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CARERS FIRST Impact on Carers Star Report

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FIRST Choice for Carers

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CONTEXT

National Trends

Family caring is a key international issue and one amplified by the ageing profile of the world's population. In the UK, there are estimated to be 6.5 million family carers, a figure predicted to rise to 10 million by 2045 (Larkin and Milne, 2015). Family carers routinely experience a range of negative outcomes relating to caring including physical and mental ill health, reduced quality life, 'restrictedness' and poverty (Yeandle et al, 2017). The challenges of caring are especially pronounced for intensive carers ie carers who provide support for their relative for many hours a week (Milne and Larkin, 2014, 2017).

The importance of supporting carers is increasingly recognised in policy and practice and there is growing emphasis on evaluating the effectiveness of interventions for carers (DH, 2014; HM Government, 2008). Evidence relating to service efficacy is mixed. Integrated programmes of support are effective in terms of delaying care home admission and psycho-educational groups for dementia carers enhance wellbeing (Milne et al, 2013). Information (e.g. advice about managing challenging behaviours) is highly rated and carers value practical help with physical aspects of care (e.g. incontinence). There is recent evidence that a manual-based therapy intervention to support dementia carers is highly effective: it reduces the risk of depression amongst carers in the short and medium term (Knapp et al., 2013). However, most research on interventions for carers is limited in scope and size, of variable quality, short term, & lacking in rigour. Good quality data on the impact of an intervention(s) over the longer term is rare (Milne & Larkin, 2014).

Carers FIRST

Carers FIRST, a long-established Kent based charity, is commissioned by four local authorities (including Kent & Medway Councils) to offer a range of services for carers including: information

and advice, assessments of need (a statutory function on behalf of local authorities), befriending, signposting, support groups, emotional support and arranging respite breaks.

Carers FIRST serves adult carers of all 'types' e.g. older carers, spouse carers and carers of people with a wide range of conditions e.g. dementia carers, carers of people with learning disabilities. It collects demographic data on all the carers it serves and the Local Authority they live in. It also records which specific services carers receive.


Measuring Carer Outcomes – The Carers Star

Carers FIRST is leading the way in terms of routinely collecting data on outcomes related to its support to carers. Carers FIRST has been using a tool - the Carers Outcome Star - for over 3 years with a significant number of the carers that it serves.


The 'Carer's Star' collects information on 7 different domains: health; the caring role; managing at home; time for yourself; how the carer feels; finances; and work. A carer is 'scored' on a scale of 1-5 on each domain (1 = 'cause for concern' & 5 = 'as good as it can be'; see Figure 1). The data is entered onto an agency wide database by carers' workers. The Carer's Star is not a validated measure but it is an evidence based tool that evaluates change; it was developed by a specialised agency in partnership with a national carers' charity (<http://www.outcomesstar.org.uk/carers-star/>). It is one of a family of 'outcomes stars' and suite of tools that are used in research (Killaspy et al, 2012).

The Carers Star assessment has been performed at entry to the service, and again within 6 months after entry. Further stars are completed roughly every 3 months while the carer is part of the Carers FIRST caseload.

Figure 1. The Carer's Star



Star Chart



Carers Star™

The Outcomes Star for people caring for others

Carer

Date of completion

First Review Retrospective

Completed by Worker and carer
 Worker alone
 Carer

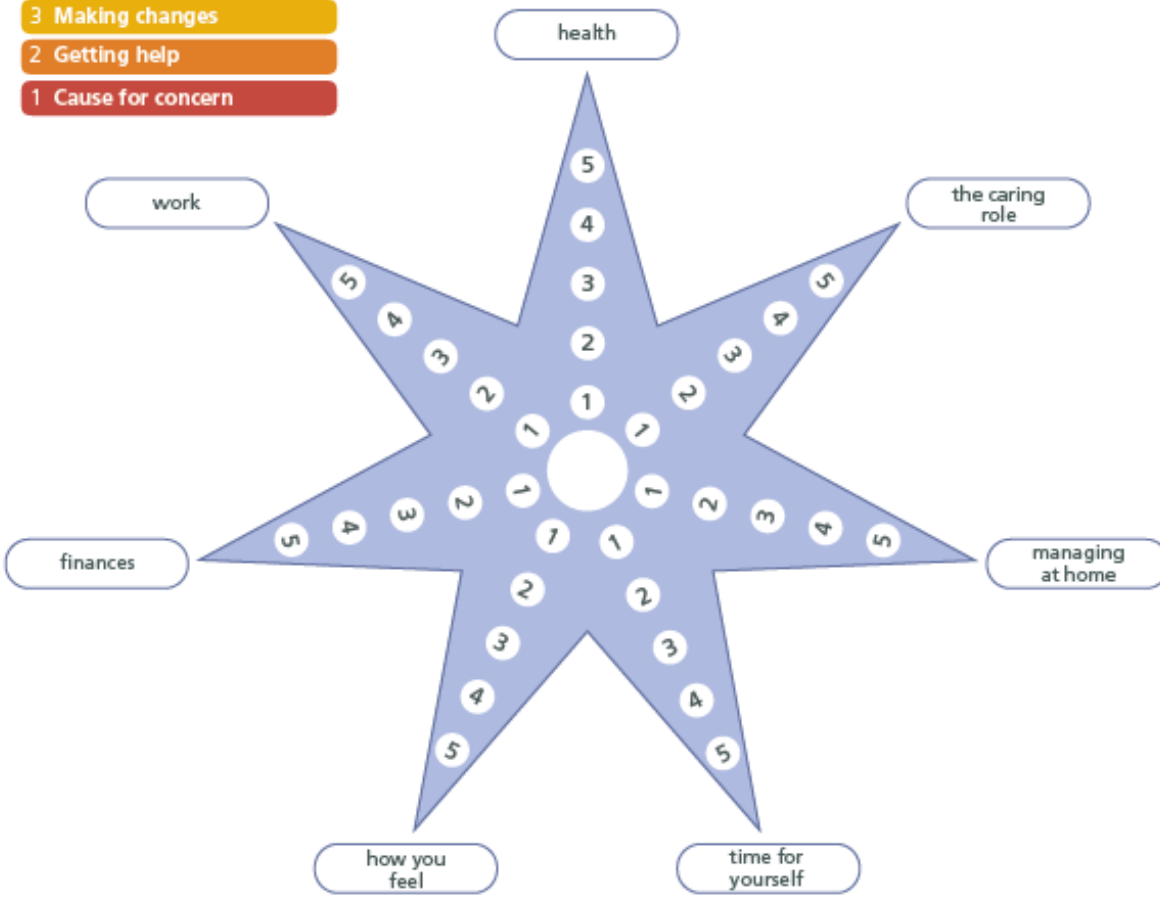
5 As good as it can be

4 Finding what works




3 Making changes

2 Getting help

1 Cause for concern



Carer: I was involved in completing this Star Chart

Carers Star™ © Triangle Consulting Social Enterprise Ltd | www.outcomesstar.org.uk
 The Star Chart must be used with the Scales and workers trained by a licensed Star trainer

METHOD

Carers FIRST database was provided to the first author of the report including a list of pre-agreed variables. Variables of interest included:

- Carer ID
- Referral date
- Gender
- Area/Location
- Municipal ward
- Carer Age
- Carers Star 1 scores for each of the 7 domains
- Carers Star 2 scores for each of the 7 domains
- Carer level of need (hours of caring per week)
- Referrals out and signposting
- Relationship to the cared for person
- Primary vs secondary identification of the carer
- Cared-for person's main condition
- Number of conditions of the cared-for person
- Number of cared for individuals per carer
- Intensity of Carers FIRST involvement

Data cleaning and computing of composite variables was also performed; for example, see page X for formula used to quantify the 'intensity' of Carers FIRST involvement.

