

Appendix A:

# Evaluation of the TrueNTH UK Supported Self-Management and Follow-Up Care Programme

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Technical Report Number 1

**EVALUATION OF EFFECTIVENESS**

October 2017



UNIVERSITY OF  
Southampton

The work reported here is part of the The Programme global initiative, led by the Movember Foundation, to tackle critical areas of prostate cancer care. The Programme is an international network of representatives which includes clinicians, academics, patients and organisations from across the UK, Canada, Australia and other countries. Through this initiative we are working together to identify and demonstrate the best and most cost-effective models for improving prostate cancer survivorship care and support. In the UK, the The Programme partnership of healthcare professionals, academics and volunteers is managed by Prostate Cancer UK

The work reported here is part of a programme of work to develop, implement and evaluate a supported self-management and follow up care programme for men with prostate cancer, which was led by a team from the University of Southampton.

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## **1. INTRODUCTION**

**1.1** The research reported here is part of a mixed methods evaluation of the TrueNTH Supported Self-Management and Follow up care programme (henceforth referred to as the Programme), which involved four NHS sites in England.

**1.2** The Programme consists of a nurse-led supported self-management and remote surveillance follow up care pathway implemented within secondary care. The aim of the Programme is to better address men's unmet needs, as well providing a more sustainable model of care within the context of increasing demand. The Programme is described in detail elsewhere (1).

Risk stratified models of follow up care have been recommended for cancer survivors for implementation in England by 2020 (2). However, whilst development work has been undertaken with breast, colorectal and testicular cancer (3, 4), this study is the first to evaluate the introduction of such a model for prostate cancer patients.

**1.3** The implementation and evaluation of the Programme was funded by Movember, in conjunction with Prostate Cancer UK. The objectives of the evaluation were to assess:

- i) the effectiveness of the Programme across key outcomes;
- ii) the impact of the Programme on costs;
- iii) the process of implementing the Programme, in order to identify any facilitating and inhibiting factors.

**1.4** This technical appendix presents findings that relate to the first objective. Technical reports on the evaluation of cost effectiveness, a qualitative report and a summary report are also available (citation to be added).

**1.5** This report first details the methods used to collect data. It then presents findings from the intention to treat analysis of effectiveness of the programme. Further pre-specified sub group

analyses are presented, taking into account four different factors: age, presence of co-morbidity, level of deprivation and time since treatment. Finally the findings from a per protocol analysis are described.

## **2. METHODS**

**2.1** The evaluation methods are described in full in the open access protocol paper (1) available at <http://rdcu.be/v1d9> , so only a brief description is given here.

### **2.2 Design**

The effectiveness of the TrueNTH Supported self-management and Follow up Programme was assessed using a quasi-experimental design, comparing outcomes of men on the Programme with a pre-service change cohort of men at four and eight months post recruitment.

### **2.3 Ethical approval**

The study received ethical approval from the National Research Ethics Service, East of England – Cambridge South (reference number 11/EE/1021). In addition, research governance approval was received from the individual NHS Trusts involved with the study, and the project was adopted by the National Institute of Health Research Clinical Research Network (ID 17238).

### **2.4 Comparator group**

The comparator group was recruited from the cohort of men attending follow-up care appointments during the period immediately prior to the introduction of the Programme at the sites. This group continued to receive their hospital's standard follow up care pre service change. This varied by site in terms of type of follow-up (face-to-face follow up or telephone), involved HCP (urological surgeon, oncologist or CNS) and follow-up time points.

### **2.5 Site recruitment**

The initial proposal was to involve three sites (early sites) in the evaluation. These sites were identified via an expression of interest which was sent to all NHS Trusts in England in February 2014. Six sites were shortlisted and interviewed in detail. Criteria for selection were: enthusiasm of the clinical team, capability of IT departments to implement the proposed IT solution, and inclusion of hospitals in both urban and rural locations. A description of the sites is provided elsewhere.

Once recruitment had been underway for a number of months it became clear that recruitment targets were not going to be met. In order to boost recruitment numbers, a decision was therefore made to include one of the two development sites, which had not yet implemented the care pathway, as a fourth evaluation site (later site).

## **2.6 Participant recruitment**

Men were recruited to the study by the clinical team at each site. At stage 1 of recruitment, men who attended a clinic appointment (either face-to-face or by telephone) and who were screened as eligible for the Programme were given a brief explanation of the evaluation and were asked to indicate consent for their contact details to be passed to the research at the University of Southampton (on a recruitment reply slip, either completed at the time or returned later by post). Men who declined this consent were asked for brief demographic details and for a reason for their decline. At stage 2 of recruitment, men who had returned a recruitment reply slip were sent, by post from the University, a recruitment pack including an invitation to take part in the study, a patient information sheet, consent form, baseline questionnaire and a freepost envelope for return of the completed documents.

Recruitment to the comparator group took place between September 2014 and April 2015 for the 3 early sites and between March 2015 and June 2015 for the later starting site. Recruitment to the programme group took place between April 2015 and February 2016 for the early sites and between June 2015 and February 2016 for the later site.

## **2.7 Eligibility**

Men were included in the study if they were:

- 1) assessed as suitable for the Programme by their clinical team, following clinical criteria (treated with radical prostatectomy (RP), external beam radiotherapy (EBRT) or androgen deprivation therapy (PADT); at least 6 weeks post RP or EBRT and +3months post commencement of PADT; meeting specified PSA levels and functionally and emotionally suitable for remote monitoring),
- 2) within 3 years of completion of RP or EBRT or within three years of commencement of PADT.
- 3) eighteen years of age or older
- 4) had adequate English language ability to complete the study questionnaires

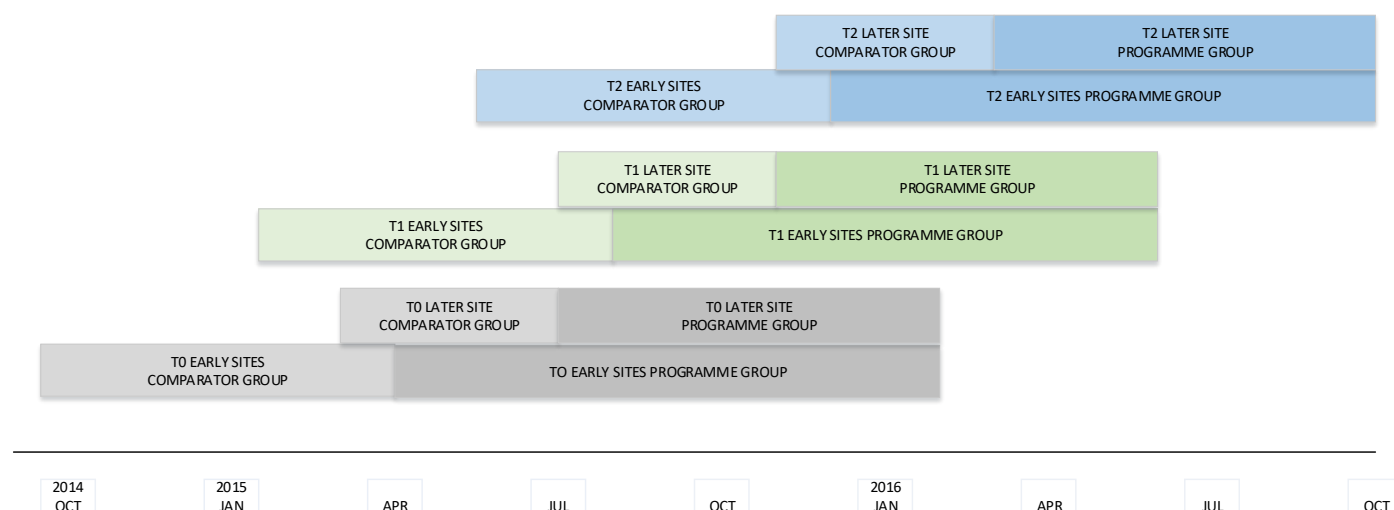
Men were excluded if they were:

- 1) unable to give informed consent
- 2) participating in a clinical trial which required face-to-face contact

## 2.8 Data collection

Data were collected by postal questionnaire at recruitment (T0) and then at four months (T1) and eight months (T2) post recruitment. Figure 1 shows timing of the data collection. Medical records were accessed, where consent was given, to ascertain clinical and treatment details (cancer stage, grade, date of diagnosis, and treatment type and date).

**Figure 1: Timing of data collection**



## 2.9 Outcome measures

The evaluation addressed a number of outcomes relevant to men who have completed treatment for prostate cancer, including: unmet need, general health status, physical symptoms, cancer specific quality of life, psychological wellbeing, worry about cancer recurrence, activation for self-management, and general health behaviours. Previously validated measures were used, where available, to assess these outcomes. Questions about health service use and satisfaction with follow up care were also included at four and eight months, and sociodemographic details were collected at all time points.

## 2.10 Analysis

Exploratory data analyses were performed to check data for data entry mistakes. Descriptive statistics for baseline clinical and demographic characteristics were calculated and presented by group. Descriptive statistics were also used to compare those completing 4 and 8 months questionnaires with those lost to attrition.



Outcome measure scales and subscales were computed according to the guidelines for each instrument. When guidelines were not available, a prorated score was calculated when at least 75% of the items for the outcome were present. Means and standard deviations were calculated for all available cases for each outcome measure at each time point, along with the difference between baseline and each of the post intervention time points at 4 and 8 months.

Regression analyses were conducted for all the outcome measures at each time point (4 and 8 months post recruitment) separately. We controlled for centre and the following baseline characteristics: outcome (assessed at baseline), age, type of treatment, educational attainment, and time since diagnosis, domestic status, co-morbidity, employment status, and ethnicity. A mixed model, including outcome at 4 and 8 months simultaneously, was also fitted controlling for the same variables listed above, and including an interaction term between time and intervention group, to give an estimate of the programme minus comparator effect specific to each follow up point, presented with 95% confidence intervals (CI), for comparison to the estimates from the regression analyses at each follow up point. Mixed models analyses produce unbiased estimates of treatment effect under the missing at random assumption. A compound symmetry (CS) pattern was specified for most of the models since finding the covariance pattern was not of intrinsic interest (citation to be added). An AR (1) covariance pattern was used for a few models that did not reach convergence using CS. Terms were deemed statistically significant at the 5% level.

Three pre-specified sets of subgroup analysis were conducted using the following cut-off points: 70 years of age, having 1 or more comorbidities, and being in the 20% most deprived areas. In addition to the pre-specified subgroups, time since treatment ( $\leq 1$  year or more than 1 year) was also investigated. Separate regression analysis for the difference in outcome between the care programme and usual care at each time point was repeated for each of the subgroups. An interaction term between each specified subgroup and the care programme vs usual care factor was examined. Estimates of the difference between programme and comparator for each subgroup were examined when the interaction term was found to be significant (at the 5% level).

A per protocol analysis (an analysis that only includes participants who were exposed to the two main elements of the programme ie workshop attendance and access to the online service) repeated the above regression analyses. Participants in the programme group who were recalled or requested to go back to clinic follow up and participants in the comparator group who attended the workshop were excluded from the analysis.

Analyses were conducted in SPSS 24 (citation to be added) for descriptive statistics and regression analysis and SAS 9.4 (citation to be added) for the mixed models.

## 3. RESULTS

### 3.1 Participants

Figure 1 shows the flow of participants through the study. 1036 men were assessed as eligible for the Programme and were invited to complete a recruitment reply slip. (556 for the comparator group and 480 for the programme group).

A total of 865 positive responses to contact were received (83% of those approached) and evaluation packs sent out. 58 men declined the invitation when asked and 103 took but did not return a recruitment reply slip. 32 men were subsequently found to be ineligible for the study and 9 were missed for other reasons.

627 men returned a valid T0 questionnaire (comparator group = 334; programme group = 293), representing 61% of those invited to take part in the study and 72% of those sent a recruitment pack. Recruitment rates (invited to baseline completion) were similar for the two groups: 60% of men invited to the comparator group and 61% of men invited to the programme group completed a T0 questionnaire.

572 men completed a valid T1 questionnaire (comparator group = 304; programme group = 268), and 556 a valid T2 questionnaire (comparator group = 293; programme group = 263). 83% of those who completed a T0 questionnaire went on to complete both T1 and T2 questionnaires (n = 522). Eight participants withdrew from the study during its duration, five became too unwell to be approached and seven died during their study involvement.

Consent for research team access to medical records was taken separately to consent for questionnaire participation. 15 men (10 comparator group men and 5 programme group men) did not give consent for this access.

### 3.2 Characteristics of sample

Tables 1 and 2 present the baseline sociodemographic and medical characteristics for all men and for the two groups separately. The mean age of all men in the study was 70 years, with youngest being 44 and the oldest 91. The majority of the men participating in the study were white (97%). Men in the sample most commonly reported no qualifications (27%), followed by vocational qualifications (21%) and GCSE/O level (17%). There were low numbers of men with higher qualifications (A level; degree; postgraduate). More than three quarters of the sample (77%) were

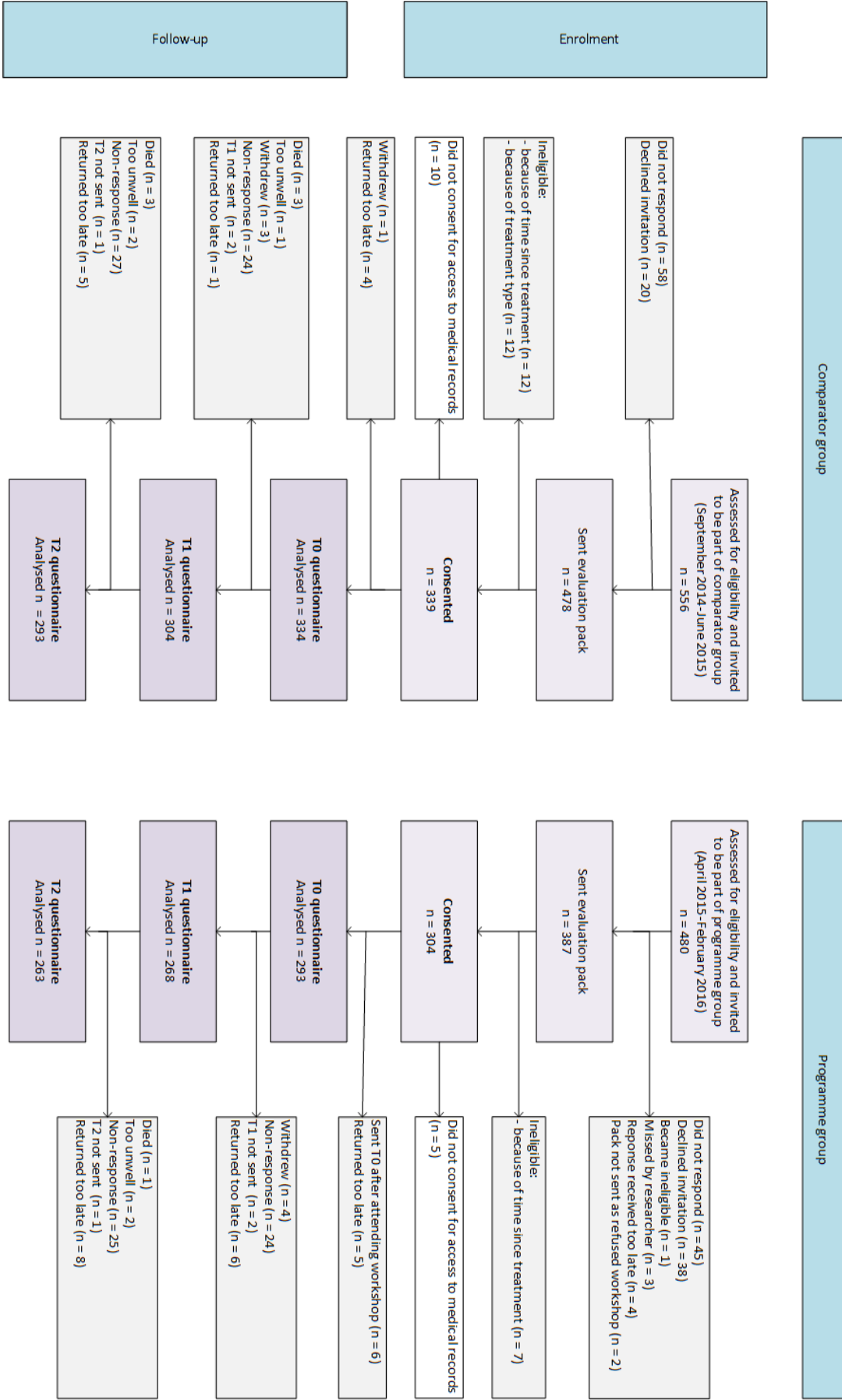
retired, while 81% were married or in a civil partnership, and 88% owned their own home. While the majority of the sample had access to the internet at home, 15% did not.

Using the Index of Multiple Deprivation (IMD) (2), 9% of participants lived in the 20% most deprived areas of England and 20% of participants in the 20% least deprived areas.

One of the inclusion criteria was that men were within a three year period from treatment. 51% of the total sample had received treatment within the year prior to recruitment, 30% were more than one but less than two years post treatment and 19 percent were more than two but less than three years post treatment.

The largest treatment group was men who had had External Beam Radiotherapy (EBRT) with hormone therapy (HT), with a further 9% having just EBRT and 15% just HT. 29% had had a radical prostatectomy and 1% Brachytherapy (BT). The remainder had combinations of treatments including brachytherapy. The majority (84%) were T stage 2 or 3, 95% were M stage zero and 91% N stage zero at diagnosis. 3% percent were M1 stage. Using the definition of prostate cancer stages proposed by the British Uro-oncology Group and others (3), which incorporates staging, Gleason score and PSA at diagnosis, 39% were categorised as locally advanced cancer, 29% as localised intermediate risk and 10% localised high risk. The mean length of time since diagnosis was 2 years. As eligibility was from most recent treatment, diagnosis time ranged from 0 to 14 years.

Figure 1: study flow chart showing participant numbers and loss to follow-up at each stage



### 3.3 Baseline equivalence

Baseline characteristics were very similar between the groups in most respects, and there were no statistical differences between the comparator and programme group on any of these variables. There were a small number of non-significant differences between the groups for baseline demographic and clinical characteristics. The only site with balanced numbers between the groups was site 2. Site 1 had more participants in the programme group (almost double) and sites 3 and 4 had more in the comparator group. More men in the programme group had A Level qualifications (10% compared to 5% in the comparator group). Considering treatment type, more men in the programme group had EBRT and HT (50%) and more in the comparator group had HT alone (19%).

