Side by Side Evaluation: Economic Analysis

May 2017

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Contents

Summary

An economic analysis was conducted as part of the Side by Side Evaluation. A rapid review of literature was undertaken confirming that it remains the case that relatively little is known about the economic case for peer support, especially in a UK context. The principal component of the evaluation was then to analyse the impact on resource use and other measures of economic impact following enrolment in Side by Side peer support programmes. Drawing on information collected in quarterly peer logs collected by our colleagues from St Georges and McPin as part of the effectiveness evaluation, these logs that contained additional economic impact questions. The impacts considered included changes in the way that people spend their time, whether this be in paid employment, voluntary activities and/or education. It also looked at changes in the time commitments of family and friends to provide support to participants of Side by Side. It also looked at impacts on the use of health and social care services and changes in self-reported quality of life.

Data on changes in costs were available from 297 participants who had completed two or more quarterly peer logs. Compared to baseline, mean quality of life scores had improved in the six, nine and twelve month quarterly peer logs, although none of these changes were statistically significant. Compared to baseline, overall mean costs for participants who provided information on all aspects of cost were lower in the six and nine month quarterly peer logs (£1,551 and £1,123 respectively versus £2,141). Median costs were significantly lower for quarters 3 and 4. Median hospital costs, as well as median community mental health costs at six and nine months were also significantly lower. Changes in costs over time were particularly driven by a reported decrease by peers in support and care received from family and friends. Although the study design means that we cannot be certain that this fall in costs was due to the use of peer support rather than other external factors, observed lower costs coupled with better quality outcomes supports greater investment in provision and ongoing evaluation of peer support programmes.

Drawing on these findings, the economic literature and qualitative information from the wider evaluation, illustrative economic modelling scenarios were then created. These explore some of the uncertainties around both the effectiveness and costs of

peer support by looking at specific pathway scenarios using a decision modelling approach. These also suggest that potentially peer support can be cost effective, and in some cases potentially cost saving. This will be dependent on the costs of delivering peer support; these will vary substantially depending on peer support format, observed level of effectiveness and overall level of sustained engagement, but in the majority of scenarios peer support appears cost effective.

In summary, our analysis cautiously suggests that there is an economic case for investing in peer support initiatives but this is tempered by the recognition that peer support can cover a wide variety of actions, potentially with very different costing models. Finally, but by no means least, it is crucial going forward to capture the full value of the time and resources volunteered in peer support and not just paid inputs. Potentially the reciprocal contributions of all involved in peer support create a valuable additional component of any local mental health system.

1. Background and aims

It has been argued that few studies have looked at the economic impacts of peer support for people with experience of poor mental health. Some past reviews of this literature suggest that peers support may be economically attractive e.g. (Trachtenberg et al., 2013), but studies tend to be of very small scale and at best they tentatively suggest that peer support may be cost effective. This is particularly important given the current context with very tight levels of funding for health and social care services.

Thus we wanted to explore further the economic case for action. As part of the Side by Side Evaluation, firstly a brief review was undertaken to update what is known about the cost effectiveness of peer support actions. Concurrently an evaluation was undertaken to further enrich this literature by looking at changes in resource use and other economic impacts following enrolment in Side by Side peer support programmes. Thirdly the results of this economic analysis and insights from some of the qualitative data that were separately collected as part of the Side by Side evaluation were used to help build a simple decision model looking at the potential costs and benefits of Side by Side, assuming different levels of engagement, continued uptake, costs and cost consequences. This latter modelling work can also help to inform the policy making process by providing additional insights for commissioners on the potential cost effectiveness of peer support.

This report concentrates on providing an overview of the findings of the economic analysis, but also briefly summarises the key conclusions of the literature review and modelling work. Further information will be available in papers that are being submitted to peer-reviewed journals for each of these three elements of the evaluation

2. Literature review

2.1 Review methods

A systematic literature review was undertaken to identify economic evaluations conducted alongside empirical evaluations, as well as economic modelling studies, assessing the case for investing in peer support interventions for people with lived experience of poor mental health (including addictions but excluding dementia). In brief three databases, PUBMED Medline, Psychinfo, CINAHL, ERIC and Econlit were searched, together with citation searching of relevant studies in Google Scholar. The search strategy combined the terms related to peer support/ mentoring with cost and economic terms. The search was restricted to the last 10 years (2007 to 2017) and all papers had to have an abstract to be eligible for inclusion. There were no language or country restrictions at screening.

Screening was conducted independently by two reviewers. Studies that focused on paid peer support workers who were part of mental health services and solely delivered services such as specific counselling or psychological therapy programmes were identified but excluded from the review which focused (paid or unpaid) peer support schemes. For instance we excluded one US study reported that the promising impacts of paid peer navigators who worked with people to provide case management, co-ordinate services and help people to better self-manage their health (Kelly et al., 2014). We also excluded peer support studies that were intended to promote / protect the psychological health of individuals without a diagnosed mental illness, such as people living with cancer or diabetes (Salzer et al., 2010), or women who may be at risk of perinatal depression e.g. (Dennis et al., 2009, Dukhovny et al., 2013).

2.2 Review findings

The review confirmed that there is still a paucity of economic evidence, specifically on peer support, or even on the costs of delivery peer support interventions.

1,160 records were initially identified and 39 were potentially found to be relevant; this was further supplemented by citation searching and examining grey literature. A challenge for the review was that many potential papers initially identified as being relevant, upon examination of the full texts were found to be focused on paid peer support workers, usually delivering some form of time limited structured psychological therapy. Others were focused on peer support as a preventive intervention, which fall beyond the scope of this report. Moreover, where peer support interventions have been evaluated, in general these studies did not consider economic impact.

After examining the full texts, only 14 relevant studies were included. A brief summary of key findings is reported here; detailed information on review results will be available in a paper submitted for publication. Only 3 of these papers were from England, with 2 referring to one study in the Netherlands, one from Australia and the remaining papers all from the very different mental health and welfare context of the US.

In England a recent economic analysis considered whether group psychoeducation would be cost effective compared to group peer support (delivered by health care professionals with a peer facilitator) for people with bipolar disorder (Camacho et al., 2017). It reported a small but significantly greater gain in quality adjusted life years and relapses prevented for the psychoeducation group, but this would have a less than a 50% chance of being more cost effective than peer support when using a willing to pay cost effectiveness threshold of £30,000 per QALY gained. An earlier English small pilot trial of time limited (four weeks) peer support provided post hospital discharge also suggested overall costs to the health and criminal justice system were higher, although this difference was not significant compared with service users who did not receive peer support (Simpson et al., 2014).

Another recent study sought to model some of the economic benefits of peer support, not only for mental health, but for other conditions. It drew on findings from a US study to help model potential cost savings to the mental health system in England through peer mentoring, although the precise value of mental health specific savings was not reported (PPL, 2016). This analysis may however be limited by its assumption that changes in the future use of psychiatric services in one hospital in

Connecticut through the use of peer mentoring would apply to the English context (Sledge et al., 2011).

Outside of the UK In a trial in the Netherlands guided group peer support plus treatment as usual was found to have better impacts on social networks, social support and quality of life, with no differences in overall costs (despite the additional costs of providing peer support groups) relative to a treatment as usual only group (Castelein et al., 2008, Stant et al., 2011). Short term provision of peer support to 49 service users discharged from inpatient care in Australia was perceived to have avoided 300 days of inpatient care within a three month period; but there was no comparator group or any comparison with rehospitalisation rates prior to the introduction of the peer support service (Lawn, Smith and Hunter, 2008).