Demographic information was calculated producing Pivot Tables on Microsoft Excel Software. Area where the carers lived, their age and gender distribution, carer level of need / hours of caring, carer relationship to looked after person, looked-after person's number of conditions as well as type of main and secondary condition were investigated to see which groups were over- and under-represented in terms of carer numbers. Contingency tables were also produced to investigate if level of carer need differed in proportions depending on carer gender, age, relationship to the cared for person, and the cared for person's main condition.

To perform inferential statistical analysis the data was transferred onto IBM SPSS Statistics 24 software. Inferential statistics were predominantly performed to find out which demographic variables predicted carer scores on the Carers Star - and in what way.

Regression analyses were computed to see if the following factors predicted scores on impact in Carers Star domains (Star score change between Time 1 and Time 2):

- Deprivation Indexes (IMD)
- Carer Age

Correlation analyses were computed to see if the following variables were related to scores on Carers Star domains:

- How many people the carer looked after
- How many referrals Carers FIRST made for the carer
- How 'intensively' Carers FIRST worked with the carer

T-tests were computed to see if there were statistically significant changes in:

- Carers Star scores between Time 1 and Time 2
- Carers Star scores between Time 1 and Time 2 for the 3 locations with over 50 carers in the analysis
- Carers FIRST impact on Carers Star depending on carer gender
- Carers FIRST impact on Carers Star depending on whether the carer was signposted to other services
- Carers FIRST impact on Carers Star depending on whether the carer identified as a primary or secondary carer

Pearson chi-square tests were computed to see if whether the carer's overall score on the Carers Star improved, stayed the same or got worse depended on whether:

- The carer looked after a partner, a child or a parent
- The carer looked after someone with dementia, a neurological condition, a physical disorder, or a mental health difficulty
- The carer lived in Medway; Dartford, Swanley and Gravesham; or South West Kent

Analysis of Variance (ANOVA) were computed to see if CF impact on Cares Star domains depended on whether:

- The carer looked after a partner, a child or a parent
- The carer looked after someone with dementia, a neurological condition, a physical disorder, or a mental health difficulty
- Carer Level of Need: low, medium or high

FINDINGS

Demographics

990 carers were eligible for the analysis, carer outcomes on the Carers Star. For the carers to meet eligibility criteria, a 'Carers Star' had to be completed at least twice. In 723 carers, the second Carers Star was completed within 6 months of the initial Carers Star, while 266 subsequent carers stars exceeded the 6 month period. For the latter group of individuals, their last carers star was used instead.

For the purposes of this report, only the **723 carers** who had both the initial and the second Carers Star completed within 6 months were included. 25.5% of the 990 carers had 3 Carers Stars performed, 9.3% had 4, 3.1% had 5 and 0.7% had 6 Carers Stars.

The carers whose data was included in the analysis, came from 6 areas where Carers FIRST operates, with a small proportion coming outside of these areas but who were provided a service nonetheless (see Table 1). As can be seen below, there were few eligible carers in East and West Lincolnshire, as well as Waltham Forrset. This was likely due to the case that these services were relatively recently established, meaning that the second stars were not yet completed for most of their caseload.

Table 1. Carer numbers by area

Area	No. of Carers
Dartford, Gravesham and Swanley	391
East Lincolnshire	6
Medway	56
South West Kent	259
Waltham Forest	1
West Lincolnshire	4
Out of Area	6

N=723

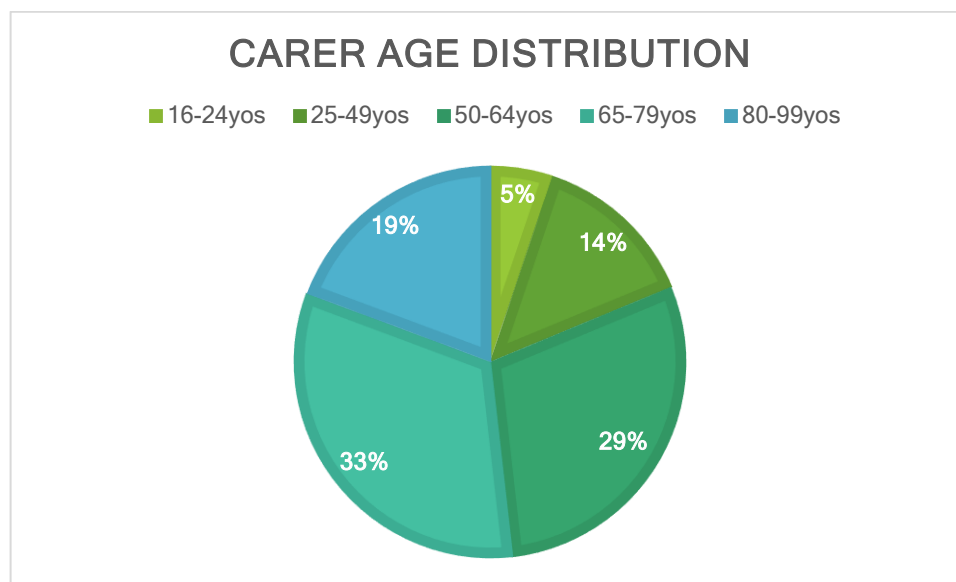
Municipal wards where the carers resided were also recorded in order to match these with the national multiple deprivation indexes (IMD). The average deprivation score for 135 wards Carers FIRST worked in was 16.61, lower than the 21.8 average for England (i.e. showing that Carers FIRST work with carers living in slightly less deprived areas than national average). The

highest deprived ward was Mablethorpe ward in East Lincolnshire with a score of 53.2, while the least deprived ward was Sevenoaks Town and St John's with a score of 3.6.

Carers were aged between 17 and 95, with the mean age of 63.04 years, with no age data available for 3 carers. As can be seen from Figure 2, nearly two thirds of carers were aged between 50 and 79.

70.95% of carers were female, and 29.05% - male.

Figure 2. Carer age distribution



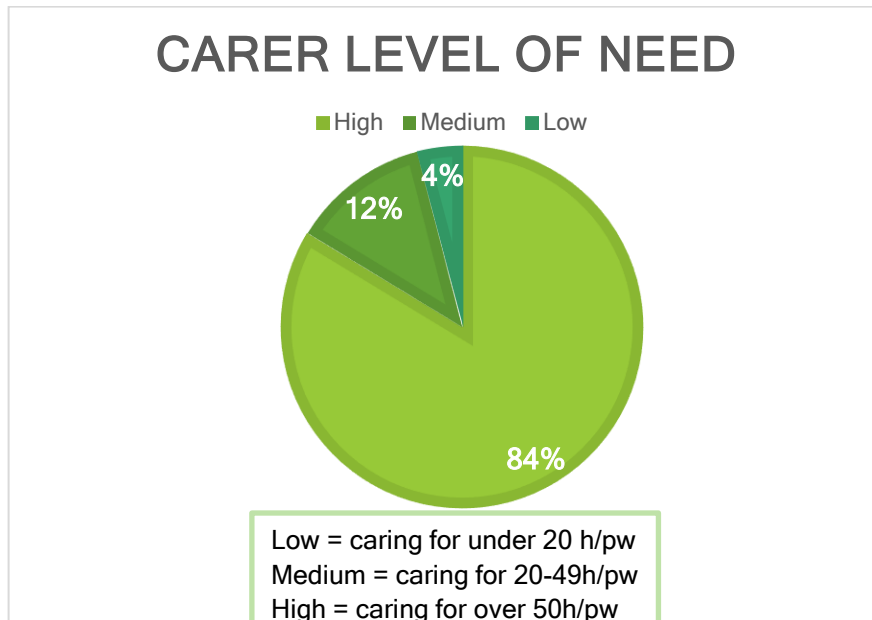
N=720 (3 cases with missing age)

Figure 3 demonstrates that at entry to the service the majority (84%) of the carers were recorded as having a high level of need. Also, three quarters (76%) of carers were signposted to other services.