More men in the programme group had received treatment in the last year (56%) compared to those in the comparator group (47%). There were more participants with localised intermediate risk and locally advanced cancer at diagnosis in the programme group and more missing data in the comparator group (in part because of refusal of consent) for most of the medical record variables.

**Table 1: Baseline sociodemographic characteristics.**

Figures are number (% of column total) unless stated otherwise.

Patient characteristic	All (n= 627)	Care programme (n=293)	Comparator group (n=334)
<b>Centre</b>			
1	155 (25)	99 (34)	56 (17)
2	202 (32)	100 (34)	102 (31)
3	146 (23)	53 (18)	93 (28)
4	124 (20)	41 (14)	83 (25)
<b>Ethnicity*</b>			
White	607 (97)	281 (97)	326 (99)
Mixed	2 (0)	1 (0)	1 (0)
Asian	4 (1)	3 (1)	1 (0)
Black	4 (1)	4 (1)	0
Other	4 (1)	2 (1)	2 (1)
Missing	6 (1)	2 (1)	4 (1)
<b>Qualifications*</b>			
No qualifications	166 (27)	70 (24)	96 (30)
GCSE/O level	106 (17)	46 (16)	60 (18)
Vocational	131 (21)	63 (22)	68 (21)
A level	45 (7)	28 (10)	17 (5)
Undergraduate	54 (9)	27 (9)	27 (8)
Postgraduate	34 (6)	21 (7)	13 (4)
Other	81 (13)	35 (12)	46 (14)
Missing	10 (2)	3 (1)	7 (2)
<b>Employment status*</b>			
Retired	479 (77)	224 (77)	255 (77)
Employed full time	56 (9)	27 (9)	29 (9)
Employed part time	34 (5)	18 (6)	16 (5)
Employed on sick leave	5 (1)	1 (0)	4 (1)
Self employed	33 (5)	16 (6)	17 (5)
Disabled or long term sick	13 (2)	3 (1)	10 (3)
Unemployed	3 (0)	2 (1)	1 (0)
Missing	4 (1)	2 (1)	2 (1)
<b>Marital status*</b>			
Married/civil partnership	507 (81)	233 (80)	274 (82)
Widowed	36 (6)	19 (6)	17 (5)
Living with partner	33 (5)	17 (6)	16 (5)
Divorced/separated	31 (5)	15 (5)	16 (5)
Single	19 (3)	9 (3)	10 (3)
Missing	1 (0)	0	1 (0)
<b>Living</b>			
In own home	554 (88)	260 (89)	294 (88)
In rented home	57 (9)	29 (10)	28 (8)
Temporary accommodation	3 (1)	1 (0)	2 (1)
Other	13 (2)	3 (1)	10 (3)
<b>Caring responsibilities for children or adults*</b>			
Yes	75 (12)	41 (14)	34 (10)
No	548 (88)	251 (86)	297 (90)
Missing	4 (1)	1 (0)	3 (1)

<b>Access to the internet at home*</b>				
	<b>Yes</b>	530 (85)	254 (87)	276 (83)
	<b>No</b>	96 (15)	39 (13)	57 (17)
	<b>Missing</b>	1 (0)	0	1 (0)
<b>Index of Multiple Deprivation decile*</b>				
	<b>1</b>	25 (4)	13 (5)	12 (4)
	<b>2</b>	28 (5)	15 (5)	13 (4)
	<b>3</b>	51 (8)	21 (7)	30 (9)
	<b>4</b>	88 (14)	39 (14)	49 (15)
	<b>5</b>	89 (15)	36 (13)	53 (16)
	<b>6</b>	75 (12)	34 (12)	41 (13)
	<b>7</b>	64 (10)	34 (12)	30 (9)
	<b>8</b>	72 (12)	41 (14)	31 (9)
	<b>9</b>	70 (11)	29 (10)	41 (13)
	<b>10</b>	53 (9)	24 (8)	29 (9)
	<b>Missing</b>	12 (2)	7 (2)	5 (2)
<b>Age of participant (in years)</b>				
	<b>Mean (SD)</b>	70 (7)	70 (7)	71 (7)
	<b>Min to max</b>	44 to 91	45 to 84	44 to 91

\*Percentages for non-missing categories calculated amongst cases with valid responses.



**Table 2: Baseline medical characteristics. Figures are number (% of column total) unless stated otherwise.**  
**\*Percentages for non-missing categories calculated amongst cases with valid responses.**

Clinical characteristic	All	Programme group (n=293)	Comparator group (n=334)
<b>Time since diagnosis (in years)*</b>			
Mean (SD)	2 (2)	2 (2)	2 (2)
Min to max	0 to 14	0 to 14	0 to 14
n	623	292	331
<b>Time from treatment*</b>			
0-1 years	314 (51)	160 (56)	154 (47)
>1-2 years	185 (30)	69 (24)	116 (35)
>2-3 years	114 (19)	56 (20)	58 (18)
Missing	14 (2)	8 (3)	6 (2)
<b>Number of comorbidities</b>			
Mean (SD)	To be added	2 (1)	2 (1)
Min to max		0 to 5	0 to 6
<b>Treatment*</b>			
Radical prostatectomy	178 (29)	83 (29)	95 (29)
External Beam Radiotherapy (EBRT)	54 (9)	23 (8)	31 (9)
Hormone therapy (HT)	91 (15)	27 (9)	64 (19)
Brachytherapy (BT)	4 (1)	2 (1)	2 (1)
EBRT and HT	264 (43)	143 (50)	121 (37)
BT and HT	14 (2)	9 (3)	5 (2)
BT and EBRT	3 (1)	1 (0)	2 (1)
BT and EBRT and HT	12 (2)	1 (0)	11 (3)
Missing	7 (1)	4 (1)	3 (1)
<b>T Stage*</b>			
T1	64 (11)	32 (11)	32 (11)
T2	255 (44)	119 (42)	136 (45)
T3	237 (40)	118 (42)	119 (39)
T4	24 (4)	12 (4)	12 (4)
T stage unknown	4 (1)	1 (0)	3 (1)
Missing	43 (7)	11 (4)	32 (10)
<b>N Stage*</b>			
N0	528 (91)	262 (91)	266 (92)
N1	33 (6)	14 (5)	19 (7)
N stage unknown	17 (3)	12 (4)	5 (2)
Missing	49 (8)	5 (2)	44 (13)
<b>M Stage*</b>			
M0	551 (95)	273 (95)	278 (95)
M1	19 (3)	7 (2)	12 (4)
M stage unknown	12 (2)	8 (3)	4 (1)
Missing	45 (7)	5 (2)	40 (12)
<b>PSA at diagnosis*</b>			
Less than 10	287 (48)	142 (49)	145 (46)
10 to 20	163 (27)	83 (29)	80 (26)
More than 20	154 (25)	65 (22)	89 (28)
Missing	23 (4)	3 (1)	20 (6)
<b>Risk stratification (3)</b>			
Advanced (metastatic)	17 (3)	7 (2)	10 (3)
Localised high risk	65 (10)	31 (11)	34 (10)
Localised intermediate risk	183 (29)	96 (33)	87 (26)
Localised low risk	36 (6)	15 (5)	21 (6)
Localised risk unknown	8 (1)	3 (1)	5 (2)
Locally advanced	245 (39)	123 (42)	122 (37)
Insufficient data	73 (12)	18 (6)	55 (17)

### 3.4 Analysis of attrition

Tables 3 and 4 compare socio-demographic and medical characteristics between those who completed all three questionnaires and those lost to attrition. The retention rate of men entering the survey was high, with 83% of those with a valid T0 questionnaire going on to complete a valid T1 and T2 questionnaire. There were no significant differences between those who completed all three questionnaires and those lost to attrition. There were a small number of non-significant differences:

- More participants were lost to attrition in the programme than in the comparator group.
- Site 1 had a lower percentage of participants lost to attrition and site 2 had more.
- There were more participants that were widowed or divorced/separated in the lost to attrition group than in those with valid data at T1 and T2. This was true also for participants living in a rented home and who had caring responsibilities.
- More participants who lived in 20% least deprived areas completed all three questionnaires and more of those living in a 20% most deprived areas were lost to attrition.
- There were more missing data for those lost to attrition.

**Table 3: Comparison of baseline characteristics between participants with valid 4 and 8 month questionnaires and those lost to attrition. Figures are number (% of column total) unless stated otherwise.**

Patient characteristic		Participants with valid 4 and 8 months questionnaires (n=522)	Participants lost to attrition (n=105)
<b>Group</b>	<b>Care Programme</b>	236 (45)	57 (54)
	<b>Usual Care</b>	286 (55)	48 (46)
<b>Centre</b>	<b>1</b>	137 (26)	18 (17)
	<b>2</b>	168 (32)	34 (32)
	<b>3</b>	122 (23)	24 (23)
	<b>4</b>	95 (18)	29 (28)
<b>Ethnicity*</b>	<b>White</b>	506 (98)	101 (97)
	<b>Mixed</b>	2 (0)	0
	<b>Asian</b>	3 (1)	1 (1)
	<b>Black</b>	0	2 (2)
	<b>Other</b>	4 (1)	0
	<b>Missing</b>	5 (1)	1 (1)
<b>Qualifications*</b>	<b>No qualifications</b>	136 (26)	30 (29)
	<b>GCSE/O level</b>	93 (18)	13 (13)
	<b>Vocational</b>	106 (21)	25 (25)
	<b>A level</b>	39 (8)	6 (6)
	<b>Undergraduate</b>	46 (9)	8 (8)
	<b>Postgraduate</b>	30 (6)	4 (4)
	<b>Other</b>	65 (13)	16 (16)
	<b>Missing</b>	7 (1)	3 (3)
<b>Employment Status*</b>	<b>Retired</b>	402 (78)	77 (74)
	<b>Employed full time</b>	45 (9)	11 (11)
	<b>Employed part time</b>	27 (5)	7 (7)
	<b>Employed on sick leave</b>	3 (1)	2 (2)
	<b>Self employed</b>	29 (6)	4 (4)
	<b>Disabled or long term sick</b>	10 (2)	3 (3)
	<b>Unemployed</b>	3 (1)	0
	<b>Missing</b>	3 (1)	1 (1)
<b>Marital status*</b>	<b>Married/civil partnership</b>	430 (83)	77 (73)
	<b>Widowed</b>	27 (5)	9 (9)
	<b>Living with partner</b>	27 (5)	6 (6)
	<b>Divorced/separated</b>	23 (4)	8 (8)
	<b>Single</b>	14 (3)	5 (5)
	<b>Missing</b>	1 (0)	0
<b>Living</b>	<b>In own home</b>	470 (90)	84 (80)
	<b>In rented home</b>	40 (8)	17 (16)
	<b>Temporary accommodation</b>	2 (0)	1 (1)
	<b>Other</b>	10 (2)	10 (3)

<b>Caring Responsibilities for children or Adults*</b>		
<b>Yes</b>	53 (10)	22 (21)
<b>No</b>	465 (90)	83 (79)
<b>Missing</b>	4 (1)	0
<b>Access to the internet at home*</b>		
<b>Yes</b>	442 (85)	88 (84)
<b>No</b>	79 (15)	17 (16)
<b>Missing</b>	1 (0)	0
<b>Index of Multiple Deprivation decile*</b>		
<b>1</b>	20 (4)	5 (5)
<b>2</b>	17 (3)	11 (11)
<b>3</b>	43 (8)	8 (8)
<b>4</b>	67 (13)	21 (21)
<b>5</b>	78 (15)	11 (11)
<b>6</b>	65 (13)	10 (10)
<b>7</b>	52 (10)	12 (12)
<b>8</b>	61 (12)	11 (11)
<b>9</b>	62 (12)	8 (8)
<b>10</b>	48 (9)	5 (5)
<b>Missing</b>	9 (2)	3 (3)
<b>Age of participant (in years)</b>		
<b>Mean (SD)</b>	70 (7)	70 (8)
<b>Min to max</b>	45 to 85	45 to 91

\*Percentages for non-missing categories calculated amongst cases with valid responses.

**Table 4: Comparison of participants' medical characteristics between participants with valid 4 and 8 month questionnaires and those lost to attrition.**

Clinical characteristic Figures are number (% of column total) unless stated otherwise.	Participants with valid 4 and 8 months questionnaires (n=522)	Participants lost to attrition (n=105)
Time since diagnosis (in years)* Mean (SD) Min to max n	2 (2) 0 to 14 522	2 (2) 0 to 14 101
Number of comorbidities Mean (SD) Min to max	2 (1) 0 to 5	2 (1) 0 to 6
Time from treatment* 0-1 years >1-2 years >2-3 years Missing	267 (52) 151 (29) 97 (19) 7 (1)	47 (48) 34 (35) 17 (17) 7 (7)
Treatment* Radical prostatectomy External Beam Radiotherapy (EBRT) Hormone therapy Brachytherapy (BT) EBRT and hormone therapy BT and hormone therapy BT with EBRT BT with EBRT and hormone therapy Missing	156 (30) 42 (8) 72 (14) 3 (1) 221 (43) 11 (2) 2 (0) 10 (2) 5 (1)	22 (21) 12 (12) 19 (18) 1 (1) 43 (42) 3 (3) 1 (1) 2 (2) 2 (2)
T Stage* T1 T2 T3 T4 TX Missing	58 (12) 212 (43) 203 (41) 20 (4) 4 (1) 25 (5)	6 (7) 43 (49) 34 (39) 4 (5) 0 18 (17)
M Stage* M0 M1 MX Missing	462 (94) 18 (4) 11 (2) 31 (6)	89 (98) 1 (1) 1 (1) 14 (13)
N Stage* N0 N1 NX Missing	450 (92) 26 (5) 14 (3) 32 (6)	78 (89) 7 (8) 3 (3) 17 (16)
Risk stratification (3) Advanced (metastatic) Localised high risk Localised intermediate risk Localised low risk Localised risk unknown Locally advanced Insufficient data	17 (3) 59 (11) 152 (29) 29 (6) 6 (1) 208 (40) 51 (10)	0 6 (6) 31 (30) 7 (7) 2 (2) 37 (35) 22 (21)
PSA at diagnosis* Less than 10 10 to 20 More than 20 Missing	240 (47) 139 (27) 129 (25) 14 (3)	47 (49) 24 (25) 25 (26) 9 (9)

### 3.5 Outcome results at 4 and 8 months

Table 5 presents differences in outcomes between men in the programme and comparator groups for each outcome at 4 and 8 months. There were a number of statistically significant results, all of which favoured the Programme:

- There were statistically significant differences in the CASUN total score and existential survivorship subscale at 4 months between groups. This was consistent for both scoring methods (strength of need and unmet needs). This difference was no longer significant at 8 months.
- There were significant differences for the EPIC26 Bowel subscale score at 4 and 8 months.
- There was a statistically significant differences for total GHQ score at 4 months, (using the 0111 method). This was no longer significant at 8 months.
- Most comparisons between programme and comparator group favoured the Programme and all statistically significant comparisons favour the Programme.

**Table 5: Differences between programme and comparator groups for each outcome at 4 and 8 months.**

Outcome (Direction) Subscales (Range)	Assessment	Care Programme Mean (SD) n=293	Usual Care Mean (SD) n=334	Care Programme – Usual Care difference (95% CI)*	P value	Direction favours Program- me
<b>CASUN (4) (higher=more need) <i>Strength of need</i></b> Total score (0 to 140)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	24.463 (17.291) n=288 18.394 (15.577) n=262 17.902 (16.289) n=260 4.873 n=248 5.540 n=251	23.493 (17.740) n=330 20.691 (18.173) n=296 19.771 (18.542) n=286 1.899 n=292 3.443 n=283	-2.439 (-4.573, -0.304) n=524 -1.704 (-3.774, 0.365) n=517	<b>0.025</b> 0.106	YES YES
Existential Survivorship (0 to 56)	Baseline 4 months 8 months Change (b-4m)	4.876 (6.773) n=290 3.413 (5.661) n=266 3.254 (5.678) n=261 0.926 n=254	4.576 (6.326) n=330 4.103 (6.093) n=300 4.047 (6.394) n=287 0.155 n=296	-0.723 (-1.416, -0.029) n=533 -0.673 (-1.387, 0.042) n=519	<b>0.041</b> 0.065	YES YES
Comprehensive cancer care (0 to 24)	Change (b-8m) Baseline 4 months 8 months Change (b-4m)	1.168 n=252 10.046 (5.597) n=292 8.011 (5.867) n=262 7.799 (5.887) n=260 1.937 n=252	0.170 n=284 9.343 (5.971) n=330 8.232 (6.139) n=299 7.819 (6.108) n=287 1.013 n=295	-0.388 (-1.273, 0.497) n=530 -0.258 (-1.112, 0.597) n=521	0.390 0.554	YES YES
Information (0 to 12)	Change (b-8m) Baseline 4 months 8 months Change (b-4m)	1.973 n=253 3.457 (3.074) n=291 2.574 (2.967) n=263 2.473 (2.828) n=260 0.893 n=252	1.551 n=284 3.508 (3.208) n=330 2.828 (3.054) n=300 2.555 (2.834) n=292 0.606 n=296	-0.177 (-0.649, 0.295) n=531 0.108 (-0.328, 0.544) n=524	0.462 0.627	YES NO
Quality of life (0 to 8)	Change (b-8m) Baseline 4 months 8 months Change (b-4m)	0.825 n=252 1.309 (1.561) n=288 0.974 (1.421) n=266 0.988 (1.488) n=259 0.296 n=253	0.979 n=289 1.304 (1.645) n=329 1.183 (1.599) n=300 1.164 (1.577) n=287 0.085 n=295	-0.171 (-0.402, 0.060) n=531 -0.202 (-0.431, 0.026) n=517	0.146 0.083	YES YES
Relationships (0 to 12)	Change (b-8m) Baseline 4 months 8 months Change (b-4m) Change (b-8m)	0.308 n=250 1.721 (2.133) n=290 1.311 (1.970) n=264 1.230 (1.920) n=261 0.238 n=252	0.116 n=284 1.604 (2.083) n=331 1.520 (2.045) n=298 1.408 (1.961) n=289 0.058 n=295	-0.141 (-0.400, 0.117) n=531 -0.167 (-0.416, 0.082) n=523	0.283 0.187	YES YES