Analysis of administrative data in Georgia, USA found an association between the use of peer support services and higher costs to the Medicaid system (used by low income people) (Landers and Zhou, 2014). Costs for health care facility use were lower, but these were more than offset by higher medication, community mental health and peer support services. The study was not able to look at mental health related outcomes, other than use of services, so no judgement can be made about any impact on quality of life. An earlier analysis with the same medical datasets in Georgia suggested peer support use was associated with a significantly higher rate of crisis stabilisation and an lower rate of hospitalisation for service users who did not experience a crisis (Landers and Zhou, 2011).

In the US a peer support programme matched people with mental health and substance abuse problems (including alcohol) with other people with lived experience of mental health problems who had been clean of substance abuse for at least 3 years (Min et al., 2007). The study found that in a three year period, compared with people who did not receive peer support, participants in the peer support group spent more time in the community before any further hospital stays; they also had a significantly lower rate of rehospitalisation. The authors noted further unpublished analysis suggesting a significantly lower number of days spent in hospital. Another small evaluation of a peer mentoring programme found that participants had fewer rehospitalisations and days in hospital compared to people

who received care as usual; no analysis was conducted of the costs of the programme (Sledge et al., 2011).

In the US one to one peer mentoring, for homeless people with a variety of mental health needs was not found to have any impact on health service use or costs (Yoon et al., 2017). Finally in a very small feasibility study of peer support for young people with alcohol or cannabis abuse/ dependence in the US suggested its potential for increasing abstinence, but with no impact on societal costs, including criminal justice and health system contacts (Smith et al., 2016).

3. Economic analysis of Side by Side

Although there is no control group in this study we are able to compare patterns in health and social care resource before and after enrolment in Side By Side and to look at impacts on particular groups within the study, e.g. to compare face to face and online peer support groups, or changes in rural versus urban populations.

Chapter 3 of the companion evaluation reports goes into detail on methods used to capture and collate data in the analysis; here we focus solely on the approach to economic data collected as part of this process.

The economic analysis looked at changes over time in the way that people spend their time, whether this is in paid employment, voluntary activities and/or education. It also looked at changes in the time commitments of family and friends to provide support to people. It then also looked at impacts on the use of health and social care services; these included the use of inpatient and other hospital services, contacts with specialist community mental health services, including contacts with supported employment services and Recovery Colleges, and the use of general community health and social services, such as contacts with GPs and use of home help services.

As well as these impacts on resource use and costs, the economic analysis also looked at changes in self-reported quality of life; quality of life is often considered to be a key outcome in health economic studies, and the cost per level of improvement in quality of life is a key criteria used when policy makers in the health system in

England make decisions about which services to fund. A standard and widely used measure of Quality of Life the EuroQOL EQ-5D-3L (Brooks, Rabin and de Charro, 2003) was included in the log. Mean quality of life scores were calculated using published values for England using the Time Trade Off method.

As stated in the main evaluation report, in order to address the question of whether there is a relationship between how much peer support people choose to give and receive, and any change in outcomes for each individual, we have compared how economic impacts have changed over time. By looking at data for all of the study participants together we can use statistical modelling methods to identify potential characteristics of individuals that are likely to have an influence on future economic impacts.

4. Methods

Data for the economic analysis were collected from Side by Side participants on a quarterly basis (every three months) as an addition to the log they completed either online or on paper on a monthly basis as part of the wider evaluation conducted by colleagues from St Georges and McPin. This longer log should have been completed as their first and also as their last log, and every three months in between. Individuals usually participated in Side by Side for between 6 and 12 months meaning that we would expect to have between 3 and 5 sets of economic of data per participant. A short version of the quarterly log was also produced for use where deemed appropriate, this focused on asking questions about services thought to have the most impact on costs. The initial data collection period reflected the use of time and resources in the three months prior to taking part in Side by Side. Each subsequent quarterly log then asked about experiences over the previous three months.

The economic analysis data collected in the log were adapted from the Client Service Receipt Inventory (CSRI). This is a validated tool, initially developed for mental health service use, which is now used to collect data on health, social care and wider service use (Beecham and Knapp, 2001). Study participants use the tool to self-report their use of services over specific time periods. It has been used widely

in the UK for populations with a large range of mental and physical health problems. Appropriate unit costs were then identified for each element of resource use in the CSRI to estimate impacts on health and social care costs for all individuals at baseline and at subsequent quarters.

Table 1 provides unit cost estimates, assumptions and sources for health and social care services used in the analysis, many of which have been taken from the PSSRU Unit Costs of Health and Social Care 2016 (Curtis and Burns, 2016). Where NHS Reference Costs 2015/16 have been used, we have conservatively estimates of these costs, using values for non-elective short inpatient stays for most hospital stays. Supported employment and recovery college costs are taken from published estimates, in the case of supported employment derived from budget and attendance information at one London college. We have assumed for ease that all complementary therapy sessions can be valued at the rate of that of an acupuncturist. All costs are reported in 2016 prices.

Table 1: Unit costs used in analysis (2016 prices)

Service	Unit Cost	Source
Hospital Admission for Mental Health reasons	£376.00 per bed day	Mean cost per bed day mental health care clusters including carbon emissions. PSSRU Unit Costs 2016
Hospital Admission for Non-Mental Health Reasons (including short residential stays)	£616 per stay	Mean non-elective short stay based NHS Reference Costs 2016. In PSSRU Unit Costs 2016
Hospital A&E Visit	£112.00	NHS Reference Costs 2015/2016 VB09Z Emergency Medicine, Category 1 Investigation with Category 1-2 Treatment
Hospital Outpatient Visits both MH and other reason	£136	Mean Costs NHS Reference Costs 2015/2016 in PSSRU Unit Costs
GP Practice Visit	£36.00 per average 9.22 minute consultation.	PSSRU Unit Costs 2016

	£3.90 per minute	
GP Practice Nurse Visit	£43 per hour or £0.72 per minute	Assuming 15 minute consultation (£43 per hour – PSSRU Unit Costs 2016)
Community Mental Health Team	£191 per contact	Mean average weighted cost per contact with a community mental health team specialist for adults with mental health problems. PSSRU unit costs 2016. (Based on NHS Reference Costs)
Crisis Resolution Home Treatment Team	£191 per contact	Mean average weighted cost per contact with a community mental health team specialist for adults with mental health problems. PSSRU unit costs 2016. (Based on NHS Reference Costs)
Group based counselling / talking therapy	£96.00	Mean cost of IAPT service PSSRU Unit Costs 2016
Individual based counselling / talking therapy	£96.00	Assumed here to be same cost as group therapy
Alternative Medicine	£50.00	Reported cost per session acupuncture in Greater London by British Acupuncture Council
Day Centre / Social Club	£32.00	PSSRU Unit Costs 2016 for attendance at private/independent day care service
Supported Employment	£384.25	Greig et al assumed 2013 costs inflated to 2016 prices £1537 – annual cost of support pro rata for 3 months support
Recovery College	£131.32	Based on 2031 attendances in CNWL Recovery College 2014-2015 and annual budget of £526,486 = £259.23 per attendance. Assumed each attendance is 2 hours = £129.61 inflated to 2016 prices
Home care / home help worker	£18.00 per hour or £0.30 per minute	PSSRU Unit Costs 2016.
Midwife	£14.88 per hour	Based on mean NHS basic FTE pay for midwife per annum £29,019 PSSRU Unit Costs 2016
Health Visitor	£54.71	PSSRU Unit Costs 2015 £54 inflated to 2016 prices

4.1 Impacts on employment, volunteering, education and family/friend support

It is important to consider the impacts of Side by Side on participation in paid employment, education and volunteering activities. With peer support it may be the

case that more people will have the opportunity to remain in or even enter the labour market.