95.56% of carers were the primary carer for their relative or friend. 83% cared for one person, 14% provided care to 2 individuals and 3% provided care to 3 or more individuals at the same time, with the maximum number of 5 cared-for persons looked after by the same carer (usually, where more than 3 individuals were cared for by the same carer, some of these were young children). More than half of the carers looked after their spouse or partner, over a quarter looked

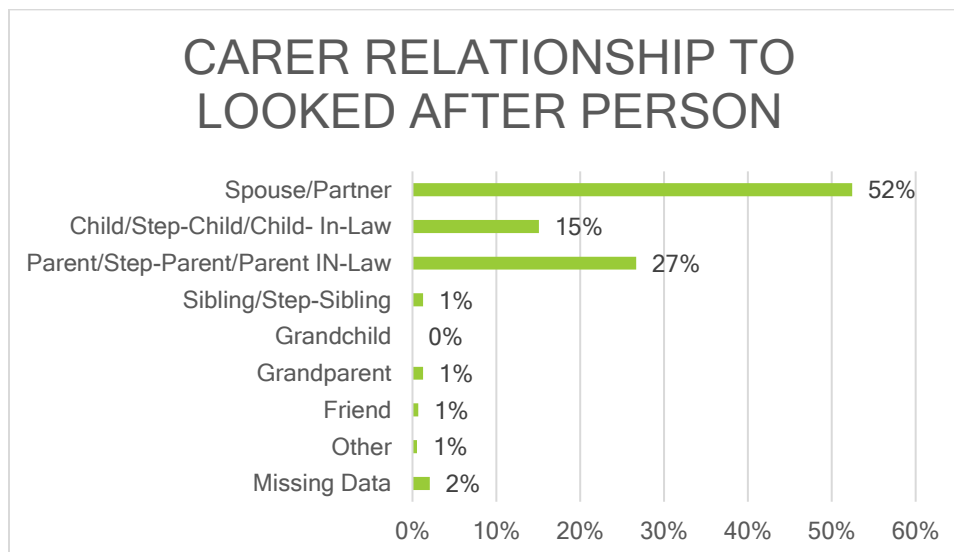
after a parent, step parent or parent-in-law and 15% looked after their child (often adult child). The average age of the cared-for person was 69.10 years.

Figure 3. Carer level of need



N=723

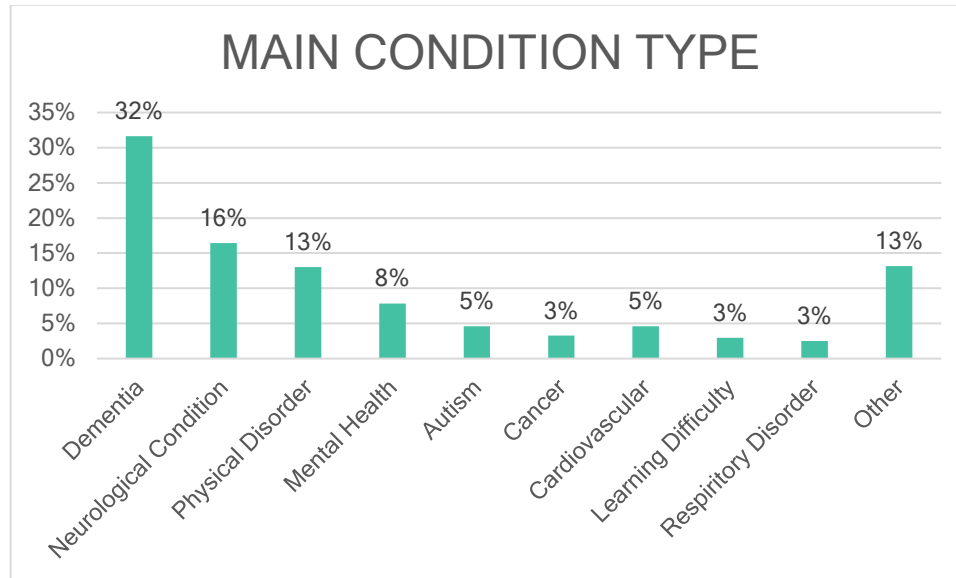
Figure 4. Carer relationship to looked after person



N= 708 (15 carers did not have a relationship recorded)

The carers were also asked to identify which conditions impacted on the cared-for person's life the most. The most common main condition affecting nearly a third of the cared for individuals was dementia, with further breakdown available in Figure 5.

Figure 5. Main condition type



N = 676 (information on main condition missing for 47 carers)

Patterns in Carer Level of Need

Demographic patterns were cross-tabulated for some of carer characteristics. It was of particular interest whether carer level of need was different depending on carer characteristics.

Table 2 demonstrates that twice as many male carers were in the low need category than female carers, with no difference between genders in the medium need category, and slightly more female than male carers in the high need category. A carer was recorded as having a low level of need if they were caring for under 19 hours per week, medium need if they cared 20-49 hours per week and high need if they cared for 50 hours or more per week.

Table 2. Level of Need by Gender

	Low Need	Medium Need	High Need
Female	17 (3% of Females)	63 (12% of Females)	433 (85% of Females)
Male	12 (6% of Males)	26 (12% of Males)	172 (82% of Males)

N= 723

Age, however did show a relationship with level of need. 16 to 24 year olds were much less likely to provide over 50 hours of care per week, and nearly a third provided under 20 hours (see Table 3).

Table 3. Level of Need by Age

	Low Need	Medium Need	High Need
16-24yos	11 (30% of 16-24yos)	14 (38% of 16-24yos)	12 (32% of 16-24yos)
25-49yos	4 (4% of 25-49yos)	13 (13% of 25-49yos)	81 (83% of 25-49yos)
50-64yos	4 (2% of 25-64yos)	30 (14% of 25-64yos)	178 (84% of 25-64yos)
65-79yos	5 (2% of 65-79yos)	20 (9% of 65-79yos)	209 (89% of 65-79yos)
80-99yos	3 (2% of 80-99yos)	12 (9% of 80-99yos)	124 (89% of 80-99yos)

N=720 (3 cases with missing age)

The levels of need were also compared among the 94% of carers who looked after a spouse, an (often adult) child or a parent. As can be seen in Table 4, carers who provided help and support for their spouses showed the highest proportion of high need (91%), with a substantially lower proportion for carers looking after children (82%) and an even lower proportion for those looking after a parent (76%). It is likely that those who care for their parents are still working and unable to provide more than 49 hours of care and/or they share care responsibilities with siblings or other family members.

Table 4. Level of Need by Caring Role

	Low Need	Medium Need	High Need
Spouse/Partner	6 (2% of those caring for a spouse)	29 (8% of those caring for a spouse)	344 (91% of those caring for a spouse)
Child/Step-Child/Child-in-Law	6 (6% of those caring for their child)	14 (13% of those caring for their child)	109 (82% of those caring for their child)
Parent/Step-Parent/Parent-In-Law	11 (6% of those caring for their child)	35 (18% of those caring for their child)	193 (76% of those caring for their parent)

N=681 (15 carers did not have a relationship recorded, 27 carers' relationship did not fit the above categories)

Level of need was also cross-tabulated with the 5 most common main conditions (i.e. conditions the carers noted as having the greatest impact on the cared-for person's life). There were no overwhelming differences in carer level of need depending on the main condition. Notably, while 4/5 of carers for people with dementia were in the 'high need' category, the same was true only for 3/4 carers looking after someone with a physical disorder.

Table 5. Level of Need by Main Condition

	Low Need	Medium Need	High Need
Dementia	3 (1% of those caring for someone with dementia)	21 (10% of those caring for someone with dementia)	190 (89% of those caring for someone with dementia)
Neurological Condition	3 (3% of those caring for someone with a neurological condition)	8 (7% of those caring for someone with a neurological condition)	100 (90% of those caring for someone with a neurological condition)
Physical Disorder	4 (5% of those caring for someone with a physical disorder)	12 (14% of those caring for someone with a physical disorder)	72 (82% of those caring for someone with a physical disorder)
Mental Health	3 (6% of those caring for someone with a mental health condition)	8 (15% of those caring for someone with a mental health condition)	42 (79% of those caring for someone with a mental health condition)
Autism	0 (0% of those caring for someone with autism)	4 (13% of those caring for someone with autism)	27 (87% of those caring for someone with autism)

N = 497 (information on main condition missing for 47 main condition for 179 carers did not fit the above categories)

Impact on Carers Star

Carers stars were performed for these carers between June 2014 and August 2017.