<b>Unmet needs</b>					
Total number of unmet needs (0 to 35)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	0.395 n=253  12.849 (8.208) n=288 10.171 (7.948) n=262 10.005 (8.024) n=260 2.064 n=248 2.270 n=251	0.155 n=287  12.191 (8.633) n=330 11.134 (8.877) n=296 10.987 (9.476) n=286 0.711 n=292 1.129 n=283		<b>0.020</b> 0.097  YES YES
Existential Survivorship (0 to 14)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	3.355 (3.711) n=290 2.521 (3.470) n=266 2.362 (3.216) n=261 0.556 n=254 0.739 n=252	3.144 (3.770) n=330 2.914 (3.639) n=300 2.905 (3.975) n=287 0.076 n=296 0.087 n=284	-0.524 (-0.973, -0.075) n=533 -0.419 (-0.892, 0.054) n=519	<b>0.022</b> 0.083  YES YES
Comprehensive Cancer Care (0 to 6)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	4.216 (1.899) n=292 3.599 (2.184) n=262 3.619 (2.224) n=260 n=252 0.477 n=253	3.869 (2.174) n=330 3.573 (2.294) n=299 3.506 (2.359) n=287 0.279 n=295 0.386 n=284	-0.134 (-0.471, 0.204) n=530 -0.074 (-0.415, 0.268) n=521	0.437 0.671  YES YES
Information (0 to 3)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	1.749 (1.319) n=291 1.378 (1.344) n=263 1.365 (1.356) n=260 0.359 n=252 0.310 n=252	1.691 (1.342) n=330 1.438 (1.358) n=300 1.420 (1.353) n=292 0.221 n=296 0.289 n=289	-0.031 (-0.247, 0.185) n=531 -0.012 (-0.228, 0.204) n=524	0.780 0.911  YES YES
Quality of life (0 to 2)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	0.823 (0.851) n=288 0.635 (0.809) n=266 0.656 (0.855) n=259 0.158 n=253 0.148 n=250	0.818 (0.885) n=329 0.753 (0.888) n=300 0.756 (0.899) n=287 0.058 n=295 0.049 n=284	-0.108 (-0.240, 0.024) n=531 -0.128 (-0.264, 0.008) n=517	0.108 0.064  YES YES
Relationships (0 to 3)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	1.014 (1.068) n=290 0.799 (1.018) n=264 0.757 (1.024) n=261 0.131 n=252 0.196 n=253	0.952 (1.063) n=331 0.878 (1.030) n=298 0.856 (1.048) n=289 0.075 n=295 0.094 n=287	-0.065 (-0.212, 0.082) n=531 -0.083 (-0.230, 0.063) n=523	0.385 0.263  YES YES
<b>Positive changes in life (higher=better)</b>	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	2.090 (1.808) n=288 2.130 (1.925) n=267 2.124 (1.880) n=259 -0.063 n=252 -0.040 n=250	1.900 (1.798) n=331 1.800 (1.838) n=303 1.618 (1.922) n=288 0.130 n=300 0.306 n=284	0.214 (-0.089, 0.517) n=535 0.221 (-0.102, 0.543) n=517	0.166 0.179  YES YES



<b>PAM (5) (higher=better)</b> (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	63.020 (14.432) n=286 64.354 (14.752) n=260 64.833 (15.671) n=255 -1.380 n=246 -1.483 n=247	61.387 (14.140) n=323 62.255 (14.617) n=289 63.598 (15.184) n=280 -0.617 n=285 -1.475 n=272	1.287 (-0.888, 3.461) n=514 0.462 (-1.715, 2.640) n=503	0.246 0.677	YES YES
<b>EPIC26 (6)(higher=better)</b> Urinary incontinence (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	83.359 (20.328) n=285 84.460 (19.723) n=259 84.922 (19.673) n=253 -0.861 n=245 -1.206 n=242	80.378 (22.381) n=324 81.872 (19.649) n=288 82.000 (19.803) n=281 -0.866 n=279 -1.520 n=273	0.657 (-1.615, 2.929) n=510 0.485 (-1.937, 2.907) n=500	0.570 0.694	YES YES
Urinary irritative/obstructive (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	87.323 (13.265) n=282 87.841 (13.729) n=257 88.203 (13.204) n=249 0.130 n=240 -0.575 n=239	85.908 (14.381) n=318 87.568 (14.803) n=275 87.711 (14.885) n=267 -1.207 n=264 -1.373 n=255	-1.035 (-3.275, 1.204) n=490 -0.544 (-2.709, 1.622) n=480	0.364 0.622	NO NO
Bowel (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	88.526 (17.370) n=290 90.436 (14.681) n=262 90.279 (14.819) n=254 -1.503 n=250 -1.238 n=247	87.590 (17.056) n=324 86.751 (18.363) n=286 87.711 (14.885) n=267 0.830 n=279 0.718 n=275	2.723 (0.517, 4.928) n=490 3.682 (1.218, 6.146) n=506	<b>0.016</b> <b>0.003</b>	YES YES
Sexual (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	20.718 (21.628) n=268 21.876 (21.219) n=242 22.354 (21.527) n=236 -1.580 n=226 -2.150 n=223	18.442 (20.998) n=305 19.493 (21.499) n=277 19.634 (21.225) n=264 -1.258 n=264 -1.279 n=254	0.187 (-2.067, 2.441) n=474 0.662 (-1.948, 3.272) n=463	0.871 0.618	YES YES
Hormonal (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	77.708 (19.834) n=283 80.611 (17.517) n=258 81.490 (19.369) n=255 -2.392 n=243 -2.865 n=243	78.098 (21.317) n=324 80.152 (20.564) n=288 81.558 (19.971) n=276 -0.572 n=282 -1.847 n=270	0.631 (-1.478, 2.741) n=509 -0.798 (-3.071, 1.475) n=497	0.557 0.491	YES NO
<b>FACTG (7)(higher= better)</b> Total score (0 to 108)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	89.439 (13.427) n=279 89.232 (13.150) n=254 88.476 (14.240) n=258 1.152 n=237 1.228 n=243	87.640 (15.227) n=315 87.494 (14.952) n=289 87.296 (14.606) n=283 1.024 n=278 0.881 n=270	-0.041 (-1.641, 1.559) n=499 -0.158 (-1.794, 1.478) n=497	0.960 0.849	NO NO
Physical well-being (0 to 28)	Baseline 4 months	24.570 (4.088) n=287 24.858 (3.646) n=265	24.344 (4.267) n=321 24.155 (4.219) n=297	0.432 (-0.026, 0.889) n=523	0.064	YES

Social/Family well-being (0 to 28)	8 months Change (b-4m) Change (b-8m) Baseline 4 months 8 months Change (b-4m) Change (b-8m)	24.551 (4.236) n=261 -0.009 n=250 0.244 n=250 21.776 (4.583) n=288 21.021 (4.991) n=265 21.073 (4.937) n=260 0.662 n=253 0.574 n=252	24.049 (4.340) n=285 0.456 n=289 0.437 n=276 21.335 (4.973) n=327 21.060 (5.792) n=298 21.277 (5.265) n=290 0.415 n=294 0.281 n=285	0.216 (-0.278, 0.711) n=510	0.391	YES
Emotional well-being (0 to 24)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	20.577 (3.238) n=289 20.547 (3.432) n=262 20.542 (3.520) n=259 0.230 n=250 0.075 n=251	20.233 (3.707) n=323 20.520 (3.525) n=297 20.228 (3.770) n=290 -0.180 n=289 0.061 n=282	-0.291 (-0.756, 0.173) n=523 0.015 (-0.499, 0.530) n=517	0.219 0.953	NO YES
Functional well-being (0 to 28)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	22.592 (5.298) n=293 22.659 (5.076) n=266 22.442 (5.315) n=261 0.372 n=257 0.328 n=255	21.8361 (6.125) n=329 21.620 (6.156) n=299 21.765 (5.748) n=293 0.395 n=295 0.148 n=289	-0.066 (-0.749, 0.617) n=536 0.064 (-0.596, 0.725) n=528	0.850 0.848	NO YES
<b>GHQ12 (8) (higher= worse)</b> Total score (0 1 1 1 method) (0 to 12)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	1.180 (2.146) n=292 0.920 (1.985) n=267 0.992 (2.053) n=262 0.179 n=257 0.156 n=256	1.330 (2.475) n=333 1.310 (2.428) n=301 1.131 (2.303) n=289 -0.104 n=299 0.136 n=287	-0.342 (-0.654, -0.030) n=539 -0.084 (-0.385, 0.217) n=526	<b>0.032</b> 0.583	YES YES
Total score (0 1 2 3 method) (0 to 36)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	10.040 (4.422) n=292 9.580 (4.069) n=267 9.718 (4.352) n=262 0.183 n=257 0.313 n=256	10.040 (4.769) n=333 10.110 (4.518) n=301 9.827 (4.270) n=289 -0.341 n=299 0.038 n=287	-0.567 (-1.151, 0.017) n=539 -0.345 (-0.928, 0.239) n=526	0.057 0.246	YES YES
<b>EQ5D (9) (higher= better)</b> (-0.594 to 1)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	0.841 (0.195) n=287 0.837 (0.181) n=264 0.838 (0.187) n=259 0.022 n=250 0.015 n=248	0.814 (0.201) n=326 0.810 (0.179) n=301 0.799 (0.212) n=291 0.013 n=295 0.020 n=284	-0.004 (-0.025, 0.016) n=528 0.016 (-0.008, 0.039) n=516	0.379 0.186	NO YES
<b>Worry of cancer (10)(higher=worse)</b> (0 to 20)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	6.998 (4.444) n=288 6.313 (4.520) n=265 6.057 (4.437) n=261 0.468 n=253 0.962 n=251	7.270 (5.015) n=333 6.177 (4.852) n=300 6.150 (4.772) n=286 0.924 n=298 1.032 n=283	0.366 (-0.224, 0.955) n=533 1.287 (-0.888, 3.461) n=514	0.224 0.246	NO NO

LIFESTYLE (higher=better)						
Number of fruits + vegetables (0 to 10)	Baseline	5.340 (1.998) n=286	4.950 (2.044) n=329	-0.045 (-0.325, 0.234) n=532	0.752	NO
	4 months	5.290 (1.973) n=266	4.990 (2.101) n=301			
	8 months Change (b-4m)	5.350 (2.001) n=260 0.087 n=252 0.016 n=250	4.713 (2.047) n=289 -0.020 n=296 0.297 n=286			
Exercise (11) (0 to 400)	Baseline	28.020 (23.564) n=270	24.600 (21.667) n=316	0.675 (-4.137, 5.487) n=489 -1.035 (-3.275, 1.204) n=490	0.783	YES
	4 months	29.720 (27.391) n=263	25.380 (28.884) n=283			
	8 months Change (b-4m)	28.512 (27.179) n=257 -1.338 n=234 -0.455 n=232	24.794 (23.749) n=282 -0.939 n=271 -0.218 n=266			

\*Controlled for centre and the following variables at baseline: outcome, age, type of treatment received (missing n=7), educational attainment (missing n=10), ethnicity (missing n=6), marital status (missing n=1), employment status (missing n=4), time since diagnosis (missing n=4) and co-morbidity. Total number of eligible participants at baseline with at least one of these characteristics missing=26/627.

### 3.6 Mixed model results

Table 6 presents the mixed model results, whereby outcomes at 4 and 8 months are included simultaneously. The mixed model results are consistent with the regression results in the previous table. This analysis method produced the same results but with the addition of statistically significant differences for existential survivorship and quality of life CASUN subscales at 8 months, favouring the Programme.

Table 6: Mixed model results

Outcome (Direction) Subscales (Range)	Assessment	Care Programme – Usual Care difference (95% CI)*	P value	Direction favours Programme
<b>CASUN (higher=more need) <i>Strength of need</i></b> Total score (0 to 140)	4 months 8 months 4 months 8 months	-2.090 (-4.079, -0.101) n=620 -2.081 (-4.088, -0.074) n=620 -0.542 (-1.211, 0.126) n=622 -0.870 (-1.548, -0.192) n=622	<b>0.040</b> <b>0.042</b> 0.112 <b>0.012</b>	YES YES YES YES
Existential Survivorship (0 to 56)	8 months	-0.422 (-1.242, 0.398) n=624	0.313	YES
Comprehensive cancer care (0 to 24)	4 months 8 months	-0.366 (-1.196, 0.464) n=624 -0.158 (-0.589, 0.273) n=623	0.387 0.473	YES YES
Information (0 to 12)	4 months 8 months	0.017 (-0.419, 0.453) n=623 -0.161 (-0.379, 0.057) n=619	0.939 0.147	NO YES
Quality of life (0 to 8)	8 months 4 months	-0.232 (-0.454, -0.010) n=619 -0.143 (-0.383, 0.096) n=623	<b>0.041</b> 0.240	YES YES
Relationships (0 to 12)	8 months	-0.162 (-0.404, 0.080) n=623	0.189	YES
<b>Unmet needs</b>				
Total number of unmet needs (0 to 35)	4 months 8 months	-1.073 (-2.087, -0.059) n=620 -1.271 (-2.294, -0.247) n=620	<b>0.038</b> <b>0.015</b>	YES YES
Existential Survivorship (0 to 14)	4 months 8 months	-0.348 (-0.784, 0.088) n=622 -0.607 (-1.049, -0.165) n=622	0.118 <b>0.007</b>	YES YES
Comprehensive Cancer Care (0 to 6)	4 months 8 months	-0.178 (-0.498, 0.143) n=624 -0.160 (-0.485, 0.164) n=624	0.277 0.332	YES YES
Information (0 to 3)	4 months 8 months	-0.047 (-0.252, 0.158) n=623 -0.049 (-0.256, 0.158) n=623	0.653 0.639	YES YES
Quality of life (0 to 2)	4 months 8 months	-0.112 (-0.239, 0.015) n=619 -0.154 (-0.282, -0.025) n=619	0.083 <b>0.020</b>	YES YES
Relationships (0 to 3)	4 months 8 months	-0.060 (-0.199, 0.079) n=623 -0.090 (-0.230, 0.051) n=623	0.395 0.210	YES YES
<b>Positive changes in life (higher=better)</b> No. positive changes (0 to 6)	4 months 8 months	0.098 (-0.197, 0.393) n=621 0.181 (-0.120, 0.482) n=621	0.514 0.238	YES YES
<b>PAM (higher=better) (0 to 100)</b>	4 months	0.973 (-1.094, 3.039) n=611	0.356	YES

\*Controlled for centre and the following variables at baseline: outcome, age, type of treatment received (missing n=7), educational attainment (missing n=10), ethnicity (missing n=6), marital status (missing n=1), employment status (missing n=4), time since diagnosis (missing n=4) and co-morbidity. Total number of eligible participants at baseline with at least one of these characteristics missing=26/627.

	8 months	0.452 (-1.637, 2.540) n=611	0.671	YES
<b>EPIC26 (higher=better)</b>				
Urinary incontinence (0 to 100)	4 months	0.400 (-1.825, 2.624) n=612	0.724	YES
Urinary irritative/obstructive (0 to 100)	8 months	1.079 (-1.169, 3.326) n=612	0.346	YES
Bowel (0 to 100)	4 months	-0.685 (-2.729, 1.359) n=604	0.511	NO
	8 months	-0.211 (-2.281, 1.858) n=604	0.841	NO
	4 months	3.045 (0.854, 5.235) n=618	<b>0.006</b>	YES
	8 months	3.349 (1.130, 5.567) n=618	<b>0.003</b>	YES
Sexual (0 to 100)	4 months	-0.206 (-2.487, 2.076) n=574	0.860	NO
	8 months	0.703 (-1.607, 3.013) n=574	0.551	YES
Hormonal (0 to 100)	4 months	-0.242 (-2.324, 1.840) n=609	0.819	NO
	8 months	-0.830 (-2.938, 1.278) n=609	0.440	NO
<b>FACTG (higher= better)</b>				
Total score (0 to 108)	4 months	-0.470 (-1.996, 1.057) n=597	0.546	NO
	8 months	-0.275 (-1.816, 1.267) n=597	0.727	NO
Physical well-being (0 to 28)	4 months	0.350 (-0.097, 0.797) n=609	0.125	YES
	8 months	0.219 (-0.234, 0.672) n=609	0.343	YES
Social/Family well-being (0 to 28)	4 months	-0.048 (-0.725, 0.630) n=619	0.891	NO
	8 months	-0.100 (-0.787, 0.587) n=619	0.775	NO
Emotional well-being (0 to 24)	4 months	-0.465 (-0.936, 0.007) n=616	0.054	NO
	8 months	-0.020 (-0.498, 0.458) n=616	0.935	YES
Functional well-being (0 to 28)	4 months	-0.011 (-0.649, 0.626) n=626	0.972	NO
	8 months	-0.040 (-0.685, 0.605) n=626	0.903	NO
<b>GHQ12 (higher= worse)</b>				
Total score (0 1 1 1 method) (0 to 12)	4 months	-0.293 (-0.583, -0.003) n=626	<b>0.048</b>	YES
	8 months	-0.058 (-0.352, 0.237) n=626	0.701	YES
Total score (0 1 2 3 method) (0 to 36)	4 months	-0.517 (-1.071, 0.038) n=626	0.068	YES
	8 months	-0.247 (-0.809, 0.316) n=626	0.389	YES
<b>EQ5D (higher= better)</b>				
(-0.594 to 1)	4 months	-0.002 (-0.023, 0.018) n=617	0.840	NO
	8 months	0.013 (-0.008, 0.034) n=617	0.215	YES
<b>Worry of cancer (higher=worse)</b>				
(0 to 20)	4 months	0.321 (-0.237, 0.879) n=621	0.259	NO
	8 months	0.049 (-0.515, 0.613) n=621	0.865	NO
<b>LIFESTYLE (higher=better)</b>				
Number of fruits + vegetables (0 to 10)	4 months	-0.010 (-0.278, 0.259) n=619	0.944	NO
	8 months	0.378 (0.106, 0.650) n=619	<b>0.007</b>	YES
Exercise (0 to 400)	4 months	1.379 (-2.821, 5.579) n=588	0.519	YES
	8 months	1.426 (-2.797, 5.650) n=588	0.508	YES

### 3.7. Subgroup analyses

The tables in the next section follow the same basic plan as Table 5, but here comparisons between the programme and comparator groups are presented separately for four subgroups: age, comorbidity, deprivation and time since treatment. The final column presents tests for interaction and answers the question: 'does the care programme minus comparator difference differ significantly between the two subgroups?' The subgroup results were obtained from separate regression analyses at 4 and 8 months with the same set of controlling variables as in Table 5 (including the baseline value of the outcome variable being analysed).