We have used median hourly wages for lost employment time of £12.18 per hour reported in the Office for National Statistics Annual Survey of Hours and Earnings and the adult minimum wage for lost volunteering and education time. In the absence of data on the occupations of family and friends we have valued all informal care time to be equivalent to that of a home help - £9.00 per hour in 2016. This is a very conservative estimate of costs and will undervalue the true economic value of family/friend support.

4.2 Statistical analysis

Given the non-normal (skewed distribution) of cost data, with many individuals having low costs and a few individuals having very high costs, the Wilcoxan signed-rank test has been used to determine whether there are significant differences in median productivity, hospital, community mental health and other community services costs between baseline and subsequently quarterly periods. Generalised Estimating Equations were also used to explore changes in various costs over time. This approach recognises that when exploring repeated measures within the same individual are more likely to be related to each other than would be the case if comparing changes between different individuals.

The GEEs approach can be used to reflect the correlation between observations from the same individual over time. An autoregressive correlation structure was assumed in this cost modelling. Given the positively skewed nature of the cost data (i.e. most individuals had relatively low levels of cost, with a small number of very costly outliers, we specified a gamma family distribution with log link for the model.

We also used a Generalised Linear Regression modelling approach to look at the relationship between specific individual characteristics: age, gender, previous use of mental health services, presence of morbidities and urban/rural location, intensity of peer support participation and changes in costs over a one year period.

5. Response to quarterly logs

5.1 Socio-demographic information

Potentially data were available for the economic analysis from 649 people. Chapter 4 of the main evaluation report states that 566 of the 703 registered participants completed at least one monthly or quarterly log. There were 1969 logs in total of which 1080 were quarterly logs and 889 monthly logs. A further 83 participants completed a total of 125 logs without having registered for the study.

Data were available in quarterly logs for 593 people, including 532 (76%) of the 703 registered participants. 61 (73%) of the 83 unregistered participants made at least one quarterly log. 1,159 logs were completed. Figure 1 shows these logs over time: 460 (40%) of all logs were completed in the initial quarter, 263 in quarter 2 and so on. Only 297 people had two or more quarterly log entries; 9 individuals completed 6 quarters and 2 more seven quarters. When restricting the sample to the 297 individuals who completed more than one peer log, there were data from 240 participants in quarter 1, with 228, 216 and 123 people completing quarter logs 2, 3 or 4 respectively. Only 44 of these people completed the peer log for quarter 5.

Figure 2 shows the breakdown of completion of at least one quarterly log by region. 20% (117) of all quarterly logs were from the Leeds region, only 1% (7) logs were from Middlesbrough and 2% (13) from Suffolk. 16% (93) were from the Elefriends online service and 10% (61) were from non-registered people. As Figure 3 shows 43% of all logs were completed by people aged 35 to 54 and as Figure 4 shows at 55% of all logs were completed by women. Participants were similar in gender, ethnicity and physical and learning disability status to the overall group of participants in the effectiveness evaluation, although only 32% of participants in the economic analysis were in touch with formal mental health services compared with 40% in the overall group of participants.

Figure 5 provides a breakdown of the completion of at least two quarterly logs by region. As the figure indicates no-one in Middlesbrough completed more than one quarterly log. In contrast 27% (79) of all people who completed two or more logs

were from the Leeds region. Slightly more people – 58%- in this economic analysis lived in cities/large towns than in the overall study group – 55%.

Figure 1: Quarterly logs completed by quarter (participants 649, logs 1159)

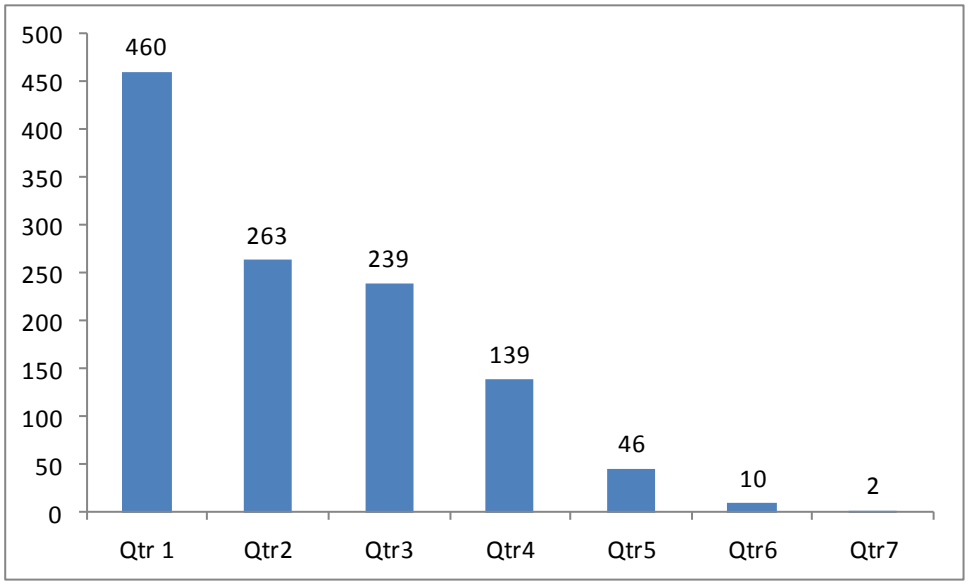


Figure 2: Completion of at least one quarterly log by region.