Carers FIRST had a statistically significant positive impact on all areas of the Carers Star apart from Work. Significant improvement happened in carer health, their caring role, managing at home, time for yourself, how the carer felt, and finances.

Figure 6. Initial Carer Star averages per domain



Health (N=723), The Caring Role (N=723), Managing at Home (N=723), Time for Yourself (N=723), How You Feel (N=723), Finances (N=723), Work (N=723)

Health: $t(718) = -4.41, p < .001$; carers report significantly better health at Star 2 ($M = 3.31, SD = 1.05$) than Star 1 ($M = 3.17, SD = 1.12$)

The Caring Role: $t(721) = -7.27, p < .001$; carers report feeling significantly better about the Caring Role at Star 2 ($M = 3.44, SD = 1.15$) than Star 1 ($M = 3.13, SD = 1.20$)

Managing at Home: $t(709) = -5.00, p < .05$; carers report managing at home significantly better at Star 2 ($M = 3.68, SD = 1.07$) than Star 1 ($M = 3.50, SD = 1.13$)

Time for Yourself: $t(711) = -12.28, p < .001$; carers report feeling significantly better about having time for themselves at Star 2 ($M = 2.97, SD = 1.21$) than Star 1 ($M = 2.49, SD = 1.19$)

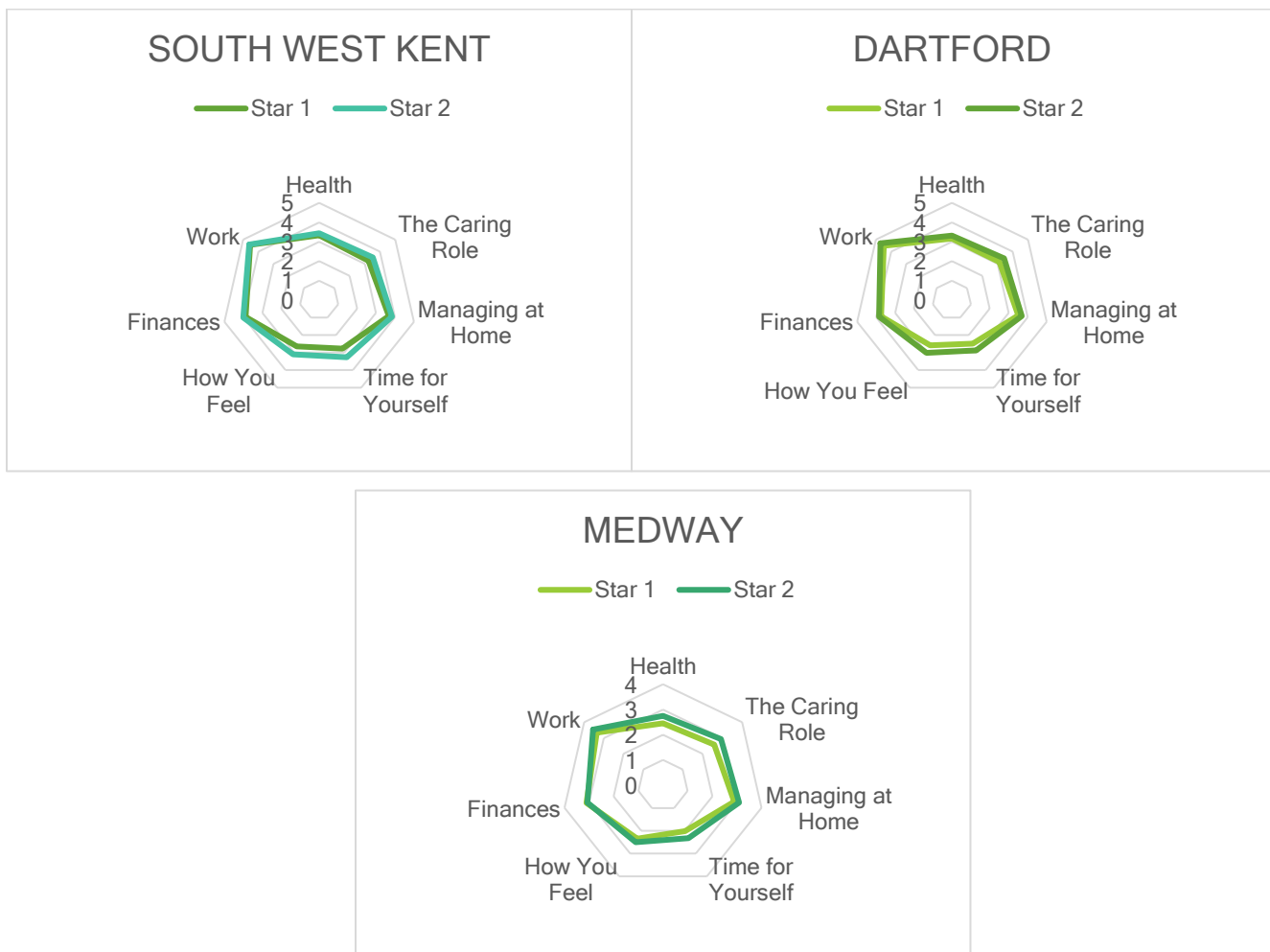
How you Feel: $t(714) = -9.71, p < .001$; carers report feeling significantly better at Star 2 ($M = 3.01, SD = 1.17$) than Star 1 ($M = 2.58, SD = 1.20$)

Finances: $t(712) = -2.65, p < .01$; carers report feeling significantly better about their finances at Star 2 ($M = 3.83, SD = 1.16$) than Star 1 ($M = 3.74, SD = 1.21$)

Work: $t(716) = -1.96, p = .05$; carers did not differ in their experiences of finances at Star 1 and 2

Area. When divided per area, the analysis demonstrated that Carers in Dartford area did significantly better in all Carer Star domains at Star 2 than Star 1. Carers in South West Kent did significantly better in The Caring Role, Managing at Home, Time for yourself and Finance domains at Star 2, but did not differ in Health scores between Star 1 and Star 2. Carers in Medway scored significantly better at Star 2 on Health and the Caring Role, but did not significantly improve on scores in Managing at Home, Time for Yourself, How You Feel and Finance domains (see Figures 7-9). Scores for East and West Lincolnshire and Waltham Forrest were not compared, due to a small number of included cases from these areas.

Figures 7-9. Initial Carer Star averages for Dartford, Medway and South West Kent Carers FIRST Service



SOUTH WEST KENT

Health: $t(255) = -1.68, p = .09$; carers in South West Kent did not improve from Star 1 to Star 2 on Health

The Caring Role: $t(257) = -3.98, p < .001$; carers in South West Kent did significantly better at Star 2 ($M = 3.53, SD = 1.11$) than Star 1 ($M = 3.24, SD = 1.20$)

Managing at Home: $t(254) = -2.61, p < .01$; carers in South West Kent did significantly better at Star 2 ($M = 3.84, SD = 1.02$) than Star 1 ($M = 3.67, SD = 1.06$)

Time for Yourself: $t(254) = -7.29, p < .01$; carers in South West Kent did significantly better at Star 2 ($M = 3.25, SD = 1.15$) than Star 1 ($M = 2.77, SD = 1.15$)

How you Feel: $t(254) = -6.10, p < .01$; carers in South West Kent did significantly better at Star 2 ($M = 3.11, SD = 1.15$) than Star 1 ($M = 2.64, SD = 1.20$)