Significant programme minus comparator group effects tend to involve the same outcomes as proved to be statistically significant in the overall analysis summarised in Table 5. Only a couple of the significant subgroup effects were supported by a statistically significant test of interaction between the programme and comparator groups. These are, first, for quality of life unmet needs at 8 months, where those with no comorbidities show if anything a negative impact of the programme, while those with 1 or more comorbidities show some benefit. Second, for the EPIC26 at 8 months where the beneficial programme effect for those 0-1 years post treatment is much greater than for those more than 1 years post treatment. With 48 tests for interaction per table (7, 8, 9 and 10) and 4 tables, 192 tests of interaction were carried out in total, and so these 2 statistically significant results could well be chance findings.

Table 7: Subgroup analysis for age

Outcome (Direction) Subscales (Range)	Subgroup	Assessment	Care Programme Mean (SD) n=293	Usual Care Mean (SD) n=334	Care Programme – Usual Care difference (95% CI)*	P value	Direction favours Program- me	P value for interact- ion
<b>CASUN (higher=more need) Strength of need</b> Total score (0 to 140)	Less than 70	Baseline	26.677 (17.472) N=146	25.250 (19.727) N=156				
	70 or more		22.280 (16.887) N=147	21.917 (15.637) N=178				
	Less than 70	4 months	19.513 (16.575) N=128	22.632 (20.100) N=139	-3.465 (-6.507, -0.422)	<b>0.026</b>	YES	0.346
	70 or more		17.325 (14.541) N=140	19.041 (16.240) N=165	-1.444 (-4.401, 1.513)	0.338	YES	
Existential Survivorship (0 to 56)	Less than 70	8 months	19.571 (17.336) N=128	19.571 (17.336) N=128	-2.515 (-5.472, 0.442)	0.095	YES	0.446
	70 or more		16.309 (15.118) N=135	16.309 (15.118) N=135	-0.940 (-3.785, 1.905)	0.516	YES	
	Less than 70	Baseline	5.774 (7.282) N=146	5.348 (7.316) N=156				
	70 or more		3.990 (6.128) N=147	3.883 (5.210) N=178				
Comprehensive cancer care (0 to 24)	Less than 70	4 months	3.983 (6.506) N=128	5.068 (7.100) N=139	-1.129 (-2.124, -0.133)	<b>0.026</b>	YES	0.257
	70 or more		2.884 (4.708) N=140	3.303 (4.992) N=165	-0.341 (0.482, -1.292)	0.482	YES	
	Less than 70	8 months	3.927 (6.819) N=128	4.782 (7.639) N=136	-1.206 (-2.230, -0.181)	<b>0.021</b>	YES	0.068
	70 or more		2.617 (4.258) N=135	3.422 (5.043) N=157	-0.153 (-1.129, 0.822)	0.758	YES	
Information (0 to 12)	Less than 70	Baseline	10.433 (5.482) N=146	9.459 (6.218) N=156				
	70 or more		9.660 (5.703) N=147	9.239 (5.756) N=178				
	Less than 70	4 months	7.784 (5.814) N=128	8.407 (6.256) N=139	-0.981 (0.124, -2.234)	0.124	YES	0.198
	70 or more		8.227 (5.931) N=140	8.084 (6.054) N=165	0.157 (-1.067, 1.380)	0.801	NO	
Quality of life (0 to 8)	Less than 70	8 months	8.180 (5.867) N=128	7.705 (6.559) N=136	-0.103 (-1.322, 1.117)	0.869	YES	0.746
	70 or more		7.436 (5.905) N=135	7.917 (5.709) N=157	-0.378 (-1.552, 0.795)	0.527	YES	
	Less than 70	Baseline	3.649 (3.006) N=146	3.689 (3.302) N=156				
	70 or more		3.269 (3.138) N=147	3.345 (3.121) N=178				
	Less than 70	4 months	2.766 (2.771) N=128	2.924 (3.220) N=139	-0.180 (-0.852, 0.491)	0.598	YES	0.960
	70 or more		2.393 (3.142) N=140	2.747 (2.913) N=165	-0.156 (-0.108, 0.497)	0.639	YES	
	Less than 70	8 months	2.543 (2.704) N=128	2.559 (2.900) N=136	0.091 (-0.531, 0.713)	0.774	NO	0.926
	70 or more		2.406 (2.949) N=135	2.551 (2.784) N=157	0.131 (-0.468, 0.731)	0.667	NO	
	Less than 70	Baseline	1.431 (1.667) N=146	1.442 (1.793) N=156				
	70 or more		1.188 (1.443) N=147	1.179 (1.493) N=178				
	Less than 70	4 months	1.134 (1.575) N=128	1.338 (1.683) N=139	-0.182 (-0.515, 0.150)	0.282	YES	0.854





Relationships (0 to 3)	70 or more Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	0.677 (0.875) N=135 1.278 (1.106) N=146 0.753 (0.964) N=147 0.969 (1.079) N=128 0.640 (0.932) N=140 0.929 (1.128) N=128 0.593 (0.889) N=135	0.740 (0.892) N=157 1.176 (1.148) N=156 0.751 (0.939) N=178 1.125 (1.098) N=139 0.670 (0.921) N=165 1.071 (1.099) N=136 0.671 (0.968) N=157	-0.095 (-0.281, 0.091)	0.317	YES	
<b>PAM (higher=better)</b> (0 to 100)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	62.331 (13.974) N=146 63.708 (14.893) N=147 64.609 (14.830) N=128 64.109 (14.729) N=140 64.790 (16.061) N=128 64.874 (15.344) N=135	62.579 (14.450) N=156 60.327 (13.811) N=178 63.355 (14.092) N=139 61.303 (15.036) N=165 65.336 (15.987) N=136 62.092 (14.335) N=157	1.327 (-1.761, 4.416) 1.246 (-1.784, 4.275) -0.322 (-3.415, 2.771) 1.279 (-1.733, 4.290)	0.399 0.420 0.838 0.404	YES YES NO YES	0.970  0.462
<b>EPIC26 (higher=better)</b> Urinary Incontinence (0 to 100)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	81.491 (22.979) N=146 85.239 (17.129) N=147 83.328 (21.253) N=128 85.517 (18.196) N=140 83.158 (22.380) N=128 86.645 (16.519) N=135 88.908 (12.081) N=146 85.714 (14.230) N=147 90.575 (12.215) N=128 85.210 (14.610) N=140 88.400 (13.878) N=128 88.004 (12.541) N=135 89.670 (16.962) N=146 87.397 (17.749) N=147 90.648 (15.652) N=128 90.239 (13.775) N=140 90.847 (14.948) N=128 89.729 (14.730) N=135 22.670 (23.294) N=146 18.614 (19.548) N=147 24.819 (23.638) N=128 19.076 (18.290) N=140 26.698 (24.734) N=128 18.011 (16.761) N=135	77.539 (24.188) N=156 82.918 (20.368) N=178 80.515 (21.181) N=139 83.087 (18.154) N=165 81.388 (20.748) N=136 82.558 (18.955) N=157 85.855 (14.876) N=156 85.956 (13.957) N=178 87.876 (15.285) N=139 87.280 (14.384) N=165 89.050 (13.510) N=136 86.458 (16.012) N=157 88.581 (16.931) N=156 86.681 (17.169) N=178 87.876 (17.586) N=139 85.773 (19.016) N=165 86.953 (19.302) N=136 86.592 (17.739) N=157 21.018 (24.437) N=156 15.981 (16.795) N=178 22.662 (24.783) N=139 16.608 (17.594) N=165 23.048 (25.261) N=136 16.372 (15.896) N=157	-0.181 (-3.405, 3.042) 1.467 (-1.683, 4.616) -1.501 (-4.888, 1.886) 2.306 (-1.057, 5.669)	0.912 0.361 0.384 0.178	NO YES NO YES	0.469  0.112
Urinary irritative/obstructive (0 to 100)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	85.714 (14.230) N=147 90.575 (12.215) N=128 85.210 (14.610) N=140 88.400 (13.878) N=128 88.004 (12.541) N=135 89.670 (16.962) N=146 87.397 (17.749) N=147 90.648 (15.652) N=128 90.239 (13.775) N=140 90.847 (14.948) N=128 89.729 (14.730) N=135 22.670 (23.294) N=146 18.614 (19.548) N=147 24.819 (23.638) N=128 19.076 (18.290) N=140 26.698 (24.734) N=128 18.011 (16.761) N=135	87.876 (15.285) N=139 87.280 (14.384) N=165 89.050 (13.510) N=136 86.458 (16.012) N=157 88.581 (16.931) N=156 86.681 (17.169) N=178 87.876 (17.586) N=139 85.773 (19.016) N=165 86.953 (19.302) N=136 86.592 (17.739) N=157 21.018 (24.437) N=156 15.981 (16.795) N=178 22.662 (24.783) N=139 16.608 (17.594) N=165 23.048 (25.261) N=136 16.372 (15.896) N=157	-0.255 (-3.396, 2.887) -1.813 (-4.944, 1.319) -2.317 (-5.316, 0.682) 1.242 (-1.765, 4.249)	0.874 0.256 0.130 0.417	NO NO NO YES	0.485  0.094
Bowel (0 to 100)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	87.397 (17.749) N=147 90.648 (15.652) N=128 90.239 (13.775) N=140 90.847 (14.948) N=128 89.729 (14.730) N=135 22.670 (23.294) N=146 18.614 (19.548) N=147 24.819 (23.638) N=128 19.076 (18.290) N=140 26.698 (24.734) N=128 18.011 (16.761) N=135	86.681 (17.169) N=178 87.876 (17.586) N=139 85.773 (19.016) N=165 86.953 (19.302) N=136 86.592 (17.739) N=157 21.018 (24.437) N=156 15.981 (16.795) N=178 22.662 (24.783) N=139 16.608 (17.594) N=165 23.048 (25.261) N=136 16.372 (15.896) N=157	0.591 (-2.530, 3.713) 4.666 (1.621, 7.711) 3.830 (0.380, 7.279) 3.249 (-0.168, 6.666)	0.710 <b>0.003</b> <b>0.030</b> 0.062	YES YES YES YES	0.064  0.811
Sexual (0 to 100)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	22.670 (23.294) N=146 18.614 (19.548) N=147 24.819 (23.638) N=128 19.076 (18.290) N=140 26.698 (24.734) N=128 18.011 (16.761) N=135	15.981 (16.795) N=178 22.662 (24.783) N=139 16.608 (17.594) N=165 23.048 (25.261) N=136 16.372 (15.896) N=157	0.923 (-2.249, 4.095) -0.635 (-3.809, 2.538) 1.443 (-2.240, 5.126) -0.102 (-3.786, 3.582)	0.568 0.694 0.442 0.957	YES NO YES NO	0.493  0.558

Hormonal (0 to 100)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	79.063 (19.415) N=146 76.381 (20.216) N=147 82.752 (17.704) N=128 78.629 (17.171) N=140 82.790 (19.204) N=128 80.240 (19.518) N=135	79.551 (21.549) N=156 76.749 (21.074) N=178 81.823 (20.425) N=139 78.718 (20.641) N=165 83.080 (20.326) N=136 80.197 (19.620) N=157	2.171 (-0.840, 5.182) -0.773 (-3.676, 2.130) 0.367 (-2.863, 3.597) -2.018 (-5.139, 1.103)	0.157 0.601 0.823 0.204	YES NO YES NO	0.163  0.291
FACTG (higher= better) Total score (0 to 108)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	88.018 (14.564) N=146 90.850 (12.081) N=147 87.633 (14.557) N=128 90.734 (11.531) N=140 87.571 (15.558) N=128 89.341 (12.856) N=135 24.490 (4.392) N=146 24.649 (3.780) N=147 24.644 (4.097) N=128 25.057 (3.170) N=140 24.592 (4.615) N=128 24.512 (3.860) N=135 21.395 (4.360) N=146 22.163 (4.784) N=147 20.443 (5.288) N=128 21.561 (4.651) N=140 20.583 (5.164) N=128 21.541 (4.682) N=135 20.264 (3.540) N=146 20.888 (2.885) N=147 20.296 (3.474) N=128 20.770 (3.392) N=140 20.456 (3.649) N=128 20.624 (3.406) N=135 21.942 (5.798) N=146 23.238 (4.680) N=147 22.171 (5.527) N=128 23.112 (4.592) N=140 22.073 (5.714) N=128 22.792 (4.904) N=135	88.831 (14.669) N=156 86.543 (15.688) N=178 90.207 (13.959) N=139 85.148 (15.424) N=165 89.147 (15.051) N=136 85.678 (14.057) N=157 24.726 (3.819) N=156 23.991 (4.626) N=178 24.767 (3.919) N=139 23.631 (4.405) N=165 24.822 (3.769) N=136 23.382 (4.688) N=157 21.396 (4.673) N=156 21.281 (5.240) N=178 21.636 (4.748) N=139 20.584 (6.508) N=165 21.354 (5.249) N=136 21.211 (5.295) N=157 20.084 (3.688) N=156 20.368 (3.729) N=178 20.663 (3.454) N=139 20.398 (3.592) N=165 20.207 (4.047) N=136 20.245 (3.524) N=157 22.697 (5.550) N=156 21.059 (6.520) N=178 22.839 (5.393) N=139 20.576 (6.581) N=165 22.867 (5.365) N=136 20.810 (5.913) N=157	-1.366 (-3.651, 0.918) 1.176 (-1.032, 3.384) -0.138 (-2.458, 2.183) -0.195 (-2.438, 2.048)	0.241 0.296 0.907 0.864	NO YES NO NO	0.114  0.972
Physical well-being (0 to 28)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	24.490 (4.392) N=146 24.649 (3.780) N=147 24.644 (4.097) N=128 25.057 (3.170) N=140 24.592 (4.615) N=128 24.512 (3.860) N=135 21.395 (4.360) N=146 22.163 (4.784) N=147 20.443 (5.288) N=128 21.561 (4.651) N=140 20.583 (5.164) N=128 21.541 (4.682) N=135 20.264 (3.540) N=146 20.888 (2.885) N=147 20.296 (3.474) N=128 20.770 (3.392) N=140 20.456 (3.649) N=128 20.624 (3.406) N=135 21.942 (5.798) N=146 23.238 (4.680) N=147 22.171 (5.527) N=128 23.112 (4.592) N=140 22.073 (5.714) N=128 22.792 (4.904) N=135	23.991 (4.626) N=178 24.767 (3.919) N=139 23.631 (4.405) N=165 24.822 (3.769) N=136 23.382 (4.688) N=157 21.396 (4.673) N=156 21.281 (5.240) N=178 21.636 (4.748) N=139 20.584 (6.508) N=165 21.354 (5.249) N=136 21.211 (5.295) N=157 20.084 (3.688) N=156 20.368 (3.729) N=178 20.663 (3.454) N=139 20.398 (3.592) N=165 20.207 (4.047) N=136 20.245 (3.524) N=157 22.697 (5.550) N=156 21.059 (6.520) N=178 22.839 (5.393) N=139 20.576 (6.581) N=165 22.867 (5.365) N=136 20.810 (5.913) N=157	0.109 (-0.544, 0.762) 0.728 (0.100, 1.357) 0.159 (-0.548, 0.867) 0.261 (-0.415, 0.937)	0.743 <b>0.023</b> 0.658 0.448	YES YES YES YES	0.176  0.836
Social/Family well-being (0 to 28)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	21.395 (4.360) N=146 22.163 (4.784) N=147 20.443 (5.288) N=128 21.561 (4.651) N=140 20.583 (5.164) N=128 21.541 (4.682) N=135 20.264 (3.540) N=146 20.888 (2.885) N=147 20.296 (3.474) N=128 20.770 (3.392) N=140 20.456 (3.649) N=128 20.624 (3.406) N=135 21.942 (5.798) N=146 23.238 (4.680) N=147 22.171 (5.527) N=128 23.112 (4.592) N=140 22.073 (5.714) N=128 22.792 (4.904) N=135	21.396 (4.673) N=156 21.281 (5.240) N=178 21.636 (4.748) N=139 20.584 (6.508) N=165 21.354 (5.249) N=136 21.211 (5.295) N=157 20.084 (3.688) N=156 20.368 (3.729) N=178 20.663 (3.454) N=139 20.398 (3.592) N=165 20.207 (4.047) N=136 20.245 (3.524) N=157 22.697 (5.550) N=156 21.059 (6.520) N=178 22.839 (5.393) N=139 20.576 (6.581) N=165 22.867 (5.365) N=136 20.810 (5.913) N=157	-0.503 (-1.531, 0.524) 0.462 (-0.531, 1.455) -0.331 (-1.334, 0.671) 0.254 (-0.718, 1.226)	0.336 0.361 0.516 0.608	NO YES NO YES	0.182  0.403
Emotional well-being (0 to 24)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	20.888 (2.885) N=147 20.296 (3.474) N=128 20.770 (3.392) N=140 20.456 (3.649) N=128 20.624 (3.406) N=135 21.942 (5.798) N=146 23.238 (4.680) N=147 22.171 (5.527) N=128 23.112 (4.592) N=140 22.073 (5.714) N=128 22.792 (4.904) N=135	20.368 (3.729) N=178 20.663 (3.454) N=139 20.398 (3.592) N=165 20.207 (4.047) N=136 20.245 (3.524) N=157 22.697 (5.550) N=156 21.059 (6.520) N=178 22.839 (5.393) N=139 20.576 (6.581) N=165 22.867 (5.365) N=136 20.810 (5.913) N=157	-0.438 (-1.107, 0.230) -0.164 (-0.804, 0.476) 0.362 (-0.368, 1.092) -0.322 (-1.028, 0.384)	0.198 0.615 0.331 0.371	NO NO YES NO	0.557  0.181
Functional well-being (0 to 28)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	23.238 (4.680) N=147 22.171 (5.527) N=128 23.112 (4.592) N=140 22.073 (5.714) N=128 22.792 (4.904) N=135	21.059 (6.520) N=178 22.839 (5.393) N=139 20.576 (6.581) N=165 22.867 (5.365) N=136 20.810 (5.913) N=157	-0.414 (-1.386, 0.558) 0.268 (-0.681, 1.217) -0.144 (-1.082, 0.794) 0.262 (-0.650, 1.174)	0.403 0.579 0.764 0.572	NO YES NO YES	0.322  0.539