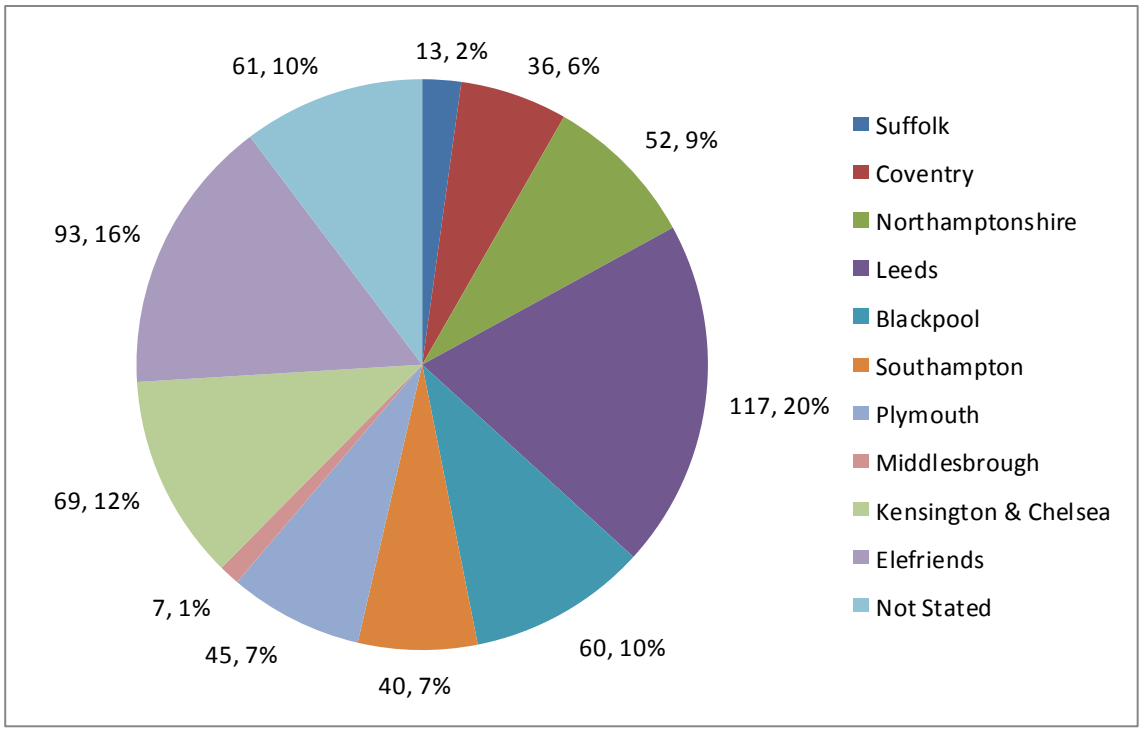


Figure 3: Breakdown of completion of at least one log by age group

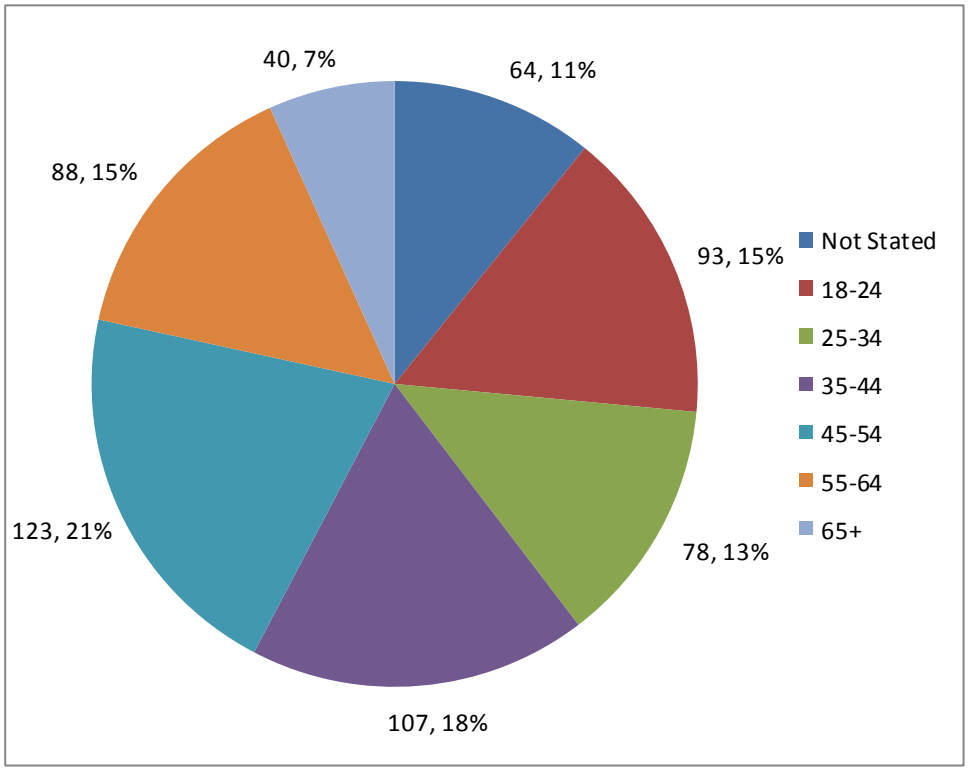


Figure 4: Breakdown of completion of at least one log by gender

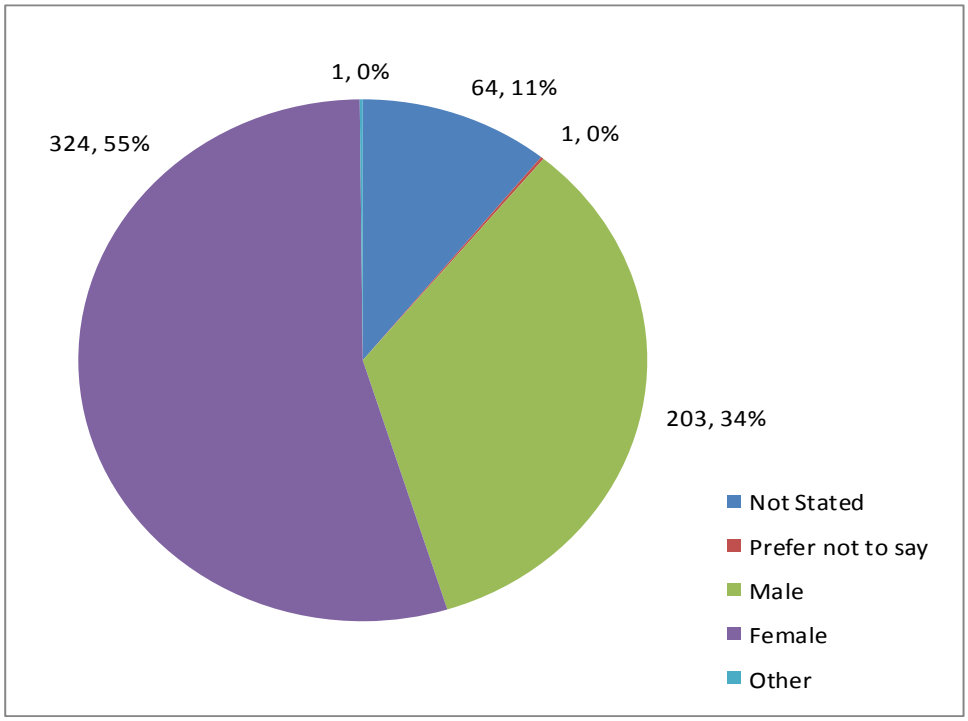
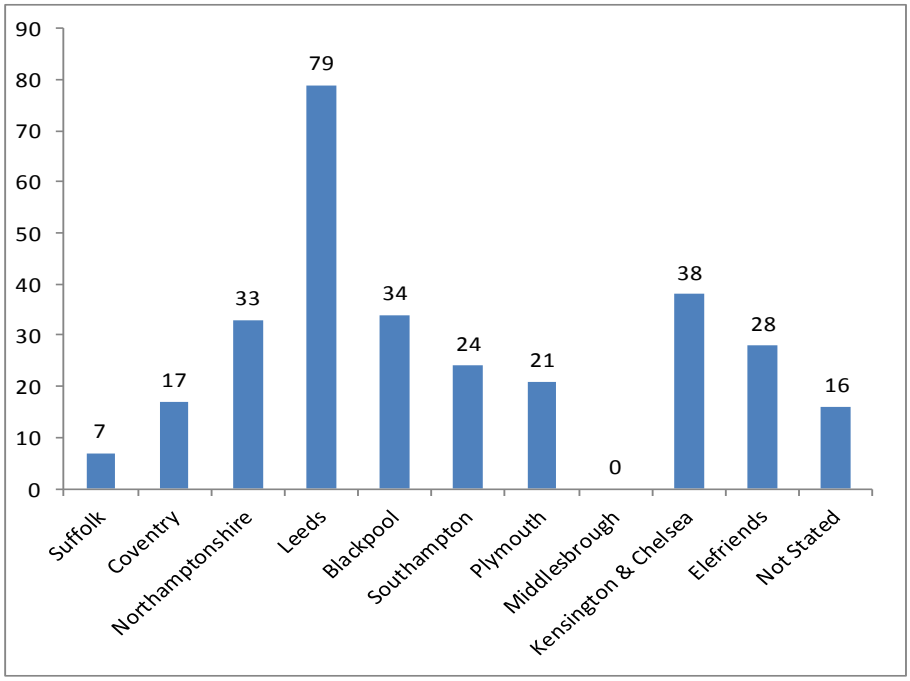