Finances: $t(252) = -2.01, p < .05$; carers in South West Kent did significantly better at Star 2 ($M = 4.00, SD = 1.03$) than Star 1 ($M = 3.88, SD = 1.06$)

Work: $t(256) = -.87, p = .39$; carers in South West Kent did not improve from Star 1 to Star 2 on Work

DARTFORD, GRAVESHAM & SWANLEY

Health: $t(390) = -3.6, p < .001$; carers in Dartford did significantly better at Star 2 ($M = 3.32, SD = 1.07$) than Star 1 ($M = 3.16, SD = 1.14$)

The Caring Role: $t(390) = -5.41, p < .001$; carers in Dartford did significantly better at Star 2 ($M = 3.44, SD = 1.18$) than Star 1 ($M = 3.14, SD = 1.14$)

Managing at Home: $t(381) = -4.35, p < .001$; carers in Dartford did significantly better at Star 2 ($M = 3.29, SD = 1.17$) than Star 1 ($M = 3.12, SD = 1.21$)

Time for Yourself: $t(383) = -10.47, p < .001$; carers in Dartford did significantly better at Star 2 ($M = 2.89, SD = 1.21$) than Star 1 ($M = 2.36, SD = 1.19$)

How you Feel: $t(387) = -8.02, p < .001$; carers in Dartford did significantly better at Star 2 ($M = 3.02, SD = 1.19$) than Star 1 ($M = 2.57, SD = 1.22$)

Finances: $t(387) = -2.88, p < .01$; carers in Dartford did significantly better at Star 2 ($M = 3.84, SD = 1.16$) than Star 1 ($M = 3.72, SD = 1.25$)

Work: $t(388) = -2.28, p < .05$; carers in Dartford did significantly better at Star 2 ($M = 4.70, SD = .79$) than Star 1 ($M = 4.61, SD = .95$)

MEDWAY

Health: $t(54) = -2.27, p < .05$; carers in Medway did significantly better at Star 2 ($M = 2.73, SD = 1.01$) than Star 1 ($M = 2.45, SD = 1.03$)

The Caring Role: $t(55) = -2.46, p < .05$; carers in Medway did significantly better at Star 2 ($M = 2.93, SD = 1.02$) than Star 1 ($M = 2.59, SD = .93$)

Managing at Home: $t(55) = -1.42, p = .16$; carers in Medway did not improve from Star 1 to Star 2 on managing at home

Time for Yourself: $t(55) = -1.78, p = .08$; carers in Medway did not improve from Star 1 to Star 2 on time for themselves

How you Feel: $t(54) = -.70, p = .49$; Medway did not improve from Star 1 to Star 2 on how they felt

Finances: $t(54) = .38, p = .71$; carers in Medway did not improve from Star 1 to Star 2 on Finances

Work: $t(53) = -.89, p = .38$; carers in Medway did not improve from Star 1 to Star 2 on Work

However, as can be seen in Table 6, the areas did not significantly differ from one another in terms of magnitude of change from Star 1 to Star 2.

Table 6. One-Way ANOVA Results with Carer Star Domains as Dependent Variables.

	South West Kent			Dartford, Gravesham & Swanley			Medway			F	p
	N	M	SE	N	M	SE	N	M	SE		
Health	256	.10	.06	391	.16	.04	55	.27	.12	.96	.38
The Caring Role	258	.29	.07	391	.30	.06	56	.34	.14	.04	.96
Managing at Home	255	.16	.06	382	.21	.05	56	.20	.14	.20	.82
Time for Yourself	255	.48	.07	384	.52	.05	56	.30	.17	1.12	.33

How You Feel	255	.47	.08	388	.12	.06	55	.13	.18	2.02	.13
Finances	253	.12	.06	388	.12	.04	55	-.05	.14	.97	.38
Work	257	.04	.05	389	.08	.04	54	.17	.19	.56	.57

Deprivation. As Dartford, South West Kent and Medway Areas differ considerably in deprivation levels, an investigation was carried out to see if deprivation predicted performance on Carers Star.

A simple linear regression was calculated to investigate if multiple deprivation indexes for the municipal wards carers lived in were related to impact (change from initial assessment to 6 month measure) on Carers Star. Deprivation levels largely accounted for differences in area, but only for the domains of Health, Managing at Home, Finances and Work, where lower deprivation was associated with better scores. Deprivation scores did not affect Star 1 scores on the Caring Role, Time for Yourself, and How the Carer Felt.

Health: $R^2 = .02$, $F(1, 718) = 5.75$, $p < .05$, the lower the deprivation indexes, the higher reported health at Star 1, $\beta = -.09$, $t = -2.40$, $p < .05$

The Caring Role: $R^2 = .001$, $F(1, 721) = .45$, $p = .51$, deprivation indexes did not predict how the carer felt about the caring role at Star 1

Managing at Home: $R^2 = .004$, $F(1, 715) = 4.03$, $p < .05$, the lower the deprivation indexes, the better the carer felt about managing at home at Star 1, $\beta = -.08$, $t = -2.01$, $p < .05$

Time for Yourself: $R^2 < .001$, $F(1, 715) = .001$, $p = .99$, deprivation indexes did not predict how the carer felt about having time for themselves at Star 1

How you Feel: $R^2 = .001$, $F(1, 716) = .60$, $p = .44$, deprivation indexes did not predict how the carer felt at Star 1

Finances: $R^2 = .02$, $F(1, 715) = 13.02$, $p < .001$, the lower the deprivation indexes, the better the carer felt about their financial situation, $\beta = -.13$, $t = -3.61$, $p < .001$

Work: $R^2 = .01$, $F(1, 717) = 5.65$, $p < .05$, the lower the deprivation indexes, the better the carer felt about work/managing their job, $\beta = -.09$, $t = -2.38$, $p < .05$

It was also investigated if deprivation levels predicted the magnitude of change between Star 1 and Star 2. To achieve this, Star 1 score per each domain was subtracted from the equivalent Star 2 score. Change ranged from positive (i.e. scores on Star 1 were lower than on Star 2) to negative (i.e. carer scores dropped at Star 2). A simple linear regression was calculated to

investigate if multiple deprivation indexes for the municipal wards carers lived in were related to the difference in scores between Star 1 and Star 2. The results demonstrated that deprivation indexes predicted change only in the domain of Health; the lower the deprivation indexes were, the lower the change scores were. In other words, improvement in health scores was more likely in more deprived areas; possibly due to the lower initial health score.

Health: $R^2 = .01$, $F(1, 717) = 5.76$, $p < .05$, *the higher the deprivation indexes, the more positive the change between Star 1 and Star 2 in terms of Carer Health*, $\beta = .09$, $t = 2.40$, $p < .05$

The Caring Role: $R^2 < .001$, $F(1, 720) = .07$, $p = .79$, *deprivation indexes did not predict change on how the carer felt about the caring role between Star 1 and Star 2*

Managing at Home: $R^2 < .001$, $F(1, 708) = .01$, $p = .92$, *deprivation indexes did not predict change on how the carer felt about managing at home between Star 1 and Star 2*

Time for Yourself: $R^2 = .003$, $F(1, 710) = 2.47$, $p = .12$, *deprivation indexes did not predict change on how the carer felt about having time for themselves between Star 1 and Star 2*

How you Feel: $R^2 = .001$, $F(1, 713) = .39$, $p = .53$, *deprivation indexes did not predict change on how the carer felt between Star 1 and Star 2*

Finances: $R^2 < .001$, $F(1, 711) = .18$, $p = .67$, *deprivation indexes did not predict change on how the carer felt about their finances between Star 1 and Star 2*

Work: $R^2 = .003$, $F(1, 715) = 1.82$, $p = .18$, *deprivation indexes did not predict change on how the carer felt about work between Star 1 and Star 2*

Lastly, all of the 723 carers were categorized into those whose situation improved (average score across all domains on Star 2 greater than on Star 1), those who experienced no change (average score across all domains on Star 2 the same as on Star 1), and those whose situation deteriorated (average score across all domains on Star 2 greater than on Star 1).