GHQ12 (higher= worse) Total score (0 to 12) method) (0 to 12)	Less than 70 70 or more Less than 70 70 or more Less than 70 70 or more	Baseline 4 months 8 months	1.428 (2.488) N=146 0.932 (1.719) N=147 1.203 (2.508) N=128 0.655 (1.289) N=140 1.071 (2.361) N=128 0.919 (1.719) N=135	1.181 (2.331) N=156 1.466 (2.593) N=178 1.309 (2.528) N=139 1.302 (2.346) N=165 1.134 (2.297) N=136 1.129 (2.315) N=157	-0.435 (-0.879, 0.009) -0.250 (-0.681, 0.181) -0.360 (-0.787, 0.067) 0.193 (-0.219, 0.606)	0.055 0.254 0.098 0.357	YES YES YES NO	0.556 0.064

Table 8: Subgroup analysis for comorbidities

Outcome (Direction) Subscales (Range)	Subgroup	Assessment t	Care Programme Mean (SD) n=293	Usual Care Mean (SD) n=334	Care Programme – Usual Care difference (95% CI)*	P value	Direction favours Programme	P value for interaction
<b>CASUN (higher=more need) <i>Strength of need</i> Total score (0 to 140)</b>	No comorbidities 1 or more comor.	Baseline	21.025 (16.054) N=70	19.482 (17.841) N=67	2.160 (-5.736, 2.751) -1.236 (-5.035, -0.177) -0.796 (-4.932, 3.340) -1.854 (-4.195, 0.487)	0.490	NO	0.650
	No comorbidities	4 months	25.567 (17.562) N=223	24.514 (17.602) N=267				
	1 or more comor.	8 months	15.858 (16.347) N=69	16.564 (17.904) N=62		<b>0.036</b>		
	No comorbidities	8 months	19.283 (15.241) N=199	21.784 (18.124) N=242		0.705		
	No comorbidities	8 months	14.186 (14.679) N=66	15.952 (19.149) N=61		0.120		
Existential Survivorship (0 to 56)	1 or more comor.	Baseline	19.141 (16.643) N=197	20.784 (18.287) N=232	-0.312 (-1.708, 1.083) -0.807 (-1.593, -0.022) -0.444 (-1.879, 0.991) -0.717 (-1.522, 0.088)		YES	0.538
	No comorbidities	Baseline	3.551 (4.575) N=70	3.703 (6.696) N=67				
	1 or more comor.	4 months	5.289 (7.285) N=223	4.798 (6.222) N=267		0.660		
	No comorbidities	4 months	2.765 (5.079) N=69	2.883 (5.568) N=62		<b>0.044</b>		
	1 or more comor.	8 months	3.636 (5.843) N=199	4.421 (6.194) N=242		0.544		
Comprehensive cancer care (0 to 24)	No comorbidities	8 months	2.277 (3.891) N=66	3.137 (6.718) N=61	-0.717 (-1.522, 0.088)	0.081	YES	0.741
	1 or more comor.	Baseline	3.578 (6.131) N=197	4.288 (6.300) N=232				
	No comorbidities	Baseline	8.937 (5.864) N=70	7.918 (6.152) N=67				
	1 or more comor.	4 months	10.396 (5.478) N=223	9.706 (5.881) N=267		0.988		
	No comorbidities	4 months	7.179 (6.415) N=69	6.944 (6.267) N=62		0.341		
Information (0 to 12)	1 or more comor.	8 months	8.296 (5.656) N=199	8.569 (6.073) N=242	-0.271, (-1.236, 0.695)	0.948	YES	0.739
	No comorbidities	Baseline	6.335 (6.026) N=66	6.383 (6.071) N=61		0.582		
	1 or more comor.	Baseline	8.287 (5.773) N=197	8.198 (6.074) N=232				
	No comorbidities	Baseline	3.167 (2.996) N=70	2.731 (3.068) N=67				
	1 or more comor.	4 months	3.547 (3.099) N=223	3.705 (3.218) N=267		0.742		
Quality of life (0 to 8)	No comorbidities	4 months	2.103 (2.771) N=69	2.148 (3.070) N=62	-0.158 (-0.618, 0.303) -0.152 (-0.414, 0.110) 0.185 (-0.270, 0.641)	0.647	YES	0.983
	1 or more comor.	8 months	2.738 (3.022) N=199	3.002 (3.032) N=242		0.307		
	No comorbidities	Baseline	2.292 (2.941) N=66	2.197 (2.903) N=61		0.950		
	1 or more comor.	Baseline	2.533 (2.794) N=197	2.649 (2.814) N=232				
	No comorbidities	4 months	1.086 (1.549) N=70	1.224 (1.565) N=67		0.256		
	1 or more comor.	8 months	1.381 (1.562) N=223	1.324 (1.667) N=267	0.074	0.502	YES	0.074
	No comorbidities	8 months	0.710 (1.238) N=69	1.000 (1.660) N=62				
	1 or more comor.	8 months	1.066 (1.471) N=199	1.231 (1.584) N=242				
	No comorbidities	8 months	0.800 (1.360) N=66	0.783 (1.391) N=61				
	No comorbidities	8 months				0.425		



	1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor.	4 months 8 months	1.009 (1.067) N=223 0.750 (1.070) N=69 0.816 (1.001) N=199 0.562 (0.873) N=66 0.821 (1.064) N=197	0.962 (1.077) N=267 0.871 (1.048) N=62 0.879 (1.027) N=242 0.733 (0.989) N=61 0.889 (1.063) N=232	-0.148 (-0.442, 0.146) -0.028 (-0.195, 0.138) -0.158 (-0.451, 0.136) -0.036 (-0.201, 0.129)	0.323 0.737 0.291 0.669	YES YES YES YES	0.482 0.470
<b>PAM (higher=better)</b> (0 to 100)	No comorbidities 1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor.	Baseline 4 months 8 months	63.580 (14.018) N=70 62.841 (14.588) N=223 65.390 (14.261) N=69 63.994 (14.938) N=199 64.925 (14.724) N=66 64.802 (16.014) N=197	67.068 (17.364) N=67 59.928 (12.825) N=267 67.876 (16.754) N=62 60.813 (13.689) N=242 69.272 (17.447) N=61 62.116 (14.208) N=232	0.782 (-3.613, 5.177) 1.249 (-1.223, 3.721) -0.370 (-4.777, 4.037) 0.472 (-1.996, 2.940)	0.727 0.321 0.869 0.707	YES YES NO YES	0.854 0.740
<b>EPIC26 (higher=better)</b> Urinary incontinence (0 to 100)	No comorbidities 1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor.	Baseline 4 months 8 months	86.239 (20.317) N=70 82.456 (20.294) N=223 86.807 (20.212) N=69 83.658 (19.541) N=199 89.169 (16.710) N=66 83.453 (20.435) N=197 90.625 (10.663) N=70 86.273 (13.849) N=223 90.723 (12.096) N=69 86.885 (14.128) N=199 90.164 (11.938) N=66 87.566 (13.558) N=197 93.627 (11.551) N=70 86.963 (18.538) N=223 93.162 (10.675) N=69 89.480 (15.760) N=199 94.102 (10.202) N=66 88.991 (15.895) N=197 20.414 (23.769) N=70 20.815 (20.958) N=223 23.270 (21.690) N=69 21.396 (21.095) N=199 24.556 (22.275) N=66 21.620 (21.285) N=197 81.757 (18.441) N=70 76.402 (20.131) N=223	82.920 (23.078) N=67 79.728 (22.198) N=267 85.454 (19.820) N=62 80.930 (19.538) N=242 85.521 (20.129) N=61 81.044 (19.651) N=232 87.885 (14.273) N=67 85.400 (14.393) N=267 91.102 (11.443) N=62 86.603 (15.478) N=242 92.299 (9.534) N=61 86.493 (15.803) N=232 89.677 (16.720) N=67 87.046 (17.133) N=267 89.407 (17.734) N=62 86.061 (18.499) N=242 87.431 (19.491) N=61 86.583 (18.225) N=232 22.877 (25.423) N=67 17.422 (19.762) N=267 25.551 (25.804) N=62 17.958 (20.042) N=242 23.324 (25.247) N=61 18.663 (19.989) N=232 86.365 (15.132) N=67 76.023 (22.149) N=267	-1.742 (-6.278, 2.794) 1.347 (-1.222, 3.917) 0.801 (-3.994, 5.596) 0.198 (-2.539, 2.934)	0.451 0.303 0.743 0.887	NO YES YES YES	0.238 0.827
Urinary irritative/obstructive (0 to 100)	No comorbidities 1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor.	Baseline 4 months 8 months	86.273 (13.849) N=223 90.723 (12.096) N=69 86.885 (14.128) N=199 90.164 (11.938) N=66 87.566 (13.558) N=197 93.627 (11.551) N=70 86.963 (18.538) N=223 93.162 (10.675) N=69 89.480 (15.760) N=199 94.102 (10.202) N=66 88.991 (15.895) N=197 20.414 (23.769) N=70 20.815 (20.958) N=223 23.270 (21.690) N=69 21.396 (21.095) N=199 24.556 (22.275) N=66 21.620 (21.285) N=197 81.757 (18.441) N=70 76.402 (20.131) N=223	82.920 (23.078) N=67 79.728 (22.198) N=267 85.454 (19.820) N=62 80.930 (19.538) N=242 85.521 (20.129) N=61 81.044 (19.651) N=232 87.885 (14.273) N=67 85.400 (14.393) N=267 91.102 (11.443) N=62 86.603 (15.478) N=242 92.299 (9.534) N=61 86.493 (15.803) N=232 89.677 (16.720) N=67 87.046 (17.133) N=267 89.407 (17.734) N=62 86.061 (18.499) N=242 87.431 (19.491) N=61 86.583 (18.225) N=232 22.877 (25.423) N=67 17.422 (19.762) N=267 25.551 (25.804) N=62 17.958 (20.042) N=242 23.324 (25.247) N=61 18.663 (19.989) N=232 86.365 (15.132) N=67 76.023 (22.149) N=267	-1.438 (-5.867, 2.991) -1.159 (-3.721, 1.403) -2.937 (-7.223, 1.349) -0.151 (-2.618, 2.316)	0.524 0.375 0.179 0.904	NO NO NO NO	0.913 0.260
Bowel (0 to 100)	No comorbidities 1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor.	Baseline 4 months 8 months	86.963 (18.538) N=223 93.162 (10.675) N=69 89.480 (15.760) N=199 94.102 (10.202) N=66 88.991 (15.895) N=197 20.414 (23.769) N=70 20.815 (20.958) N=223 23.270 (21.690) N=69 21.396 (21.095) N=199 24.556 (22.275) N=66 21.620 (21.285) N=197 81.757 (18.441) N=70 76.402 (20.131) N=223	87.046 (17.133) N=267 89.407 (17.734) N=62 86.061 (18.499) N=242 87.431 (19.491) N=61 86.583 (18.225) N=232 22.877 (25.423) N=67 17.422 (19.762) N=267 25.551 (25.804) N=62 17.958 (20.042) N=242 23.324 (25.247) N=61 18.663 (19.989) N=232 86.365 (15.132) N=67 76.023 (22.149) N=267	1.872 (-2.553, 6.296) 2.900 (0.409, 5.392) 5.019 (0.171, 9.868) 3.131 (0.249, 5.913)	0.406 0.023 0.042 0.027	YES YES YES YES	0.686 0.499
Sexual (0 to 100)	No comorbidities 1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor.	Baseline 4 months 8 months	20.815 (20.958) N=223 23.270 (21.690) N=69 21.396 (21.095) N=199 24.556 (22.275) N=66 21.620 (21.285) N=197 81.757 (18.441) N=70 76.402 (20.131) N=223	17.422 (19.762) N=267 25.551 (25.804) N=62 17.958 (20.042) N=242 23.324 (25.247) N=61 18.663 (19.989) N=232 86.365 (15.132) N=67 76.023 (22.149) N=267	1.320 (-3.341, 5.982) -0.473 (-3.042, 2.096) 3.424 (-1.893, 8.740) -0.414 (-3.342, 2.513)	0.578 0.718 0.206 0.781	YES NO YES NO	0.503 0.209
Hormonal (0 to 100)	No comorbidities 1 or more comor.	Baseline	76.402 (20.131) N=223	76.023 (22.149) N=267				

	No comorbidities 1 or more comor. No comorbidities 1 or more comor.	4 months 8 months	82.445 (16.687) N=69 79.954 (17.801) N=199 84.500 (16.472) N=66 80.461 (20.202) N=197	88.176 (16.387) N=62 77.996 (21.064) N=242 87.733 (16.081) N=61 79.879 (20.619) N=232	-0.910 (-5.125, 3.305) 0.963 (-1.441, 3.367) -1.320 (-5.872, 3.233) -0.804 (-3.397, 1.790)	0.672 0.432 0.569 0.543	NO YES NO NO	0.443 0.845
<b>FACTG (higher= better)</b> Total score (0 to 108)	No comorbidities 1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor.	Baseline 4 months 8 months	93.103 (9.166) N=70 88.259 (14.357) N=223 91.630 (10.085) N=69 88.407 (13.979) N=199 91.368 (11.250) N=66 87.522 (15.000) N=197 26.092 (2.174) N=70 24.089 (4.424) N=223 25.904 (2.455) N=69 24.489 (3.921) N=199 25.600 (2.798) N=66 24.203 (4.569) N=197 22.035 (4.779) N=70 21.695 (4.528) N=223 21.182 (4.345) N=69 20.965 (5.204) N=199 21.134 (4.685) N=66 21.053 (5.028) N=197 20.771 (2.660) N=70 20.515 (3.405) N=223 20.734 (3.247) N=69 20.483 (3.499) N=199 20.889 (3.186) N=66 20.426 (3.626) N=197 24.118 (3.508) N=70 22.114 (5.668) N=223 23.793 (3.894) N=69 22.270 (5.376) N=199 23.818 (3.917) N=66 21.986 (5.639) N=197	92.755 (12.406) N=67 86.258 (15.640) N=267 93.218 (11.166) N=62 85.930 (15.486) N=242 92.589 (13.316) N=61 85.932 (14.640) N=232 26.017 (2.455) N=67 23.902 (4.530) N=267 25.708 (3.211) N=62 23.745 (4.361) N=242 25.948 (2.994) N=61 23.564 (4.500) N=232 21.937 (4.761) N=67 21.180 (5.024) N=267 21.961 (5.010) N=62 20.823 (5.967) N=242 22.103 (5.948) N=61 21.062 (5.064) N=232 20.896 (3.141) N=67 20.060 (3.827) N=267 21.226 (2.749) N=62 20.334 (3.686) N=242 20.787 (3.895) N=61 20.079 (3.730) N=232 23.904 (4.816) N=67 21.307 (6.317) N=267 24.323 (3.974) N=62 20.913 (6.431) N=242 23.760 (4.408) N=61 21.241 (5.949) N=232	-0.131 (-3.310, 3.047) -0.254 (-2.087, 1.580) -1.450 (-4.725, 1.824) -0.025 (-1.887, 1.836)	0.935 0.786 0.385 0.979	NO NO NO NO	0.947 0.449
Physical well-being (0 to 28)	No comorbidities 1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor.	Baseline 4 months 8 months	26.092 (2.174) N=70 24.089 (4.424) N=223 25.904 (2.455) N=69 24.489 (3.921) N=199 25.600 (2.798) N=66 24.203 (4.569) N=197 22.035 (4.779) N=70 21.695 (4.528) N=223 21.182 (4.345) N=69 20.965 (5.204) N=199 21.134 (4.685) N=66 21.053 (5.028) N=197 20.771 (2.660) N=70 20.515 (3.405) N=223 20.734 (3.247) N=69 20.483 (3.499) N=199 20.889 (3.186) N=66 20.426 (3.626) N=197 24.118 (3.508) N=70 22.114 (5.668) N=223 23.793 (3.894) N=69 22.270 (5.376) N=199 23.818 (3.917) N=66 21.986 (5.639) N=197	23.902 (4.530) N=267 25.708 (3.211) N=62 23.745 (4.361) N=242 25.948 (2.994) N=61 23.564 (4.500) N=232 21.937 (4.761) N=67 21.180 (5.024) N=267 21.961 (5.010) N=62 20.823 (5.967) N=242 22.103 (5.948) N=61 21.062 (5.064) N=232 20.896 (3.141) N=67 20.060 (3.827) N=267 21.226 (2.749) N=62 20.334 (3.686) N=242 20.787 (3.895) N=61 20.079 (3.730) N=232 23.904 (4.816) N=67 21.307 (6.317) N=267 24.323 (3.974) N=62 20.913 (6.431) N=242 23.760 (4.408) N=61 21.241 (5.949) N=232	0.446 (-0.463, 1.356) 0.390 (-0.130, 0.911) -0.420 (-1.426, 0.585) 0.328 (-0.233, 0.890)	0.335 0.141 0.412 0.251	YES YES NO YES	0.915 0.194
Social/Family well-being (0 to 28)	No comorbidities 1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor.	Baseline 4 months 8 months	21.695 (4.528) N=223 21.182 (4.345) N=69 20.965 (5.204) N=199 21.134 (4.685) N=66 21.053 (5.028) N=197 20.771 (2.660) N=70 20.515 (3.405) N=223 20.734 (3.247) N=69 20.483 (3.499) N=199 20.889 (3.186) N=66 20.426 (3.626) N=197 24.118 (3.508) N=70 22.114 (5.668) N=223 23.793 (3.894) N=69 22.270 (5.376) N=199 23.818 (3.917) N=66 21.986 (5.639) N=197	-0.140 (-1.580, 1.299) 0.017 (-0.800, 0.834) -0.945 (-2.365, 0.475) 0.213 (-0.581, 1.008)	0.848 0.967 0.192 0.598	NO YES NO YES	0.850 0.155	
Emotional well-being (0 to 24)	No comorbidities 1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor.	Baseline 4 months 8 months	20.771 (2.660) N=70 20.515 (3.405) N=223 20.734 (3.247) N=69 20.483 (3.499) N=199 20.889 (3.186) N=66 20.426 (3.626) N=197 24.118 (3.508) N=70 22.114 (5.668) N=223 23.793 (3.894) N=69 22.270 (5.376) N=199 23.818 (3.917) N=66 21.986 (5.639) N=197	-0.371 (-1.309, 0.567) -0.334 (-0.867, 0.199) 0.020 (-1.009, 1.048) -0.049 (-0.634, 0.537)	0.438 0.219 0.970 0.870	NO NO YES NO	0.946 0.908	
Functional well-being (0 to 28)	No comorbidities 1 or more comor. No comorbidities 1 or more comor. No comorbidities 1 or more comor.	Baseline 4 months 8 months	22.114 (5.668) N=223 23.793 (3.894) N=69 22.270 (5.376) N=199 23.818 (3.917) N=66 21.986 (5.639) N=197	-0.378 (-1.755, 0.999) -0.095 (-0.875, 0.684) -0.059 (-1.393, 1.275) -0.020 (-0.769, 0.730)	0.590 0.810 0.931 0.958	NO NO NO NO	0.723 0.960	
<b>GHQ12 (higher= worse)</b> Total score (0 1 1 1 method) (0 to 12)	No comorbidities 1 or more comor.	Baseline	0.771 (1.704) N=70 1.306 (2.256) N=223	1.104 (2.388) N=67 1.391 (2.498) N=267				