Figure 5: Completion of at least two quarterly logs by region (n=297)

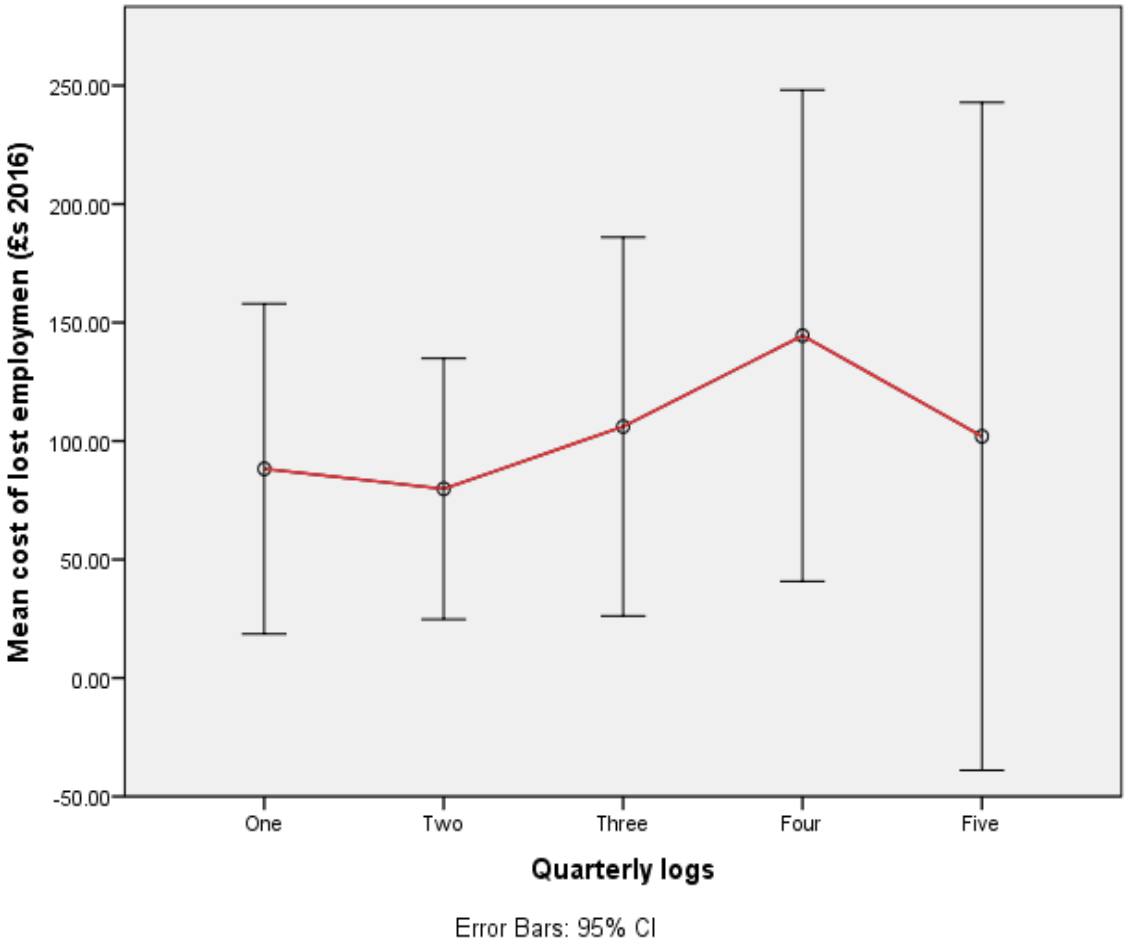


6. Economic impacts

6.1 Impacts on productivity outcomes

Overall 20% (118) of people stated they were in full time or part time paid employment or self employment at baseline. 67 of the 593 participants stated that they were in full-time employment (11%) and a further 51 (9%) reported being in part time employment. 32 participants in full time employment at baseline provided two or more quarterly logs. 28 participants in self-employment at baseline provided two or more quarterly logs. Participants were asked to record their normal hours of working per week and then indicate lost time from employment. Figure 6 shows mean costs of lost employment for individuals with at least 2 quarterly logs for all five quarters. Mean costs of lost employment per quarter were £88.26 in quarter 1, rising to £144.48 by quarter 4 and falling to £101.99 by quarter 5.

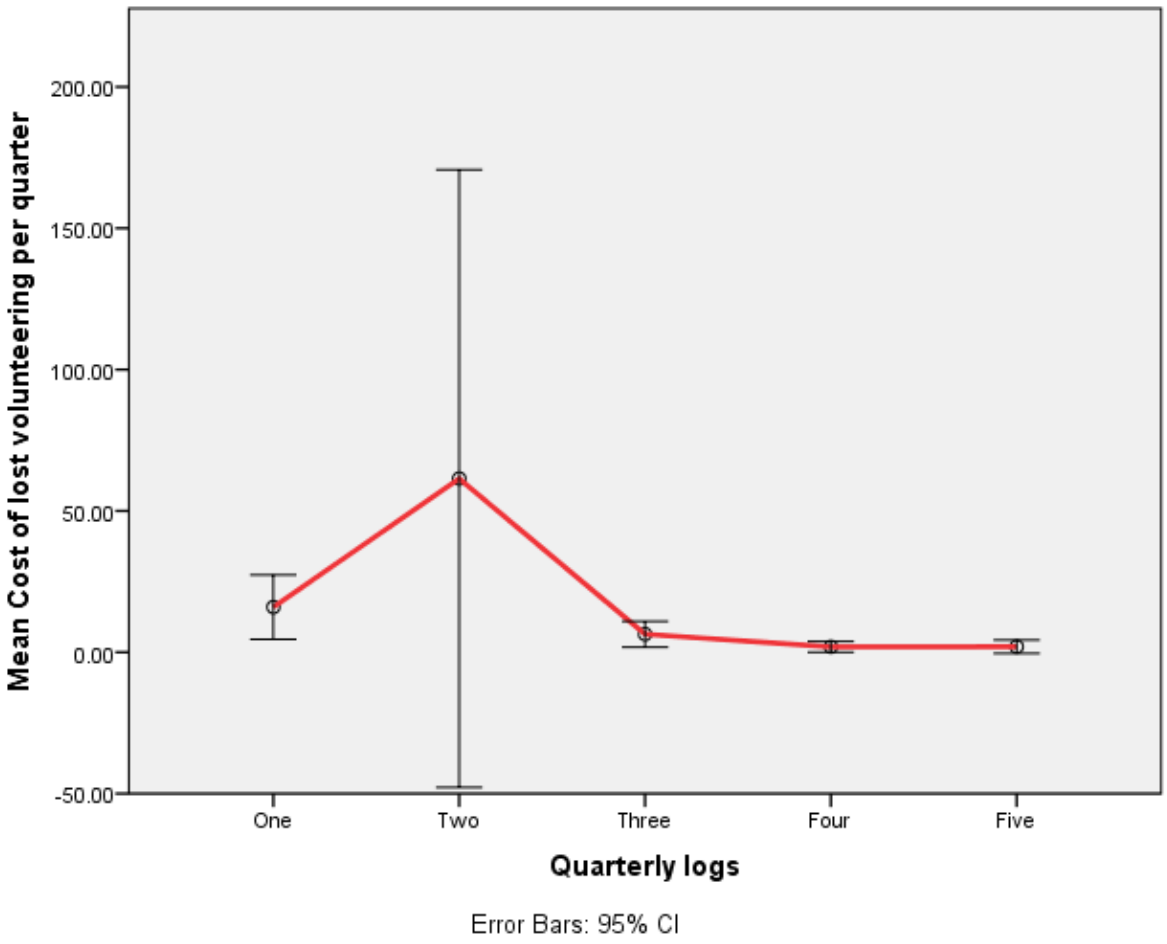
Figure 6: Trends in costs of lost employment per quarter for participants with at least 2 quarterly logs (n=297)



When using the Wilcoxon signed ranked test differences in changes in median costs between quarter 1 with either quarters 2, 3, 4 or 5 respectively, no significant difference was found, indicating that there was no significant change in the costs of lost employment over time.

