scottish Index of Multiple Deprivation (SIMD), five quintiles, effects are those compared to SIMD quintile 1 (most deprived); surgery at admission or within seven days of ICU, effects of having an operation around time of ICU admission compared to those not having operative management in this time frame; Charlson Comorbidity Index (CCI) score, effects per extra index point score; effects of specific comorbidity conditions of outcome compared to absence of the comorbidity: history of harmful alcohol or drug use, pre-morbid history of chronic pain, pre-existing psychiatric diagnosis. NA: not applicable.

Supplement 7: Breakdown of missing observations for each covariate
Missing data per covariate for baseline characteristics (Total 252 patients)

Covariate	Missing (%)
Baseline characteristics	
Age	1.2
Gender	0
Medical or surgical admission	1.2
Surgery at admission or within seven days of ICU	4.0
ICU length of stay	1.2
Hospital Length of stay	3.2
APACHE II score	3.2
Advanced respiratory support	1.2
Complex cardiovascular support requiring multiple vasoactive drugs	1.2
Renal replacement therapy	1.2
Two or greater comorbidities	2.0
Charlson comorbidity index (CCI) score	1.6
Pre-existing psychiatric diagnosis	2.0
History of harmful alcohol or drug use	2.0
Pre-morbid history of chronic pain	2.0
Scottish Index of Multiple Deprivation (SIMD) quintile	1.2
Time to follow up (months)	3.2
Days of advanced respiratory support	1.2
Days of basic cardiovascular support	1.2
Days of acute renal replacement therapy	1.2
Obesity	1.2

Covariate	Missing (%)
Baseline characteristics	
Cardiovascular comorbidity count	1.2
Respiratory disease comorbidity count	2
Other comorbidity count (Non-respiratory, non-cardiovascular)	2
Complete comorbidity count	1.2
Admitting specialty short version	1.2
Days of level 3 treatment / Intensive Care	2
Days of level 2 treatment / High Dependency	2
Admitting specialty long version	1.2
Organ system failing	1.2

ICU: Intensive care unit; APACHE II: Acute physiology and chronic health evaluation two; Level 3 care: advanced respiratory support (invasive mechanic ventilation) or multiple organ support; Level 2: single organ failure / support, complex nursing care, or complex post-operative care.

Missing data per covariate for outcome measures

Covariate	Missingness, Number (%)
	(N = 252)
Outcome measurements	
EuroQol 5 Dimension 5 Level (EQ-5D-5L) responses	
EQ-5D-5L mobility score	2 (0.79)
EQ-5D-5L self-care score	2 (0.79)
EQ-5D-5L usual activities score	2 (0.79)
EQ-5D-5L pain and discomfort score	2 (0.79)
EQ-5D-5L anxiety and depression score	2 (0.79)
EQ-5D-5L Visual Analogue Score	10 (3.97)
Hospital Anxiety and Depression Scale (HADS): Anxiety	
I feel tense or wound up	5 (1.98)
I get a sort of frightened feeling as if something awful is about to happen	4 (1.59)
worrying thoughts go through my mind	4 (1.59)
I can sit at ease and feel relaxed	4 (1.59)
I get a sort of frightened feeling like butterflies in the stomach	7 (2.78)
I feel restless as if I have to be on the move	8 (3.17)
I get sudden feelings of panic	9 (3.57)
Hospital Anxiety and Depression Scale (HADS): Depression	
I still enjoy the things I used to enjoy	3 (1.19)
I can laugh and see the funny side of things	6 (2.38)
I feel cheerful	4 (1.59)
I feel as if I am slowed down	7 (2.78)

Covariate	Missingness, Number (%) (N = 252)
I have lost interest in my appearance	7 (2.78)
I look forward with enjoyment to things	9 (3.57)
I can enjoy a good book or radio or television programme	8 (3.17)
Generalised self-efficacy (GSE)	
I can always manage to solve difficult problems if I try hard enough	6 (2.38)
If someone opposes me I can find the means and ways to get what I want	9 (3.57)
It is easy for me to stick to my aims and accomplish goals	11 (4.37)
I am confident that I could deal efficiently with unexpected events	8 (3.17)
Thanks to my resourcefulness I know how to handle unforeseen situations	8 (3.17)
I can resolve most problems if I invest the necessary effort	10 (3.97)
I can remain calm when facing difficulties because I can rely on my coping abilities	9 (3.57)
When I am confronted with a problem I can usually find several solutions	8 (3.17)
If I am in trouble I can usually think of a solution	8 (3.17)
I can usually handle whatever comes my way	7 (2.78)
Brief Pain Inventory (short form)	
Have you had pain today?	29 (11.51)
Worst pain in past 24 hours	4 (1.59)
Least pain in past 24 hours	7 (2.78)

Covariate	Missingness, Number (%) (N = 252)
Average pain level	9 (3.57)
Pain right now	7 (2.78)
Pain interference with activity	14 (5.56)
Pain interference with mood	16 (6.35)
Pain interference with walking	18 (7.14)
Pain interference with normal work	17 (6.75)
Pain interference with relations with other people	15 (5.95)
Pain interference with sleep	16 (6.35)
Pain interference with enjoyment of life	16 (6.35)

Supplement 8 (Table 3): Unadjusted outcome measure differences between the matched intervention and usual care cohort

Outcome	Intervention (n=75)	Usual Care (n=75)	P value
EQ-5D Health utility score, median (IQR)	0.639 (0.542-0.791)	0.592 (0.225-0.792)	0.14
EQ-5D VAS, median (IQR)	70 (50-88)	55 (35.3-75)	<0.001
Generalized self-efficacy, median (IQR)	32 (28-35)	30 (22-34)	0.02
Summary (mean) pain score, median (IQR)	3 (0.29-5)	3.75 (1.25-6.5)	0.13
Average Pain Score measured (single question), median (IQR)	3 (0-6)	5 (1-7)	0.10
Worse pain score, median (IQR)	4 (0-7)	5 (2-8)	0.12
Pain interference with enjoyment of life, median (IQR)	3 (0-7)	5 (0-8)	0.09
Pain interference with normal work, median (IQR)	3 (0-8)	5 (1-9)	0.18
Mean pain interference summary, median (IQR)	3 (0-6)	4 (1-7)	0.12
HADS anxiety score, median (IQR)	7 (4-12)	8 (4-13)	0.32
HADS Anxiety: mild, moderate, or severe symptoms (%)	46.7	54.7	0.33
HADS depression score, median (IQR)	6 (3-10)	8 (4-13)	0.02
HADS depression: mild, moderate, or severe symptoms (%)	33.3	50.7	0.03

Supplement 9:
Forest plots comparing main sensitivity analyses for each outcome