	No comorbidities 1 or more comor. No comorbidities 1 or more comor.	4 months 8 months	0.768 (1.800) N=69 0.970 (2.047) N=199 0.662 (1.492) N=66 1.102 (2.199) N=197	0.902 (2.285) N=62 1.408 (2.456) N=242 0.869 (2.037) N=61 1.202 (2.368) N=232	-0.101 (-0.725, 0.523) -0.389 (-0.742, -0.035) 0.125 (-0.476, 0.727) -0.125 (-0.464, 0.213)	0.750 <b>0.031</b> 0.683 0.468	YES YES NO YES	0.425  0.468
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Table 9: Subgroup analysis for deprivation

Outcome (Direction) Subscales (Range)	Subgroup	Assessment	Care Programme Mean (SD) n=293	Usual Care Mean (SD) n=334	Care Programme – Usual Care difference (95% CI)*	P value	Direction favours Program-me	P value for intera- ction
<b>CASUN (higher=more need) <i>Strength of need</i> Total score (0 to 140)</b>	20% most deprived	Baseline	28.350 (22.523) N=28	19.093 (14.737) N=25				
	80% least deprived		23.983 (16.556) N=258	23.798 (17.994) N=304				
	20% most deprived	4 months	20.928 (15.366) N=21	18.103 (19.191) N=21	-0.546 (-8.265, 7.173)	0.890	YES	0.621
	80% least deprived		18.227 (15.701) N=241	20.991 (18.175) N=279	-2.570 (-4.828, -0.311)	0.026	YES	
	20% most deprived	8 months	21.449 (20.680) N=23	17.947 (16.393) N=19	2.304 (-5.059, 9.667)	0.539	NO	0.304
	80% least deprived		17.619 (15.856) N=234	19.808 (18.688) N=269	-1.724 (-3.926, 0.478)	0.125	YES	
	20% most deprived	Baseline	7.607 (10.854) N=28	4.167 (5.362) N=25				
	80% least deprived		4.553 (6.141) N=258	4.531 (6.397) N=304				
	20% most deprived	4 months	3.762 (5.272) N=21	4.048 (5.886) N=21	0.665 (-1.827, 3.156)	0.600	NO	0.243
	80% least deprived		3.330 (5.703) N=241	4.098 (6.151) N=279	-0.881 (-1.618, -0.144)	0.019	YES	
Existential Survivorship (0 to 56)	20% most deprived	8 months	4.565 (8.670) N=23	3.105 (5.557) N=19	1.671 (-0.851, 4.193)	0.193	NO	0.071
	80% least deprived		3.131 (5.342) N=234	4.019 (6.433) N=269	-0.751 (-1.504, 0.002)	0.051	YES	
	20% most deprived	Baseline	10.229 (6.103) N=28	7.087 (5.022) N=25				
	80% least deprived		10.008 (5.553) N=258	9.565 (6.032) N=304				
	20% most deprived	4 months	9.650 (6.133) N=21	6.600 (6.378) N=21	0.130 (-3.068, 3.328)	0.936	NO	0.775
	80% least deprived		7.927 (5.878) N=241	8.398 (6.115) N=279	-0.354 (-1.285, 0.577)	0.456	YES	
	20% most deprived	8 months	8.652 (6.492) N=23	7.316 (5.648) N=19	-0.506 (-3.553, 2.542)	0.745	YES	0.784
	80% least deprived		7.748 (5.841) N=234	7.856 (6.158) N=269	-0.062, (-0.973, 0.850)	0.894	YES	
	20% most deprived	Baseline	3.357 (3.070) N=28	2.417 (3.120) N=25				
	80% least deprived		3.457 (3.063) N=258	3.590 (3.207) N=304				
Information (0 to 12)	20% most deprived	4 months	2.825 (2.926) N=21	1.400 (2.437) N=21	0.925 (-0.789, 2.638)	0.289	NO	0.189
	80% least deprived		2.576 (2.998) N=241	2.958 (3.081) N=279	-0.268 (-0.766, 0.230)	0.292	YES	
	20% most deprived	8 months	2.435 (2.727) N=23	2.211 (2.720) N=19	0.245 (-1.309, 1.798)	0.757	NO	0.928
	80% least deprived		2.481 (2.851) N=234	2.549 (2.838) N=269	0.171 (-0.292, 0.634)	0.469	NO	
	20% most deprived	Baseline	1.222 (1.601) N=28	1.000 (1.285) N=25				
	80% least deprived		1.311 (1.563) N=258	1.340 (1.677) N=304				
	20% most deprived	4 months	0.714 (1.102) N=21	1.190 (1.692) N=21	-0.439 (-1.266, 0.389)	0.298	YES	0.520
	80% least deprived		0.992 (1.452) N=241	1.196 (1.602) N=279	-0.156 (-0.401, 0.089)	0.211	YES	
	20% most deprived	8 months	0.957 (1.461) N=23	1.684 (1.827) N=19	-0.646 (-1.470, 0.177)	0.124	YES	0.225
	80% least deprived							

Relationships (0 to 12)	80% least deprived	Baseline	1.009 (1.504) N=234	1.129 (1.552) N=269	-0.115 (-0.358, 0.128)	0.352	YES	0.601
	20% most deprived		2.107 (2.499) N=28	1.583 (1.840) N=25				
	80% least deprived		1.682 (2.109) N=258	1.583 (2.078) N=304				
	20% most deprived		1.333 (1.853) N=21	1.571 (2.181) N=21				
	80% least deprived		1.308 (1.996) N=241	1.522 (2.042) N=279				
<b>Unmet needs</b> Total number of unmet needs (0 to 35)	20% most deprived	8 months	1.435 (2.253) N=23	1.053 (1.545) N=19	0.342 (-0.557, 1.241)	0.455	NO	0.308
	80% least deprived		1.213 (1.896) N=234	1.414 (1.968) N=269				
	20% most deprived		14.404 (9.348) N=28	11.306 (8.740) N=25				
	80% least deprived		12.626 (7.994) N=258	12.218 (8.645) N=304				
	20% most deprived		11.315 (7.912) N=21	10.301 (9.613) N=21				
Existential Survivorship (0 to 14)	80% least deprived	4 months	10.011 (7.921) N=241	11.226 (8.857) N=279	-0.099 (-3.961, 3.764)	0.960	YES	0.528
	20% most deprived		11.183 (9.827) N=23	10.421 (9.258) N=19				
	80% least deprived		9.893 (7.819) N=234	10.963 (9.494) N=269				
	20% most deprived		4.321 (4.643) N=28	3.042 (3.782) N=25				
	80% least deprived		3.212 (3.550) N=258	3.091 (3.747) N=304				
Comprehensive Cancer Care (0 to 6)	20% most deprived	4 months	2.857 (3.745) N=21	2.857 (3.877) N=21	0.513 (-1.099, 2.125)	0.532	NO	0.181
	80% least deprived		2.434 (3.388) N=241	2.899 (3.635) N=279				
	20% most deprived		2.783 (3.965) N=23	2.421 (4.032) N=19				
	80% least deprived		2.317 (3.139) N=234	2.865 (3.947) N=269				
	20% most deprived		4.364 (1.851) N=28	3.625 (2.242) N=25				
Information (0 to 3)	80% least deprived	Baseline	4.198 (1.911) N=258	3.903 (2.175) N=304	0.067 (-1.149, 1.283)	0.914	NO	0.755
	20% most deprived		3.559 (2.205) N=241	3.150 (2.540) N=21				
	80% least deprived		3.826 (2.480) N=23	3.620 (2.270) N=279				
	20% most deprived		3.606 (2.192) N=234	3.474 (2.170) N=19				
	80% least deprived		1.661 (1.277) N=28	3.508 (2.380) N=269				
Quality of life (0 to 2)	20% most deprived	Baseline	1.756 (1.324) N=258	1.250 (1.422) N=25	0.010 (-0.353, 0.372)	0.958	NO	0.970
	80% least deprived		1.500 (1.395) N=21	1.724 (1.334) N=304				
	20% most deprived		1.365 (1.338) N=241	0.750 (1.164) N=21				
	80% least deprived		1.391 (1.373) N=23	1.498 (1.362) N=279				
	20% most deprived		1.359 (1.353) N=234	1.412 (1.353) N=269				
Relationships (0 to 3)	80% least deprived	8 months	0.778 (0.847) N=28	0.750 (0.847) N=25	0.010 (-0.219, 0.239)	0.931	NO	0.835
	20% most deprived		0.823 (0.851) N=258	0.827 (0.890) N=304				
	80% least deprived		0.524 (0.814) N=21	0.762 (0.944) N=21				
	20% most deprived		0.636 (0.808) N=241	0.760 (0.888) N=279				
	80% least deprived		0.609 (0.891) N=23	0.947 (0.970) N=19				
Quality of life (0 to 2)	20% most deprived	4 months	0.670 (0.854) N=234	0.746 (0.894) N=269	-0.327 (-0.814, 0.160)	0.188	YES	0.343
	80% least deprived		1.250 (1.110) N=28	1.083 (1.176) N=25				
	20% most deprived							
	80% least deprived							
	20% most deprived							
Relationships (0 to 3)	80% least deprived	Baseline			-0.082 (-0.226, -0.062)	0.263	YES	
	20% most deprived							
	80% least deprived							
	20% most deprived							
	80% least deprived							

	80% least deprived 20% most deprived 80% least deprived 20% most deprived 80% least deprived	4 months 8 months	0.980 (1.062) N=258 0.905 (1.044) N=21 0.781 (1.010) N=241 0.870 (1.100) N=23 0.744 (1.017) N=234	0.937 (1.052) N=304 0.857 (1.108) N=21 0.885 (1.027) N=279 0.737 (0.991) N=19 0.855 (1.049) N=269	0.089 (-0.438, 0.615) -0.090 (-0.246, 0.067) 0.040 (-0.486, 0.565) -0.055 (-0.211, 0.101)	0.741 0.260 0.882 0.488	NO YES NO YES	0.524 0.734
<b>PAM (higher=better)</b> (0 to 100)	20% most deprived 80% least deprived 20% most deprived 80% least deprived 20% most deprived	Baseline 4 months 8 months	62.459 (14.316) N=28 63.101 (14.575) N=258 62.150 (13.487) N=21 64.486 (14.879) N=241 64.709 (12.597) N=23 64.772 (15.921) N=234	57.484 (8.119) N=25 61.793 (14.549) N=304 56.824 (11.100) N=21 62.723 (14.852) N=279 60.339 (9.194) N=19 63.822 (15.563) N=269	1.085 (-6.621, 8.791) 1.582 (-0.720, 3.885) 0.755 (-7.046, 8.556) 0.459 (-1.850, 2.768)	0.782 0.178 0.849 0.696	YES YES YES YES	0.903 0.943
<b>EPIC26 (higher=better)</b> Urinary incontinence (0 to 100)	20% most deprived 80% least deprived 20% most deprived 80% least deprived 20% most deprived	Baseline 4 months 8 months	78.250 (21.189) N=28 84.097 (19.964) N=258 82.083 (20.798) N=21 84.721 (19.710) N=241 85.170 (16.321) N=23 85.319 (19.486) N=234 83.929 (20.584) N=28	77.302 (23.685) N=25 80.479 (22.398) N=304 79.429 (18.553) N=21 81.955 (19.798) N=279 75.276 (22.881) N=19 82.353 (19.620) N=269 86.458 (16.655) N=25	-0.646 (-8.600, 7.309) 1.027 (-1.391, 3.446) 4.539 (-3.862, 12.940) 0.294 (-2.263, 2.851)	0.873 0.404 0.289 0.821	NO YES YES YES	0.692 0.342
Urinary irritative/obstructive (0 to 100)	20% most deprived 80% least deprived 20% most deprived 80% least deprived 20% most deprived	Baseline 4 months 8 months	87.601 (12.269) N=258 87.202 (15.993) N=21 88.014 (13.452) N=241 90.761 (14.823) N=23 88.239 (12.691) N=234 89.821 (13.309) N=28 88.216 (17.959) N=258	85.792 (14.318) N=304 89.688 (14.520) N=21 87.326 (14.901) N=279 85.156 (20.901) N=19 87.728 (14.514) N=269 86.413 (19.062) N=25 87.725 (16.979) N=304	-3.408 (-11.026, 4.209) -0.614 (-2.973, 1.746) 2.106 (-5.452, 9.663) -0.676 (-2.963, 1.611)	0.380 0.609 0.584 0.562	NO NO YES NO	0.491 0.489
Bowel (0 to 100)	20% most deprived 80% least deprived 20% most deprived 80% least deprived 20% most deprived	Baseline 4 months 8 months	89.821 (13.309) N=28 87.917 (13.912) N=21 90.530 (14.849) N=241 93.106 (12.502) N=23 89.846 (15.121) N=234 22.520 (24.338) N=28	80.556 (24.627) N=21 87.318 (17.731) N=279 83.333 (24.533) N=19 86.926 (18.043) N=269 15.972 (21.828) N=25 18.526 (21.040) N=304	0.235 (-7.792, 8.262) 2.879 (0.547, 5.211) 2.674 (-6.023, 11.371) 3.509 (0.904, 6.113)	0.954 <b>0.016</b> 0.546 <b>0.008</b>	YES YES YES YES	0.534 0.857
Sexual (0 to 100)	20% most deprived 80% least deprived 20% most deprived 80% least deprived 20% most deprived	Baseline 4 months 8 months	20.105 (20.669) N=258 14.895 (12.308) N=21 22.132 (21.554) N=241 19.071 (12.042) N=23 22.362 (21.718) N=234 73.565 (23.612) N=28	14.881 (18.782) N=21 19.745 (21.790) N=279 9.465 (8.429) N=19 20.507 (21.900) N=269 80.365 (22.637) N=25 77.915 (21.300) N=304	-1.485 (-9.535, 6.566) 0.373 (-2.022, 2.767) 0.582 (-8.505, 9.670) 0.286 (-2.479, 3.051)	0.717 0.760 0.900 0.839	NO YES YES YES	0.664 0.951
Hormonal (0 to 100)	20% most deprived 80% least deprived	Baseline	78.052 (19.558) N=258					



	20% most deprived 80% least deprived 20% most deprived 80% least deprived	4 months  8 months	0.429 (1.121) N=21 0.962 (2.050) N=241 0.739 (1.322) N=23 0.987 (2.071) N=234	1.095 (1.947) N=21 1.286 (2.438) N=279 0.947 (1.985) N=19 1.102 (2.288) N=269	-0.801 (-1.918, 0.317) -0.291 (-0.621, 0.039) -0.438 (-1.493, 0.617) -0.063 (-0.378, 0.252)	0.160 0.083 0.415 0.694	YES YES YES YES	0.390   0.504
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Table 10: Subgroup analysis for time since treatment

Outcome (Direction) Subscales (Range)	Subgroup	Assessment	Care Programme Mean (SD) n=293	Usual Care Mean (SD) n=334	Care Programme – Usual Care difference (95% CI)*	P value	Direction favours Program-me	P value for interact- ion
<b>CASUN (higher=more need) Strength of need</b> Total score (0 to 140)	0-1 years	Baseline	24.807 (17.369) N=160	26.265 (18.508) N=154				
	More than 1 year	4 months	24.518 (17.526) N=125	21.232 (16.649) N=174	-2.836 (-5.773, 0.102)	0.058	YES	0.074
	0-1 years	8 months	18.342 (14.694) N=150	22.737 (18.108) N=144	-2.258 (-5.330, 0.815)	0.149	YES	
	More than 1 year	8 months	18.766 (16.910) N=113	19.148 (18.202) N=156	-2.309 (-5.155, 0.537)	0.112	YES	0.624
	0-1 years	Baseline	17.700 (16.785) N=146	22.058 (19.565) N=140	-1.310 (-4.243, 1.622)	0.380	YES	
Existential Survivorship (0 to 56)	More than 1 year	Baseline	17.998 (15.952) N=112	17.835 (17.444) N=150				
	0-1 years	4 months	4.748 (6.932) N=160	5.205 (6.986) N=154	-1.165 (-2.118, 0.212)	<b>0.017</b>	YES	0.171
	More than 1 year	8 months	5.096 (6.725) N=125	4.031 (5.662) N=174	-0.225 (-1.216, 0.767)	0.656	YES	
	0-1 years	8 months	3.261 (5.327) N=150	4.849 (6.471) N=144	-0.766 (-1.753, 0.221)	0.128	YES	0.799
	More than 1 year	Baseline	3.737 (6.166) N=113	3.474 (5.721) N=156	-0.585 (-1.605, 0.434)	0.260	YES	
Comprehensive cancer care (0 to 24)	More than 1 year	Baseline	3.229 (5.962) N=146	4.815 (6.916) N=140				
	0-1 years	4 months	3.388 (5.418) N=112	3.415 (5.852) N=150	-0.283 (-1.498, 0.933)	0.648	YES	0.779
	More than 1 year	8 months	10.254 (5.527) N=160	10.261 (5.967) N=154	-0.528 (-1.796, 0.739)	0.413	YES	
	0-1 years	8 months	9.927 (5.697) N=125	8.605 (5.837) N=174	-0.578 (-1.750, 0.593)	0.332	YES	0.581
	More than 1 year	Baseline	8.318 (5.751) N=150	8.924 (5.920) N=144	-0.118 (-1.316, 1.080)	0.847	YES	
Information (0 to 12)	More than 1 year	Baseline	7.676 (6.083) N=113	7.718 (6.299) N=156				
	0-1 years	4 months	7.818 (5.906) N=146	8.597 (5.964) N=140	-0.070 (-0.721, 0.581)	0.833	YES	0.576
	More than 1 year	8 months	7.550 (5.905) N=112	7.138 (6.199) N=150	-0.332 (-1.009, 0.345)	0.336	YES	
	0-1 years	8 months	3.535 (3.112) N=160	4.092 (3.211) N=154	-0.177 (-0.779, 0.425)	0.564	YES	0.178
	More than 1 year	Baseline	3.379 (3.043) N=125	3.032 (3.110) N=174	0.401 (-0.216, 1.018)	0.202	NO	
Quality of life (0 to 8)	More than 1 year	4 months	2.755 (2.948) N=150	3.161 (3.159) N=144				
	0-1 years	8 months	2.369 (3.010) N=113	2.592 (2.942) N=156	-0.255 (-0.568, 0.059)	0.112	YES	0.532
	More than 1 year	Baseline	2.340 (2.766) N=146	3.004 (2.935) N=140	-0.113 (-0.440, 0.213)	0.496	YES	
	0-1 years	4 months	2.622 (2.920) N=112	2.185 (2.690) N=150	-0.311 (-0.625, 0.002)	0.051	YES	0.225
	More than 1 year	8 months	1.352 (1.607) N=160	1.444 (1.735) N=154	-0.038 (-0.364, 0.288)	0.819	YES	
Relationships (0 to 12)	More than 1 year	Baseline	1.273 (1.522) N=125	1.170 (1.553) N=174				
	0-1 years	4 months	0.973 (1.461) N=150	1.294 (1.669) N=144				
	More than 1 year	8 months	0.955 (1.345) N=113	1.085 (1.543) N=156				
	0-1 years	Baseline	0.986 (1.486) N=146	1.288 (1.720) N=140				
	More than 1 year	Baseline	0.991 (1.505) N=112	1.048 (1.426) N=150				
Relationships (0 to 12)	More than 1 year	Baseline	1.706 (2.243) N=160	1.714 (2.222) N=154				
	0-1 years	Baseline						
	More than 1 year	Baseline						
	0-1 years	Baseline						
	More than 1 year	Baseline						