We also looked at impacts on participation in volunteering activities and in participation in education. There were no significant changes in costs of volunteering over time although the change in costs between quarter 1 and quarter 4 where mean costs fell from £16 to £1.92 per quarter was almost significant at the 5% level ($p<0.089$). Figure 7 shows trends in mean costs of volunteering per quarter

Figure 7: Mean costs of lost volunteering per quarter for participants with at least 2 quarterly logs (n=297)



Only 17 people reported being in some form of education for at least one hour per week at baseline, with mean costs per quarter being £4.40 in quarter 1 rising to a maximum of £10.20 in quarter; no differences in costs were significant between quarters, but there were too few people participating in education to draw any conclusions about changes in costs.

The final area of productivity impact that we looked at was the impacts on family and friends who may provide support to people as a result of their mental health needs. Many participants did indicate that in a typical week they received support from their families and friends (Figures 8 and 9); with up to 12 hours per week of support being received (Figure 10). These costs make up the majority of productivity impacts.

Figure 8: Peer group participants reported use of family care (N=297)

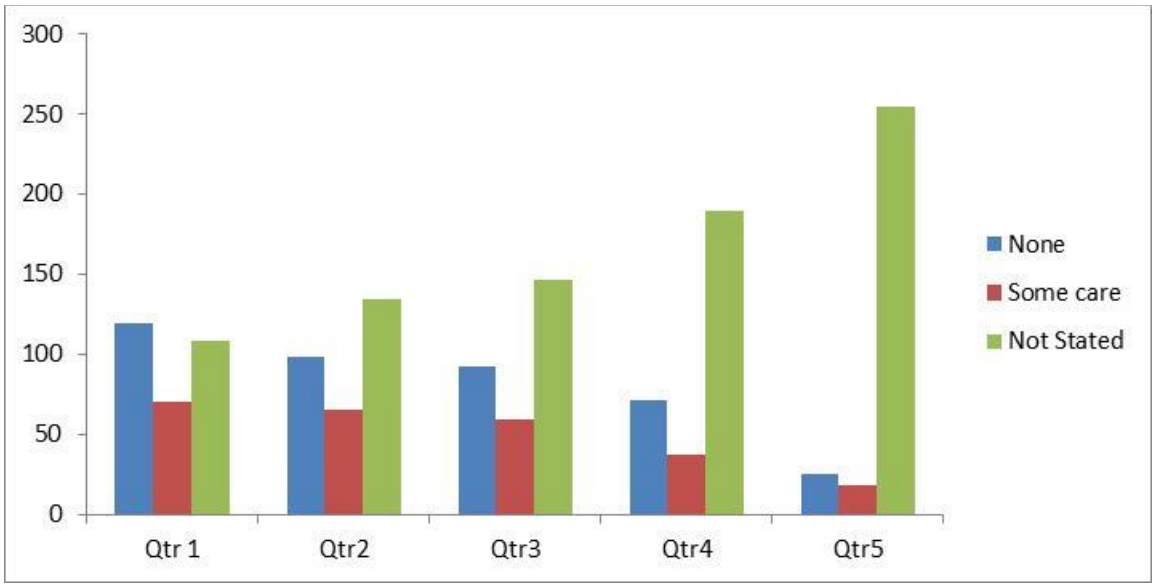


Figure 9: Peer group participants reported support from friends (N=297)