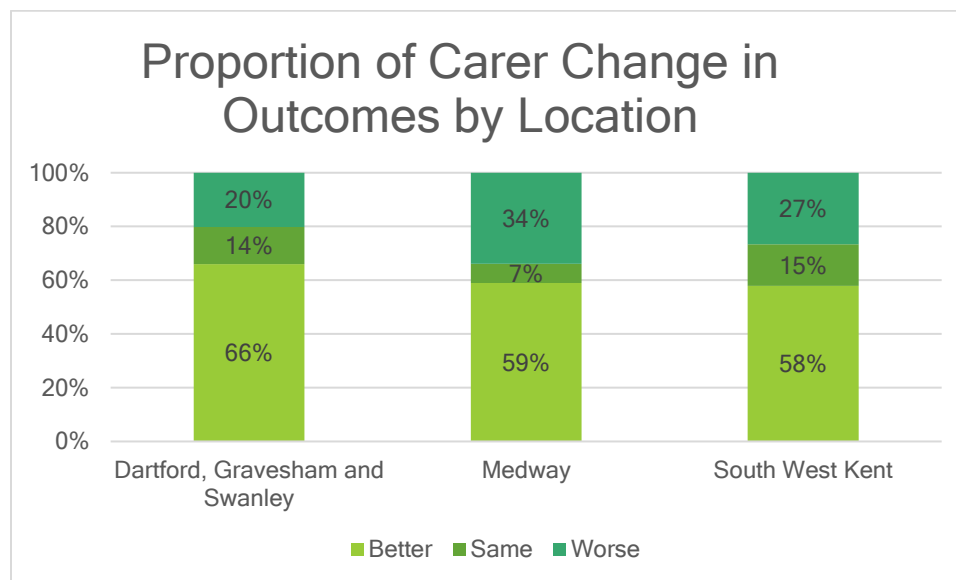
While Table 7 shows that a higher proportion of carers' situations got better in Dartford than Medway or Southe West Kent, and the highest proportion of carers got worse in Medway, a Pearson chi-square test of independence, performed to examine the relation between area and change in carers situation suggested no significant differences, $X^2(4, N = 706) = 9.48$, $p = .05$.

Table 7. Change in Carer Starts between Time 1 and Time 2 based on Area

	Got Better	Did not Change	Got Worse
Dartford	258 (66% of Carers in Dartford)	54 (14% of Carers in Dartford)	79 (20% of Carers in Dartford)
Medway	33 (59% of Carers in Medway)	4 (7% of Carers in Medway)	19 (34% of Carers in Medway)
South West Kent	150 (58% of Carers in South West Kent)	40 (15% of Carers in South West Kent)	69 (27% of Carers in South West Kent)

N=706 (Waltham Forrest, East Lincolnshire and West Lincolnshire Carers excluded)

Figure 10. Proportion of Carer Change in Outcomes by Location



Age. Age was also investigated as an influence on *change* in carer scores on Carer Star domains between Star 1 and Star 2. A single linear regression analysis was calculated to investigate this. Age was a significant predictor of Health, Managing at Home, How You Feel, Finances and Work domains, where the older the carer was, the better they were likely to do in these domains. How the carer scored on The Caring Roles and Time for Yourself domains, however, did not depend on age in a linear manner.

Health: $R^2 = .001$, $F(1, 714) = 6.69$, $p < .05$, the younger the carer was, the more positive the difference in health scores between Star 1 and Star 2 was, $\beta = -.01$, $t = 3.72$, $p < .01$

The Caring Role: $R^2 < .001$, $F(1, 3545) = .29$, $p = .59$, age did not predict how the carer felt about the carer role

Managing at Home: $R^2 = .002$, $F(1, 3527) = 7.92$, $p < .01$, the older the carer was, the better the carer felt about managing at home, $\beta = .05$, $t = 2.81$, $p < .01$

Time for Yourself: $R^2 < .001$, $F(1, 3528) = 1.37$, $p = .24$, age did not predict how the carer felt about having time for themselves

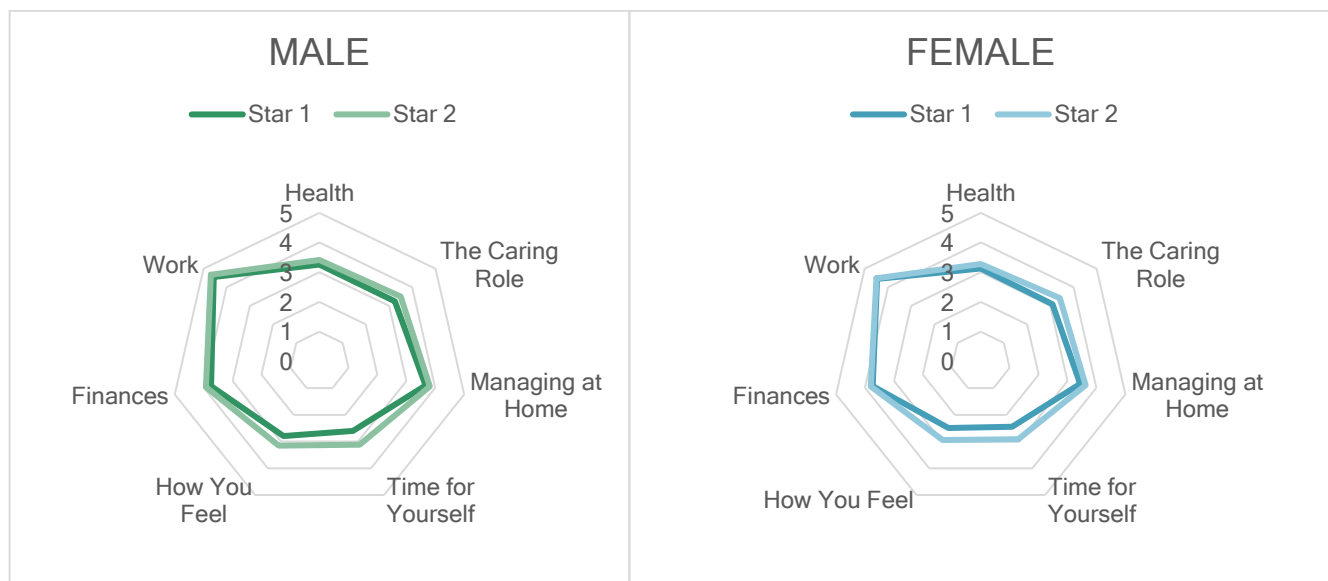
How you Feel: $R^2 = .01$, $F(1, 3533) = 46.30$, $p < .001$, the older the carer was, the better they felt in themselves, $\beta = .11$, $t = 6.81$, $p < .001$

Finances: $R^2 = .06$, $F(1, 3529) = 215.78$, $p < .001$, the older the carer was, the better the carer felt about their financial situation, $\beta = .24$, $t = 14.69$, $p < .001$

Work: $R^2 = .10$, $F(1, 3538) = 380.99$, $p < .001$, the older the carer was, the better the carer felt about work/managing their job, $\beta = .31$, $t = 19.52$, $p < .001$

Gender. Dividing the carers' scores on the initial carers' star by gender also demonstrated some differences. Men were doing slightly better in many domains, but particularly in reporting feeling better than their female counterparts (see Figures 11-12).

Figures 11-12. Initial Carer Star averages per domain by Carer Gender



An independent sample's t-test was performed to see if there was a statistically significant difference between male and female impact on Carers Stars (results did not assume equal variances, as only a third of carers were male). There were no statistically significant differences between men and women, showing that Carers FIRST impact on Carers Stars did not depend on carer gender.

Health: $t(365) = -0.46, p = .96$; male carers did not differ from female carers in Carers FIRST impact on health.

The Caring Role: $t(434) = -.88, p = .38$; male carers did not differ from female carers in Carers FIRST impact on the caring role.