<b>Unmet needs</b> Total number of unmet needs (0 to 35)	More than 1 year 0-1 years	4 months	1.732 (2.033) N=125 1.247 (1.921) N=150 1.416 (2.060) N=113 1.272 (2.086) N=146 1.158 (1.710) N=112 12.745 (7.802) N=160 13.123 (8.856) N=125 10.146 (7.691) N=150 10.382 (8.377) N=113 9.822 (7.951) N=146 10.188 (8.236) N=112 3.192 (3.541) N=160 3.586 (3.983) N=125 2.484 (3.409) N=150	1.517 (1.964) N=174 1.674 (2.055) N=144 1.402 (2.050) N=156 1.565 (2.127) N=140 1.270 (1.798) N=150 13.276 (8.754) N=154 11.335 (8.419) N=174 12.298 (8.924) N=144 10.208 (8.779) N=156 11.964 (9.655) N=140 10.200 (9.296) N=150 3.450 (3.926) N=154 2.885 (3.626) N=174 3.389 (3.732) N=144	-0.377 (-0.732, -0.022) 0.087 (-0.279, 0.453) -0.165 (-0.510, 0.181) -0.097 (-0.453, 0.258)	<b>0.037</b> 0.643 0.350 0.591	YES NO YES YES	0.068  0.786
	More than 1 year 0-1 years	8 months	12.745 (7.802) N=160 13.123 (8.856) N=125 10.146 (7.691) N=150 10.382 (8.377) N=113 9.822 (7.951) N=146 10.188 (8.236) N=112 3.192 (3.541) N=160 3.586 (3.983) N=125 2.484 (3.409) N=150	13.276 (8.754) N=154 11.335 (8.419) N=174 12.298 (8.924) N=144 10.208 (8.779) N=156 11.964 (9.655) N=140 10.200 (9.296) N=150 3.450 (3.926) N=154 2.885 (3.626) N=174 3.389 (3.732) N=144	-1.599 (-3.063, -0.135) -1.011 (-2.543, 0.521) -1.108 (-2.603, 0.387) -0.780 (-2.320, 0.759)	<b>0.032</b> 0.195 0.146 0.320	YES YES YES YES	0.578  0.760
	More than 1 year 0-1 years	4 months	2.664 (3.604) N=113 2.351 (3.308) N=146 2.438 (3.155) N=112 4.284 (1.870) N=160 4.167 (1.938) N=125 3.670 (2.133) N=150 3.532 (2.276) N=113 3.653 (2.153) N=146 3.505 (2.339) N=112 1.745 (1.283) N=160 1.762 (1.362) N=125 1.503 (1.331) N=150 1.230 (1.353) N=113 1.285 (1.341) N=146 1.459 (1.374) N=112 0.849 (0.866) N=160 0.810 (0.850) N=125	2.513 (3.543) N=156 3.329 (4.158) N=140 2.569 (3.794) N=150 4.105 (2.116) N=154 3.702 (2.194) N=174 3.843 (2.227) N=144 3.361 (2.328) N=156 3.775 (2.278) N=140 3.270 (2.417) N=150 1.948 (1.312) N=154 1.488 (1.331) N=174 1.577 (1.381) N=144 1.346 (1.328) N=156 1.636 (1.358) N=140 1.245 (1.324) N=150 0.895 (0.912) N=154 0.749 (0.862) N=174	-0.802 (-1.421, -0.183) -0.231 (-0.875, 0.412) -0.401 (-1.054, 0.252) -0.455 (-1.130, 0.219)	<b>0.011</b> 0.480 0.229 0.185	YES YES YES YES	0.201  0.907
	More than 1 year 0-1 years	8 months	2.351 (3.308) N=146 2.438 (3.155) N=112 4.284 (1.870) N=160 4.167 (1.938) N=125 3.670 (2.133) N=150 3.532 (2.276) N=113 3.653 (2.153) N=146 3.505 (2.339) N=112 1.745 (1.283) N=160 1.762 (1.362) N=125 1.503 (1.331) N=150 1.230 (1.353) N=113 1.285 (1.341) N=146 1.459 (1.374) N=112 0.849 (0.866) N=160 0.810 (0.850) N=125	3.329 (4.158) N=140 2.569 (3.794) N=150 4.105 (2.116) N=154 3.702 (2.194) N=174 3.843 (2.227) N=144 3.361 (2.328) N=156 3.775 (2.278) N=140 3.270 (2.417) N=150 1.948 (1.312) N=154 1.488 (1.331) N=174 1.577 (1.381) N=144 1.346 (1.328) N=156 1.636 (1.358) N=140 1.245 (1.324) N=150 0.895 (0.912) N=154 0.749 (0.862) N=174	-0.216 (-0.680, 0.247) -0.014 (-0.497, 0.468) -0.217 (-0.690, 0.255) 0.065(-0.417, 0.548)	0.359 0.953 0.367 0.791	YES YES YES NO	0.543  0.400
	More than 1 year 0-1 years	Baseline	4.284 (1.870) N=160 4.167 (1.938) N=125 3.670 (2.133) N=150 3.532 (2.276) N=113 3.653 (2.153) N=146 3.505 (2.339) N=112 1.745 (1.283) N=160 1.762 (1.362) N=125 1.503 (1.331) N=150 1.230 (1.353) N=113 1.285 (1.341) N=146 1.459 (1.374) N=112 0.849 (0.866) N=160 0.810 (0.850) N=125	1.948 (1.312) N=154 1.488 (1.331) N=174 1.577 (1.381) N=144 1.346 (1.328) N=156 1.636 (1.358) N=140 1.245 (1.324) N=150 0.895 (0.912) N=154 0.749 (0.862) N=174	0.103 (-0.193, 0.400) -0.205 (-0.514, 0.104) -0.149 (-0.447, 0.149) 0.132 (-0.173, 0.438)	0.494 0.193 0.327 0.395	NO YES YES NO	0.149  0.186
Quality of life (0 to 2)	More than 1 year 0-1 years	Baseline	0.849 (0.866) N=160 0.810 (0.850) N=125	0.895 (0.912) N=154 0.749 (0.862) N=174	-0.175 (-0.356, 0.005)	0.057	YES	0.306
	More than 1 year 0-1 years	4 months	0.624 (0.809) N=150 0.643 (0.815) N=113	0.832 (0.919) N=144 0.680 (0.856) N=156	-0.042 (-0.230, 0.145)	0.657	YES	
	More than 1 year 0-1 years	8 months	0.646 (0.832) N=146 0.673 (0.889) N=112 0.962 (1.085) N=160 1.073 (1.057) N=125 0.767 (1.017) N=150	0.791 (0.936) N=140 0.724 (0.862) N=150 0.994 (1.088) N=154 0.913 (1.035) N=174 0.979 (1.024) N=144	-0.151 (-0.338, 0.035) -0.063 (-0.257, -0.131)	0.111 0.521	YES	0.512
Relationships (0 to 3)	More than 1 year 0-1 years	Baseline	0.962 (1.085) N=160 1.073 (1.057) N=125 0.767 (1.017) N=150	0.994 (1.088) N=154 0.913 (1.035) N=174 0.979 (1.024) N=144	-0.199 (-0.401, 0.002)	0.053	YES	0.075





	0-1 years More than 1 year	8 months	81.109 (19.254) N=146 81.597 (19.914) N=112	78.120 (20.570) N=140 84.821 (19.090) N=150	0.967 (-2.177, 4.112) -2.721 (-5.944, 0.502)	0.546 0.098	YES NO	0.099
<b>FACTG (higher= better)</b>								
Total score (0 to 108)	0-1 years More than 1 year 0-1 years More than 1 year 0-1 years More than 1 year	Baseline 4 months 8 months	89.750 (12.098) N=160 89.050 (15.228) N=125 89.846 (12.524) N=150 88.371 (14.119) N=113 89.073 (13.197) N=146 87.592 (15.653) N=112	86.717 (15.133) N=154 88.688 (15.174) N=174 86.361 (15.149) N=144 88.585 (14.847) N=156 86.468 (15.018) N=140 88.079 (14.365) N=150	1.000 (-1.199, 3.200) -1.070 (-3.373, 1.232) -0.168 (-2.417, 2.081) -0.604 (-2.925, 1.717)	0.372 0.361 0.883 0.610	YES NO NO NO	0.193  0.785
Physical well-being (0 to 28)	0-1 years More than 1 year 0-1 years More than 1 year 0-1 years More than 1 year 0-1 years More than 1 year	Baseline 4 months 8 months	24.489 (3.662) N=160 24.711 (4.598) N=125 24.766 (3.197) N=150 25.019 (4.225) N=113 24.702 (3.566) N=146 24.342 (5.030) N=112 21.957 (4.696) N=160 21.645 (4.237) N=125	24.255 (3.957) N=154 24.456 (4.537) N=174 23.837 (4.585) N=144 24.466 (3.877) N=156 23.997 (4.348) N=140 24.133 (4.369) N=150 21.200 (5.078) N=154 21.485 (4.877) N=174	0.656 (0.026, 1.287) 0.176 (-0.475, 0.828) 0.276 (-0.412, 0.964) 0.024 (-0.680, 0.728)	<b>0.041</b> 0.595 0.431 0.946	YES YES YES YES	0.288  0.606
Social/Family well-being (0 to 28)	0-1 years More than 1 year 0-1 years More than 1 year 0-1 years More than 1 year 0-1 years More than 1 year	Baseline 4 months 8 months	21.338 (5.020) N=150 20.611 (4.941) N=113 21.181 (5.222) N=146 21.000 (4.597) N=112 20.754 (2.627) N=160 20.253 (3.908) N=125 20.674 (3.239) N=150 20.342 (3.701) N=113	20.847 (5.116) N=144 21.262 (6.422) N=156 20.887 (5.519) N=140 21.689 (5.038) N=150 20.044 (3.838) N=154 20.471 (3.557) N=174 20.270 (3.689) N=144 20.791 (3.391) N=156	0.298 (-0.693, 1.288) -0.367 (-1.402, 0.667) 0.054 (-0.907, 1.015) -0.334 (-1.335, 0.668)	0.555 0.486 0.913 0.513	YES NO YES NO	0.351  0.574
Emotional well-being (0 to 24)	0-1 years More than 1 year 0-1 years More than 1 year 0-1 years More than 1 year 0-1 years More than 1 year	Baseline 4 months 8 months	20.754 (2.627) N=160 20.253 (3.908) N=125 20.674 (3.239) N=150 20.342 (3.701) N=113 20.818 (2.993) N=146 20.069 (4.116) N=112 22.544 (5.138) N=160 22.629 (5.611) N=125	20.044 (3.838) N=154 20.471 (3.557) N=174 20.270 (3.689) N=144 20.791 (3.391) N=156 20.090 (3.685) N=140 20.346 (3.877) N=150 21.327 (6.227) N=154 22.345 (6.001) N=174	-0.046 (-0.688, 0.597) -0.486 (-1.147, 0.175) 0.041 (-0.673, 0.754) -0.104 (-0.835, 0.627)	0.889 0.149 0.911 0.781	NO NO YES NO	0.338  0.776
Functional well-being (0 to 28)	0-1 years More than 1 year 0-1 years More than 1 year 0-1 years More than 1 year 0-1 years More than 1 year	Baseline 4 months 8 months	22.629 (5.611) N=125 22.770 (4.880) N=150 22.455 (5.391) N=113 22.481 (5.144) N=146 22.358 (5.593) N=112	21.343 (6.001) N=144 21.805 (6.345) N=156 21.548 (5.923) N=140 21.910 (5.636) N=150	0.108 (-0.832, 1.049) -0.176 (-1.146, 0.794) -0.109 (-1.015, 0.798) 0.190 (-0.741, 1.121)	0.821 0.722 0.814 0.688	YES NO NO YES	0.672  0.643
<b>GHQ12 (higher= worse)</b>								
Total score (0 1 1 1 method) (0 to 12)	0-1 years More than 1 year	Baseline	1.231 (2.120) N=160 1.121 (2.151) N=125	1.714 (2.769) N=154 0.965 (2.107) N=174				

	0-1 years More than 1 year 0-1 years More than 1 year	4 months 8 months	0.900 (1.965) N=150 0.955 (2.046) N=113 0.821 (1.805) N=146 1.259 (2.351) N=112	1.718 (2.802) N=144 0.935 (1.979) N=156 1.241 (2.378) N=140 1.013 (2.225) N=150	-0.438 (-0.872, -0.005) -0.254 (-0.698, 0.190) -0.074 (-0.488, 0.340) -0.041 (-0.461, 0.379)	<b>0.048</b> 0.262 0.726 0.849	YES YES YES YES	0.551  0.910
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### 3.8. Per protocol analyses

**Table 11:**

Outcome (Direction) Subscales (Range)	Assessment	Care Programme Mean (SD) n=200	Usual Care Mean (SD) n=326	Care Programme – Usual Care difference (95% CI)*	P value	Direction favours Care Programme
<b>CASUN (higher=more need)</b>  Total score (0 to 140)  <i>Strength of need</i>	Baseline	25.156 (16.788) n=196	23.405 (17.669) n=322			
	4 months	19.808 (15.803) n=182	20.464 (18.020) n=290	-1.615 (-4.028, 0.799) n=449	0.189	YES
	8 months	18.610 (17.297) n=180	19.657 (18.435) n=279	-1.240 (-3.610, 1.130) n=440	0.304	YES
	Change (b-4m)	4.499 n=174	2.029 n=286			
Existential Survivorship (0 to 56)	Change (b-8m)	5.611 n=175	3.552 n=276			
	Baseline	4.754 (6.531) n=197	4.506 (6.310) n=322	-0.486 (-1.278, 0.305) n=456	0.228	YES
	4 months	3.578 (5.633) n=185	3.990 (5.995) n=294	-0.559 (-1.389, 0.270) n=441	0.185	YES
	8 months	3.336 (6.065) n=180	3.981 (6.360) n=280			
Comprehensive cancer care (0 to 24)	Change (b-4m)	0.824 n=178	0.203 n=290			
	Change (b-8m)	1.152 n=175	0.182 n=277			
	Baseline	10.43 (5.653) n=199	9.357 (5.949) n=322	-0.139 (-1.123, 0.846) n=454	0.782	YES
	4 months	8.464 (5.981) n=182	8.210 (6.122) n=293	-0.111 (-1.086, 0.864) n=444	0.823	YES
Information (0 to 12)	8 months	7.954 (6.107) n=180	7.825 (6.090) n=280			
	Change (b-4m)	1.771 n=177	1.044 n=289			
	Change (b-8m)	2.038 n=177	1.591 n=277			
	Baseline	3.573 (3.011) n=198	3.498 (3.211) n=322	-0.029 (-0.560, 0.502) n=454	0.914	YES
Quality of life (0 to 8)	4 months	2.794 (2.991) n=182	2.804 (3.048) n=294	0.336 (-0.153, 0.826) n=447	0.178	NO
	8 months	2.650 (2.847) n=180	2.544 (2.829) n=285			
	Change (b-4m)	0.756 n=176	0.626 n=290			
	Change (b-8m)	0.685 n=176	1.000 n=282			
Relationships (0 to 12)	Baseline	1.403 (1.564) n=196	1.290 (1.649) n=321	-0.101 (-0.364, 0.162) n=455	0.450	YES
	4 months	1.032 (1.459) n=185	1.156 (1.592) n=294	-0.138 (-0.403, 0.127) n=440	0.308	YES
	8 months	1.078 (1.534) n=179	1.157 (1.569) n=280			
	Change (b-4m)	0.337 n=178	0.100 n=289			
	Change (b-8m)	0.316 n=174	0.116 n=277			
	Baseline	1.937 (2.239) n=197	1.601 (2.098) n=323	-0.127 (-0.422, 0.168) n=455	0.396	YES
	4 months	1.511 (2.075) n=184	1.509 (2.060) n=292	-0.160 (-0.447, 0.126) n=445	0.273	YES
	8 months	1.397 (2.077) n=180	1.404 (1.969) n=282			
	Change (b-4m)	0.319 n=177	0.066 n=289			