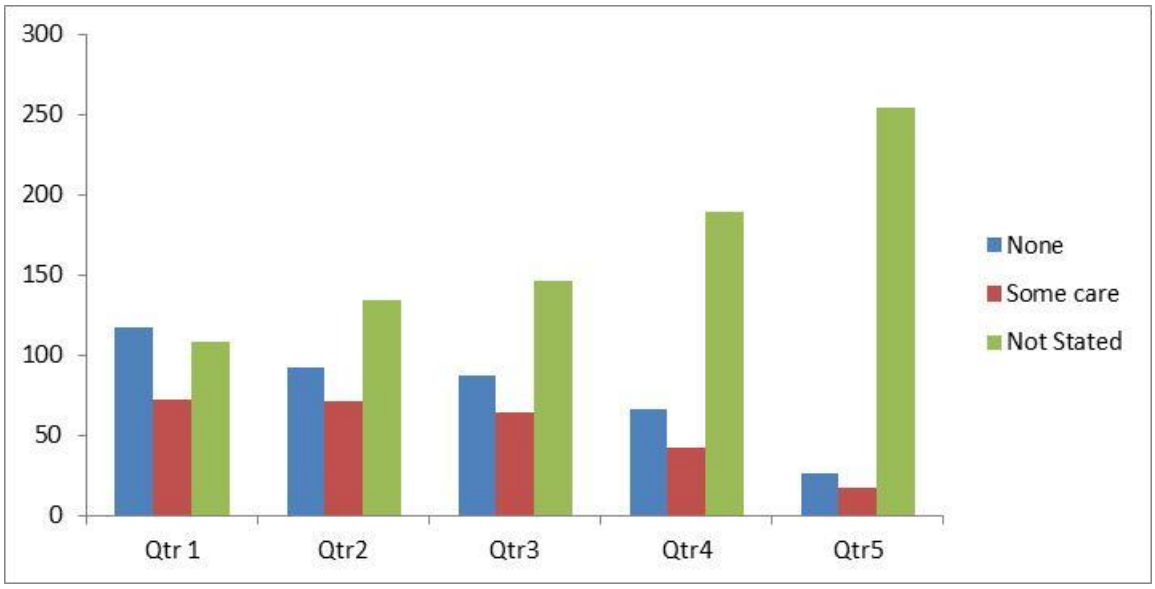


Figure 10: Mean weekly hours of care from family and friends

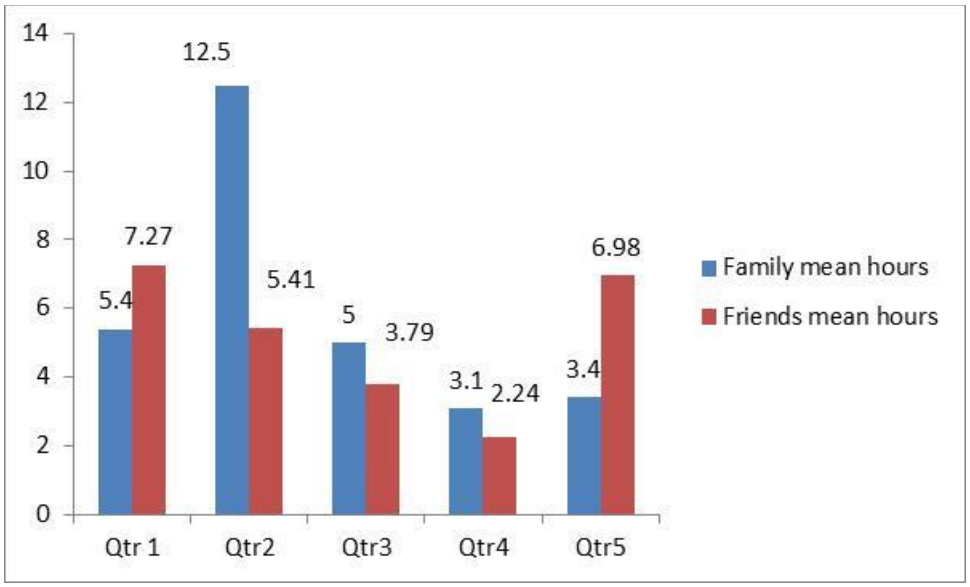
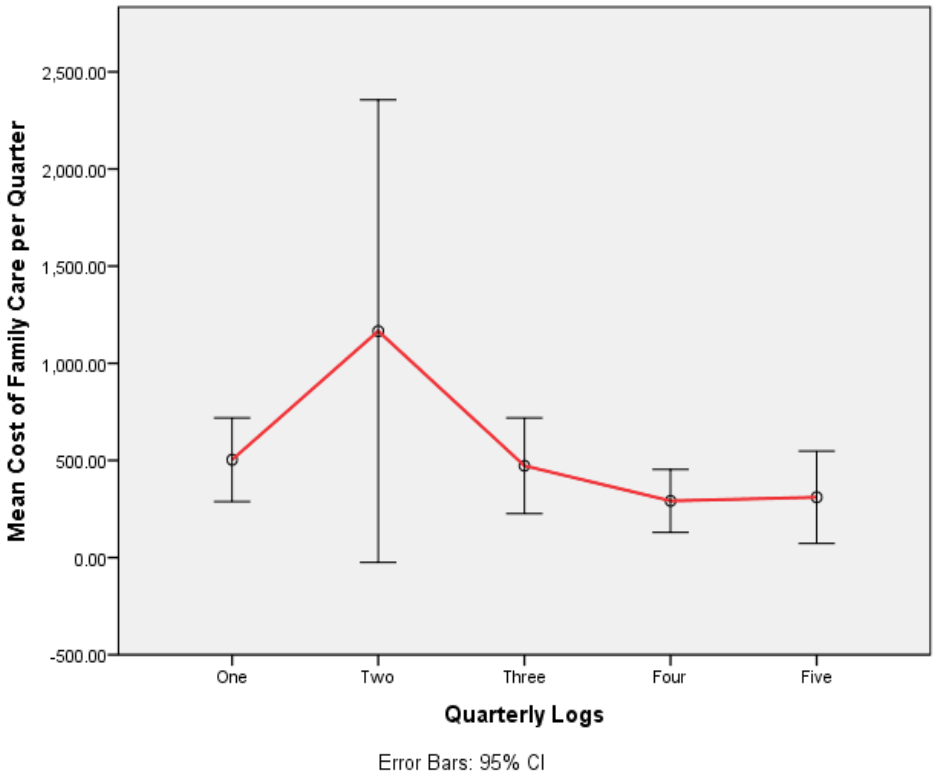


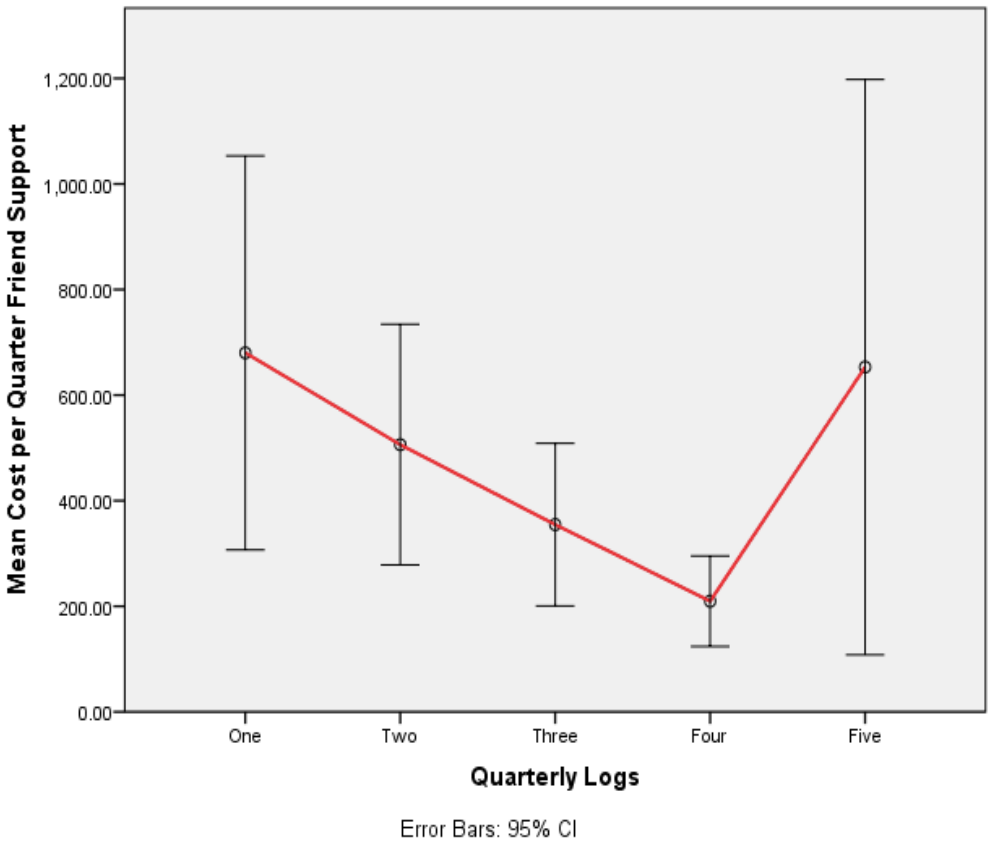
Figure 11: Mean costs family care per quarter (at least 2 quarterly logs) (n=297)



Mean costs per quarter for family care at quarter 1 were £503 (n=190) falling to £311 by quarter 5 (n=44) (Figure 11). Mean costs per quarter for support from friends at quarter 1 were £680 (n=190) falling to £210 by quarter 4 (n=109) and rising to £653

at quarter 5 (n=44) (Figure 12). There are no significant changes in median costs over quarters, although costs are quarter 4 are almost significantly lower than those seen at quarter 1 for both family (P=0.10) and friends (P=0.09)

Figure 12: Mean costs friends care per quarter (at least 2 quarterly logs) (n=297)



6.2 Overall impact on productivity losses

The total productivity costs over the entire one year period were £557,132. Overall there were no significant changes in overall productivity costs over the five quarters. Mean costs per quarter were £1,297 for the three months prior to the first quarter, rising to £1,832 in quarter 2, falling to £639 by quarter 4 and rising to £1,079 by quarter 5 (Figure 13). 89% of productivity losses were due to family and friend support (Figure 14).