Managing at Home: $t(449) = -.75, p = .46$; male carers did not differ from female carers in Carers FIRST impact on managing at home.

Time for Yourself: $t(353) = .32, p = .75$; male carers did not differ from female carers in Carers FIRST impact on time for oneself.

How you Feel: $t(412) = -1.0, p = .32$; male carers did not differ from female carers in Carers FIRST impact on how they felt.

Finances: $t(380) = .96, p = .34$; male carers did not differ from female carers in Carers FIRST impact on finances.

Work: $t(337) = 1.42, p = .16$; male carers did not differ from female carers in Carers FIRST impact on work.

Relationship to the Looked-After Person. Carer Star outcomes were also compared depending on who the carers looked after. Only the most prevalent categories broadly divided into partner, child and parent were compared

A one-way ANOVA was performed to see if carers looking after a partner (IV₁), those looking after a child (IV₂) and those looking after a parent (IV₃) significantly differed in terms Carers FIRST impact on any of the Carers Star domains (DV₁₋₆).

Whom the carer looked after, did not predict Carers FIRST influence on Carers Star outcomes from assessment to 6 months follow-up.

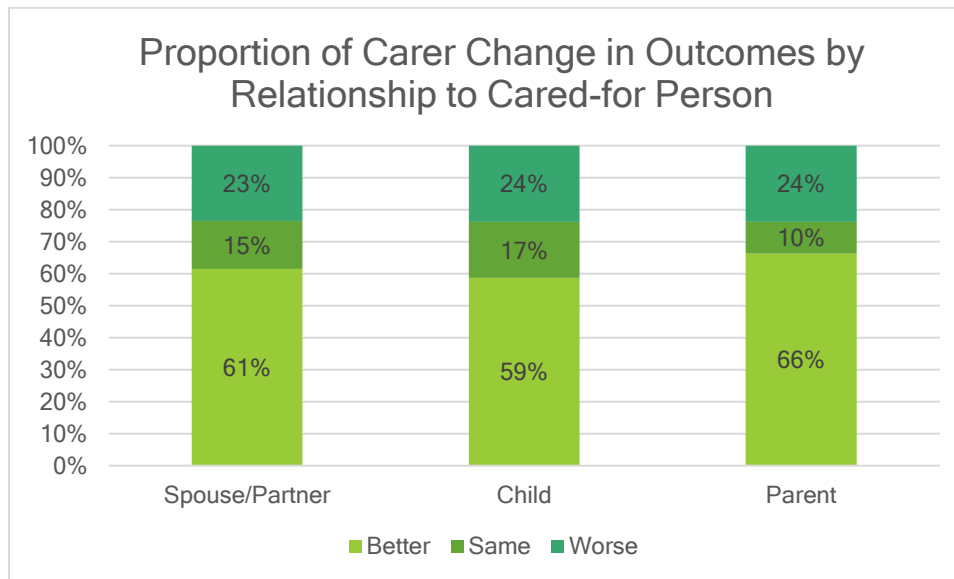
Table 8. One-Way ANOVA Results with Carer Star Domains as Dependent Variables.

	Spouse/Partner			Child/Step-Child/Child-in-Law			Parent/Step-Parent/Parent-in-Law			F	p
	N	M	SE	N	M	SE	N	M	SE		
Health	355	.10	.05	137	.22	.09	73	.19	.11	.97	.38
The Caring Role	356	.27	.06	138	.53	.12	74	.32	.11	2.61	.08
Managing at Home	348	.18	.05	137	.34	.10	73	.05	.11	2.08	.13

Time for Yourself	349	.45	.06	136	.61	.10	74	.49	.05	1.14	.32
How You Feel	351	.34	.06	138	.60	.12	74	.50	.13	2.44	.09
Finances	351	.07	.05	136	.13	.08	73	.15	.11	.35	.71
Work	352	.05	.03	138	.13	.10	74	.03	.12	.49	.61

Pearson chi-square test of independence, performed to examine the relation between who the carer looked after and change in carers situation suggested no significant differences, $\chi^2(4, N = 568) = 6.01, p = .19$. Whether the carer looked after a partner, a child or a parent did not lead to differences in who got better, stayed the same or got worse on the Carers Star after Carers FIRST input.

Figure 13. Proportion of Carer Change in Outcomes by Relationship to Cared-for Person



Condition of the Looked-After Person. Carer Star domains were also compared based on the main condition of the cared for person. Again, the condition of the cared for person did not predict Carers FIRST impact on the Carers Star outcomes in any of the domains.

Table 9. One-Way ANOVA Results with Carer Star Domains as Dependent Variables.

	Dementia			Neurological Condition			Physical Disorder			Mental Health Difficulty			F	p
	N	M	SE	N	M	SE	N	M	SE	N	M	SE		
Health	212	.08	.06	111	.12	.08	88	.11	.09	53	.30	.14	.94	.42
The Caring Role	214	.33	.08	111	.18	.09	88	.28	.10	53	.58	.15	1.68	.17

Managing at Home	210	.19	.06	109	.14	.10	87	.20	.10	53	.38	.14	.78	.50
Time for Yourself	211	.51	.07	107	.46	.10	86	.63	.11	52	.65	.14	.75	.53
How You Feel	211	.46	.08	109	.42	.11	88	.51	.13	53	.42	.17	.12	.95
Finances	211	.03	.06	108	.16	.08	88	.25	.10	53	.11	.12	1.38	.25
Work	213	-.02	.04	110	.15	.09	88	.07	.10	52	.23	.14	1.95	.12

Pearson chi-square test of independence, performed to examine the relation between the main condition of the looked after person and change in carers situation suggested no significant differences, $\chi^2 (6, N = 466) = 3.63, p = .72$. Whether the carer looked after someone with dementia, a neurological condition, a physical disorder or a mental health difficulty did not lead to differences in who got better, stayed the same or got worse on the Carers Star after Carers FIRST input.

Signposting to Other Services. An independent sample's t-test was performed to see if there was a statistically significant difference between carers' stars for those carers who were signposted to other services and those who were not. The two groups did not significantly differ from one another in any of the Carers Star Domains, suggesting that signposting to other services did not predict Carers FIRST impact on Carers Star outcomes.

Health: $t(3582) = .05, p = .96$

The Caring Role: $t(3580) = .18, p = .86$

Managing at Home: $t(3562) = .06, p = .95$

Time for Yourself: $t(3563) = .91, p = .37$

How you Feel: $t(3568) = -.90, p = .37$

Finances: $t(3564) = -1.28, p = .20$

Work: $t(3573) = .18, p = .86$

Primary vs Secondary Carers. Similarly, scores on Impact in Carers Star domains were compared among carers who self-identified as a primary carer and those who did not by performing an independent sample's t-test (equal variances were not assumed as only 4% of

carers identified as non-primary). The two groups did not significantly differ from one another in any of the Carers Star Domains.

Health: $t(34) = .64, p = .53$; primary carers did not differ significantly from secondary carers in impact on health

The Caring Role: $t(32) = 1.63, p = .11$; primary carers did not differ significantly from secondary carers in impact on the caring role

Managing at Home: $t(32) = .74, p = .47$; primary carers did not differ significantly from secondary carers in managing at home

Time for Yourself: $t(34) = .25, p = .80$; primary carers did not differ significantly from secondary carers in time for oneself

How you Feel: $t(33) = .21, p = .84$; primary carers did not differ significantly from secondary carers in impact on how you felt

Finances: $t(32) = -.34, p = .74$; primary carers did not differ significantly from secondary carers in impact on finances

Work: $t(35) = -.27, p = .74$; primary carers did not differ significantly from secondary carers in impact on work

Level of Need. Impact on Carers Stars also did not depend on carer level of need in any of the Carers Star domains apart from Health, Managing at Home and Time for Yourself. This is not surprising as people in the 'low need' category and providing under 15 hours of care per week may not feel in need of more time for themselves as those providing more hours of care.