<b>Unmet needs</b> Total number of unmet needs (0 to 35)	Change (b-8m)	0.489 n=176	0.163 n=280		0.101 0.117	YES YES
Existential Survivorship (0 to 14)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	13.177 (8.202) n=196 10.816 (8.148) n=182 10.121 (8.138) n=180 1.968 n=174 2.589 n=175	12.105 (8.555) n=322 11.005 (8.750) n=290 10.915 (9.369) n=279 0.739 n=286 1.147 n=276	-1.010 (-2.217, 0.198) n=449 -0.984 (-2.216, 0.248) n=440		
	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	3.323 (3.706) n=197 2.682 (3.541) n=185 2.340 (3.213) n=180 0.469 n=178 0.811 n=175	3.082 (3.716) n=322 2.841 (3.548) n=294 2.845 (3.912) n=280 0.087 n=290 0.093 n=277	-0.370 (-0.881, 0.142) n=456 -0.408 (-0.954, 0.138) n=441	0.156 0.142	YES YES
	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	4.296 (1.903) n=199 3.682 (2.173) n=182 3.561 (2.255) n=180 0.545 n=177 0.605 n=177	3.878 (2.164) n=322 3.568 (2.284) n=293 3.518 (2.351) n=280 0.289 n=289 0.392 n=277	-0.143 (-0.509, 0.222) n=454 -0.123 (-0.512, 0.265) n=444	0.441 0.533	YES YES
	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	1.833 (1.300) n=198 1.478 (1.341) n=182 1.456 (1.359) n=180 0.324 n=176 0.284 n=176	1.683 (1.342) n=322 1.430 (1.357) n=294 1.416 (1.352) n=285 0.219 n=290 0.289 n=282	0.031 (-0.213, 0.275) n=454 0.066 (-0.176, 0.308) n=447	0.802 0.590	NO NO
Quality of life (0 to 2)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	0.872 (0.859) n=196 0.659 (0.819) n=185 0.704 (0.859) n=179 0.185 n=178 0.149 n=174	0.804 (0.885) n=321 0.738 (0.884) n=294 0.754 (0.896) n=280 0.059 n=289 0.040 n=277	-0.100 (-0.249, 0.050) n=455 -0.104 (-0.260, 0.051) n=440	0.190 0.189	YES YES
	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	1.129 (1.088) n=197 0.913 (1.047) n=184 0.828 (1.040) n=180 0.172 n=177 0.270 n=176	0.941 (1.062) n=323 0.868 (1.032) n=292 0.849 (1.042) n=282 0.076 n=289 0.096 n=280	-0.036 (-0.204, 0.131) n=455 -0.094 (-0.258, 0.069) n=445	0.668 0.256	YES YES
	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	2.184 (1.788) n=196 2.243 (1.937) n=185 2.291 (1.865) n=179 -0.062 n=177 -0.091 n=175	1.876 (1.789) n=323 1.758 (1.809) n=297 1.580 (1.905) n=281 0.150 n=294 0.325 n=277	0.325 (-0.016, 0.666) n=459 0.350 (-0.02, 0.711) n=441	0.062 0.058	YES YES
	Baseline 4 months 8 months Change (b-4m) Change (b-8m)					

<b>PAM (higher=better)</b> (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	63.479 (13.826) n=195 64.917 (14.592) n=184 64.984 (15.284) n=177 -1.455 n=176 -1.218 n=174	61.195 (14.038) n=315 62.225 (14.560) n=283 63.477 (15.013) n=273 -0.661 n=279 -1.525 n=265	1.229 (-1.237, 3.696) n=443 0.135 (-2.319, 2.588) n=429	0.328 0.914	YES YES
<b>EPIC26 (higher=better)</b> Urinary incontinence (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	83.438 (20.613) n=196 84.101 (19.998) n=181 84.372 (19.760) n=178 -0.483 n=174 -0.689 n=173	80.207 (22.538) n=317 81.715 (19.803) n=282 81.859 (19.948) n=274 -0.928 n=274 -1.671 n=267	-0.293 (-2.889, 2.304) n=438 0.024 (-2.720, 2.769) n=430	0.825 0.986	NO YES
Urinary irritative/obstructive (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	87.630 (13.338) n=192 88.167 (13.912) n=178 87.821 (13.704) n=175 -0.26 n=168 -0.333 n=169	86.053 (14.258) n=311 87.778 (14.717) n=270 87.885 (14.885) n=260 -1.418 n=260 -1.481 n=249	-0.915 (-3.424, 1.594) n=419 -1.212 (-3.644, 1.220) n=409	0.474 0.328	NO NO
Bowel (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	89.487 (15.277) n=198 91.060 (13.059) n=184 91.359 (13.185) n=176 -1.353 n=178 -1.518 n=174	87.671 (17.007) n=316 86.914 (18.258) n=280 86.731 (18.577) n=273 0.589 n=273 0.659 n=268	2.435 (-0.004, 4.873) n=440 4.462 (1.639, 7.285) n=432	0.050 <b>0.002</b>	YES YES
Sexual (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	21.844 (21.564) n=192 23.719 (21.702) n=173 24.319 (21.497) n=167 -2.074 n=167 -2.376 n=163	18.385 (21.043) n=298 19.558 (21.649) n=272 19.509 (21.268) n=259 -1.248 n=259 -1.261 n=249	0.146 (-2.411, 2.703) n=414 0.359 (-2.605, 3.323) n=404	0.911 0.812	YES YES
Hormonal (0 to 100)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	80.103 (18.623) n=194 82.445 (17.378) n=181 83.722 (18.397) n=178 -1.94 n=174 -2.602 n=172	78.434 (21.153) n=316 80.208 (20.554) n=283 81.543 (20.097) n=269 -0.415 n=277 -1.530 n=263	0.527 (-1.848, 2.901) n=440 -0.355 (-2.918, 2.207) n=425	0.663 0.785	YES NO
<b>FACTG (higher= better)</b> Total score (0 to 108)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	90.806 (12.807) n=189 89.786 (12.973) n=177 89.377 (13.817) n=177 1.588 n=166 1.334 n=168	87.664 (15.297) n=307 87.614 (14.990) n=283 87.394 (14.626) n=277 0.907 n=272 0.780 n=264	-0.790 (-2.572, 0.992) n=427 -0.522 (-2.384, 1.339) n=422	0.384 0.582	NO NO
Physical well-being (0 to 28)	Baseline	25.001 (3.823) n=195	24.353 (4.294) n=313			

Social/Family well-being (0 to 28)	4 months 8 months Change (b-4m) Change (b-8m) Baseline 4 months 8 months Change (b-4m) Change (b-8m)	24.951 (3.671) n=184 24.847 (4.194) n=180 0.108 n=176 1.334 n=168 21.923 (4.487) n=197 21.171 (4.739) n=183 21.303 (4.696) n=179 0.698 n=178 0.535 n=176	24.161 (4.242) n=291 24.056 (4.345) n=279 0.451 n=283 0.430 n=270 21.344 (4.986) n=319 21.144 (5.781) n=292 21.347 (5.243) n=283 0.340 n=288 0.200 n=278	0.235 (-0.292, 0.761) n=448 0.173 (-0.391, 0.737) n=434	0.381 0.547	YES YES
Emotional well-being (0 to 24)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	20.664 (3.127) n=197 20.554 (3.540) n=183 20.576 (3.554) n=178 0.235 n=176 0.044 n=174	20.249 (3.711) n=315 20.552 (3.536) n=291 20.223 (3.790) n=283 -0.205 n=283 0.059 n=275	-0.404 (-0.934, 0.125) n=448 -0.051 (-0.647, 0.546) n=439	0.134 0.867	NO NO
Functional well-being (0 to 28)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	23.340 (4.963) n=200 22.979 (4.948) n=185 22.829 (5.190) n=180 0.573 n=181 0.583 n=178	21.829 (6.169) n=321 21.612 (6.180) n=293 21.745 (5.769) n=286 0.390 n=289 0.137 n=282	-0.237 (-1.019, 0.545) n=459 -0.176 (-0.933, 0.581) n=450	0.551 0.648	NO NO
<b>GHQ12 (higher= worse)</b> Total score (0 1 1 1 method) (0 to 12)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	1.170 (2.167) n=200 0.995 (2.117) n=185 1.056 (2.279) n=180 0.138 n=181 0.084 n=178	1.326 (2.493) n=325 1.292 (2.418) n=295 1.149 (2.323) n=282 -0.092 n=293 0.121 n=280	-0.276 (-0.636, 0.084) n=462 0.019 (-0.333, 0.371) n=447	0.133 0.914	YES NO
Total score (0 1 2 3 method) (0 to 36)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	10.015 (4.417) n=200 9.795 (4.342) n=185 9.739 (4.737) n=180 0.039 n=181 0.270 n=178	9.988 (4.805) n=325 10.088 (4.518) n=295 9.826 (4.307) n=282 -0.362 n=293 -0.007 n=280	-0.413 (-1.095, 0.269) n=462 -0.305 (-0.975, 0.364) n=447	0.235 0.371	YES YES
<b>EQ5D (higher= better)</b> (-0.594 to 1)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	0.872 (0.176) n=196 0.845 (0.179) n=183 0.854 (0.184) n=177 0.028 n=176 0.022 n=171	0.813 (0.202) n=318 0.810 (0.179) n=296 0.797 (0.212) n=285 0.013 n=290 0.021 n=278	-0.013 (-0.035, 0.010) n=454 0.010 (-0.017, 0.036) n=439	0.265 0.480	NO YES
<b>Worry of cancer (higher=worse)</b> (0 to 20)	Baseline 4 months 8 months	6.944 (4.309) n=196 6.284 (4.375) n=185 6.089 (4.403) n=180	7.232 (4.985) n=325 6.146 (4.828) n=294 6.172 (4.780) n=279	0.162 (-0.496, 0.820) n=457 -0.008 (-0.688, 0.672) n=440	0.629 0.981	NO YES

	Change (b-4m) Change (b-8m)	0.506 n=178 0.986 n=174	0.916 n=292 0.996 n=276		
<b>LIFESTYLE (higher=better)</b> Number of fruits + vegetables (0 to 10)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	5.281 (1.971) n=196 5.324 (1.883) n=185 5.382 (1.922) n=178 0.022 n=178 -0.052 n=173	4.944 (2.056) n=321 4.986 (2.116) n=295 4.709 (2.061) n=282 -0.021 n=290 0.301 n=279	0.030 (-0.285, 0.344) n=456 0.525 (0.194, 0.855) n=442	0.853 <b>0.002</b>  YES YES
Exercise (0 to 400)	Baseline 4 months 8 months Change (b-4m) Change (b-8m)	29.561 (23.256) n=189 30.055 (21.634) n=183 29.950 (25.636) n=179 -0.421 n=171 -0.207 n=167	24.640 (21.855) n=308 25.527 (29.050) n=277 24.938 (23.936) n=275 -1.102 n=265 -0.336 n=259	-0.074 (-5.337, 5.190) n=425 1.560 (-3.169, 6.289) n=417	0.978 0.517  NO YES

\*Controlled for centre and the following variables at baseline: outcome, age, type of treatment received (missing n=7), educational attainment (missing n=10), ethnicity (missing n=6), marital status (missing n=1), employment status (missing n=4), time since diagnosis (missing n=4) and co-morbidity. Total number of eligible participants at baseline with at least one of these characteristics missing=26/627.



### **3.9 Satisfaction with care**

Tables 12 and 13 show differences between programme and comparator groups for questions related to satisfaction with care, which were asked at the four and eight month questionnaires. At 4 months, there were statistically significant differences for eight statements regarding satisfaction with specific aspects of care (such as ability to ask questions), with the programme group indicating more satisfaction. However, general statements about acceptability and quality of care and whether care met expectations showed no difference between groups. No differences between the groups were apparent at 8 months.

**Table 12: Comparison between programme and comparator groups for satisfaction with care at T1**

T1	Strongly agree N (%)	Agree	Neither agree nor disagree	Disagree	Strongly disagree	P	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I have felt reassured	73 (29)	124 (51)	51 (21)	0 (0)	0 (0)	.000	56 (20)	119 (43)	81 (29)	8 (3)	12 (5)
I have known who to contact with any problems	125 (50)	115 (46)	8 (3)	0 (0)	0 (0)	.000	86 (31)	158 (57)	14 (5)	7 (2)	13 (5)
I have felt comfortable about contacting the doctors and nurses with any problems	113 (46)	121 (48)	12 (5)	2 (1)	0 (0)	.000	93 (33)	143 (51)	22 (8)	6 (2)	15 (6)
I have felt isolated	1 (1)	6 (2)	18 (7)	85 (34)	138 (56)	.045	7 (3)	11 (4)	34 (12)	91 (33)	133 (48)
I have felt that the care received was thorough	103 (42)	116 (47)	27 (11)	0 (0)	1 (0)	.000	80 (29)	134 (48)	48 (17)	6 (2)	12 (4)
I have felt able to ask questions	112 (45)	127 (51)	9 (4)	1 (0)	0 (0)	.000	93 (33)	143 (51)	26 (9)	4 (2)	14 (5)
I have felt that the doctors/nurses spent enough time with me	97 (39)	117 (47)	31 (13)	1 (.5)	1 (.5)	.000	78 (28)	137 (49)	41 (15)	7 (3)	17 (6)
I have felt involved in decisions about my care	93 (38)	114 (46)	36 (15)	2 (1)	1 (0)	.001	72 (26)	132 (47)	55 (19)	8 (3)	13 (5)
Has the health care you received been acceptable	yes 230 (93)	no 0 (0)	Unsure 18 (7)			.138	yes 251 (90)	no 4 (1)	Unsure 24 (9)		
Has the health care you received met your expectations	exceeded 36 (15)	met 186 (75)	Fell short 8 (3)	unsure 17 (7)		.177	exceeded 25 (9)	met 213 (77)	Fell short 13 (5)	unsure 25 (9)	
How would you rate the quality of care you have received	Excellent 70 (29)	Very good 94 (38)	Good 66 (27)	Fair 12 (5)	Poor 2 (1)	.313	Excellent 69 (25)	Very good 109 (40)	Good 67 (25)	Fair 26 (9)	Poor 3 (1)

**Table 13: Comparison between programme and comparator groups for satisfaction with care at T2**

T2	Strongly agree N (%)	Agree	Neither agree nor disagree	Disagree	Strongly disagree	P	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
I have felt reassured	45 (19)	122 (50)	64 (26)	6 (3)	5 (2)	.694	61 (23)	125 (45)	81 (29)	8 (2)	4 (1)
I have known who to contact with any problems	98 (40)	139 (56)	6 (2)	1 (1)	3 (1)	.097	85 (31)	173 (62)	11 (4)	6 (2)	3 (1)
I have felt comfortable about contacting the doctors and nurses with any problems	91 (37)	132 (54)	17 (7)	1 (1)	3 (1)	.269	86 (31)	168 (61)	15 (5)	5 (2)	3 (1)
I have felt isolated	4 (2)	8 (3)	28 (11)	71 (29)	134 (55)	.896	3 (1)	11 (4)	32 (12)	88 (32)	142 (51)
I have felt that the care received was thorough	73 (30)	122 (51)	42 (17)	3 (1)	2 (1)	.951	79 (29)	144 (52)	44 (16)	5 (2)	3 (1)
I have felt able to ask questions	87 (36)	135 (55)	21 (9)	0 (0)	1 (0)	.072	92 (34)	164 (60)	12 (4)	4 (1)	3 (1)
I have felt that the doctors/nurses spent enough time with me	77 (32)	122 (50)	38 (16)	6 (2)	1 (0)	.873	80 (29)	143 (52)	43 (15)	8 (3)	3 (1)
I have felt involved in decisions about my care	74 (31)	120 (49)	45 (19)	3 (1)	1 (0)	.635	72 (26)	146 (53)	50 (18)	7 (2)	2 (1)
Has the health care you received been acceptable	yes 219 (91)	no 3 (1)	Unsure 19 (8)			.527	yes 241 (89)	no 7 (3)	Unsure 23 (9)		
Has the health care you received met your expectations	exceeded 24 (10)	met 192 (80)	Fell short 6 (2)	unsure 18 (8)		.636	exceeded 23 (9)	met 213 (80)	Fell short 12 (5)	unsure 19 (7)	
How would you rate the quality of care you have received	Excellent 51 (23)	Very good 85 (38)	Good 74 (33)	Fair 10 (5)	Poor 3 (1)	.301	Excellent 63 (24)	Very good 101 (39)	Good 71 (27)	Fair 23 (9)	Poor 3 (1)

## 4. DISCUSSION

Overall, the analyses tend to show that men on the programme rated their outcomes somewhat more highly than men in the comparator group, but in most cases the benefit was not sufficient to achieve statistical significance. From these results, it seems fair to suggest men on the programme fared no worse than men who received usual care. A few of the differences achieved statistical significance, in all cases favouring the programme, adding to the evidence against the possibility of the programme delivering lower quality care.

Reports of minimally important differences (MIDs) are only available for 3 of the measures used (12-14). Using the MID to interpret the EPIC26 bowel significant difference, differences related to this programme reach around 2.7 at 4 months and 3.6 at 8 months, compared to a 4-6 point minimally important difference (14).

The subgroups analyses (by age, comorbidity status, IMD deprivation score, and time since treatment) tend to support the whole group conclusions. Statistically significant intervention effects within subgroups occurred in the subgroups less than 70 years of age; mainly in the groups with 1 or more comorbidity; in the less deprived subgroup; and in the subgroup 0-1 years post treatment. In all cases the statistically significant subgroup effects favoured the programme, but very few subgroup effects were supported by statistically significant tests of difference between the subgroups.

Analyses indicate increased satisfaction with care among the programme group at four months, though this difference was no longer apparent at eight months. It is possible that attendance at the workshop, not long before the four month questionnaire, is the reason for this difference.

### Study limitations

A randomised controlled trial (RCT) is the best method for attributing cause to an intervention. As this was an evaluation of a service improvement initiative, it was not possible to conduct an RCT, with the requirements that accompany this type of design for strict control over participant inclusion and exclusion. Instead, a real world approach (15) was taken, allowing for clinician judgment on patient inclusion. The fact that there were no significant differences between the groups at baseline is positive as it underlines the fact the two groups were similar on the aspects measured, but it is not possible to know if there were unmeasured differences between groups (16).

It is also possible that there was some contamination of the comparator group. Indeed, collection of service use data as part of the study indicates that some of the unscheduled telephone calls made by the comparator group to the clinical team were answered by the support worker. It is also possible that the more person centred approach cultivated in the CNS and support worker through project training was applied to comparator group men when they came into contact with them.

As already mentioned, it is also possible that some of the identified change was due to chance through multiple testing, a consequence for studies using multiple outcomes.

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