Health ($F(2,716) = 4.22, p < .05$). A Bonferroni post hoc test revealed that carers in the 'moderate need' category saw better Carers FIRST impact than those in the 'high need' group. People in the low need category did not differ significantly from those in the moderate or high need categories in CF impact on Carers' Star.

Managing at Home ($F(2,707) = 3.41, p < .05$). A Bonferroni post hoc test revealed that carers in the 'moderate need' category saw better Carers FIRST impact than those in the 'high need' group. People in the low need category did not differ significantly from those in the moderate or high need categories in CF impact on Carers' Star.

Time for Yourself ($F(2,709) = 3.94, p < .05$). A Bonferroni post hoc test revealed that carers in the 'low need' category saw worse Carers FIRST impact than those in the 'moderate' or 'high need' groups. People in the moderate need category did not differ significantly from those in the high need category in CF impact on Carers' Star.

Table 10. One-Way ANOVA Results with Carer Star Domains as Dependent Variables.

	Low Need			Medium Need			High Need			<i>F</i>	<i>p</i>
	<i>N</i>	<i>M</i>	<i>SE</i>	<i>N</i>	<i>M</i>	<i>SE</i>	<i>N</i>	<i>M</i>	<i>SE</i>		
Health	29	.14	.20	89	.40	.12	601	.11	.03	4.22	<.05
The Caring Role	29	.41	.20	89	.54	.14	604	.26	.04	2.56	.08
Managing at Home	29	.17	.19	88	.44	.10	593	.15	.04	3.41	<.05
Time for Yourself	29	-.03	.18	87	.57	.11	596	.49	.04	3.94	<.05
How You Feel	28	.18	.20	88	.59	.14	599	.41	.05	1.54	.22
Finances	28	.07	.14	87	-.06	.08	598	.11	.04	1.32	.27
Work	29	-.10	.16	88	.06	.10	600	.07	.03	.59	.55

Number of Cared For Individuals. A correlation analysis was calculated to investigate if the number of people the carer looked after at the same time was related to CF impact on the Carers Star. None of the domains were statistically correlated with the number of people the carer looked after.

How many people the carer looked after at the same time was correlated with scores in the following Carer Star domains:

- **Health** ($r(714) = -.04, p = .27$). The number of people the carer cared for did not affect CF impact on health.
- **The Caring Role** ($r(717) = -.06, p = .09$). The number of people the carer cared for did not affect CF impact on the caring role.
- **Managing at Home** ($r(705) = -.001, p = .99$). The number of people the carer cared for did not affect CF impact on managing at home.
- **Time for Yourself** ($r(707) = .01, p = .77$). The number of people the carer cared for did not affect CF impact on time for themselves.

- **How You Feel** ($r(710) = -.02, p = .67$). The number of people the carer cared for did not affect CF impact on how they felt.
- **Finances** ($r(708) = -.01, p = .90$). The number of people the carer cared for did not affect CF impact on finances.
- **Work** ($r(712) = -.02, p = .52$). The number of people the carer cared for did not affect CF impact on work.

Number of referrals. Another correlation analysis was calculated to investigate if the number of referrals Carers FIRST made for the carer was related to CF impact on the Carers Star. Health, the Caring Role, Managing at Home, and Finances showed a negative correlation with number of referrals; the *less* referrals CF made, the more positive the impact of Carers FIRST was. This is unsurprising, because making less referrals outside of the service would indicate that Carers FIRST felt they could address the carers needs themselves.

The number of referrals Carers FIRST made was correlated with scores in the following Carer Star domains:

- **Health** ($r(595) = -.12, p < .01$). The lower the number of referrals, the more positive CF impact on the Health.
- **The Caring Role** ($r(598) = -.11, p < .05$). The lower the number of referrals, the more positive CF impact on the caring role.
- **Managing at Home** ($r(588) = -.01, p < .05$). The lower the number of referrals, the more positive CF impact on managing at home.
- **Time for Yourself** ($r(591) = -.04, p = .32$). The number of referrals did not affect CF impact on time for themselves.
- **How You Feel** ($r(593) = -.06, p = .11$). The number of referrals did not affect CF impact on how they felt.
- **Finances** ($r(591) = -.10, p < .05$). The lower the number of referrals, the more positive CF impact on finances.
- **Work** ($r(595) = .01, p = .77$). The number of referrals did not affect CF impact on work.

Intensity. Intensity of the Carers FIRST involvement was calculated using the following formula:

$$Intensity = \frac{\text{Number of 'active' contacts}}{\text{Length of Carers FIRST Involvement in Weeks}}$$

Here, '*active*' input counted as anything apart from sending out newsletters and included Carers FIRST staff spending time liaising with other professionals about the carer's case and needs (i.e. making inquiries or referrals). A correlation analysis was conducted to see if Initial Carers Star scores were related to intensity of Carers' FIRST involvement. Lower scores on the Caring Role, Managing at Home and How You Feel were related to more intensive subsequent input from Carers FIRST.

How long Carers FIRST worked with the carer was correlated with scores in the following Carer Star domains:

- **The Caring Role** ($r(704) = .10, p < .01$). The more intensively Carers FIRST worked with the carer, the more positive was the impact on CF input on the Caring Role.
- **Managing at Home** ($r(692) = .10, p < .01$). The more intensively Carers FIRST worked with the carer, the more positive was the impact on CF input on Managing at Home.
- **How You Feel** ($r(697) = .08, p < .05$). The more intensively Carers FIRST worked with the carer, the more positive was the impact on CF input on How the Carer Felt.

CONCLUSIONS

- Gender had no effect on CF impact or any of the Carers Star domains
- Carer's age significantly predicted CF impact on Health (the older the carer was, the less impact CF had), and Work (the older the carer was, the less impact CF had on Work; likely because many older carers were retired), but did not predict CF impact on The Caring Role, Managing at Home, Time for Yourself, How The Carer Felt, Finances,
- Deprivation levels in the carer's neighbourhood significantly predicted carer performance at Star 1 on Health (the lower the deprivation, the better the health score), Managing at Home (the lower the deprivation scores, the better the carer was managing at home) Finances (the lower the deprivation score, the better the carer scored on finances) and Work (the lower the deprivation score, the better the carer scored on Work), but not The Caring Role, Time for Yourself, How You Feel, which at the initial Carers Star did not depend on deprivation
- CF impact on Health (less deprivation was associated with more positive impact from CF on Health), but not The Caring Role, Managing at Home, Time for Yourself, How You Feel, Finances, or Work, where CF impact did not depend on deprivation.
- Level of Need (i.e. the number of hours of caring per week) Impact on Carers Stars also did not depend on carer level of need in most of the Carers Star domains apart from Health, Managing at Home and Time for Yourself. People in the moderate need group experienced a more positive CF impact than those in a high need group when it came to health and managing a home, while in terms of time for yourself people in the low need group experienced poorer CF impact than those in both the moderate and high need groups. This is not surprising as people in the 'low need' category and providing under 15 hours of care per week may not feel in need of more time for themselves as those providing more hours of care.
- The relationship of the carer to the cared for individual did not influence CF impact on any of the Carer Star domains
- Whether the carer identified as a primary or a secondary carer did not affect CF impact on any of the Carer Star domains

- Number of individuals the carer cared for did not influence CF impact on any of the Carer Star domains
- Number of referrals CF made influenced CF impact on Health, The Caring Role, Managing at Home, How the Carer Felt, and Finances (the more referrals, the less positive the CF impact in these domains), but not Time for Yourself
- The 4 most prevalent main conditions, experienced by at least 50 cared for individuals (Dementia, Neurological Disorders, Physical Disabilities and Mental Health Difficulties) did not influence CF impact on any of the Carer Star Domains.
- Intensity of CF involvement predicted CF impact in The Caring Role, Managing at Home, How the Carer Felt (the higher the intensity, the more positive CF impact in these domains), but not Health, Time for Yourself, Finances, or Work.
- 62% got better overall, 14% remained the same and 24% got worse