Figure 13: Total productivity losses per quarter (n=297)

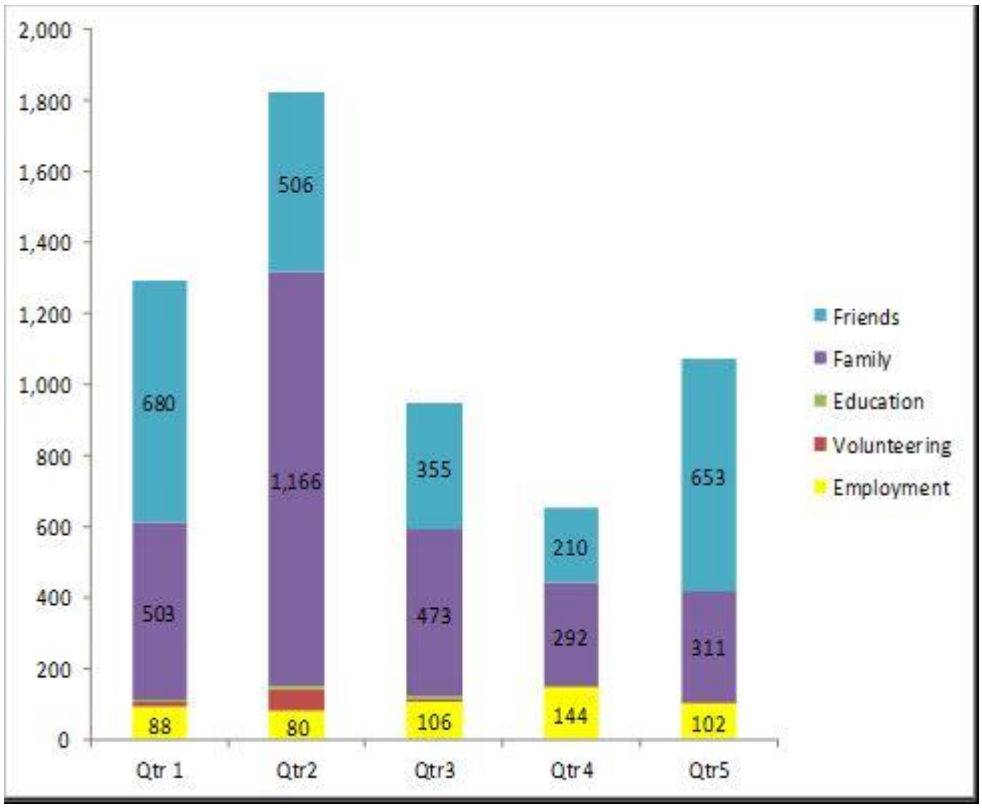
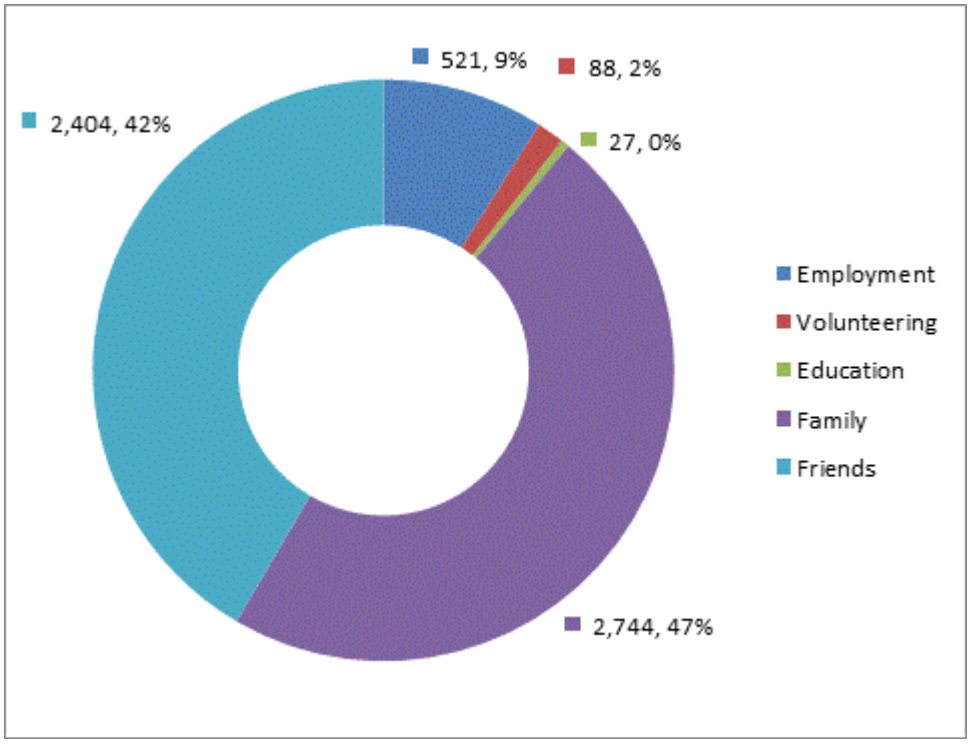


Figure 14: Breakdown of total productivity costs over 5 quarters



6.3 Health and social care service use

Hospital costs

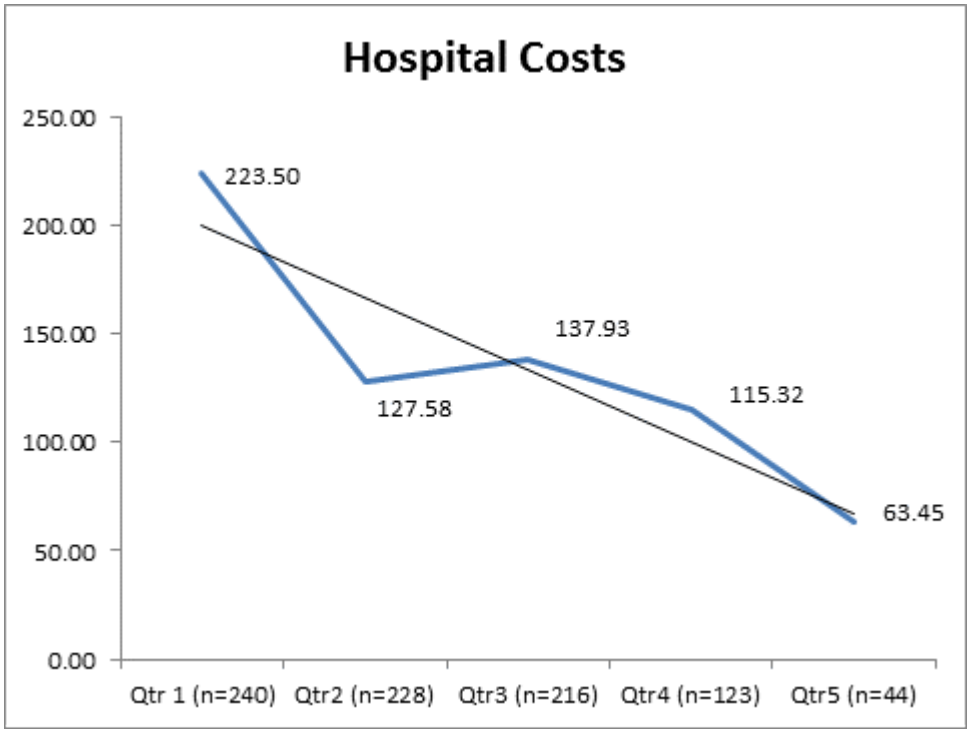
The analysis looked at three broad types of health and social care costs: hospital related costs, community mental health team costs and other community costs. First we focus on hospital based costs. Table 2 summarises mean costs and number of observations, as well as the standard deviation, minimum and maximum values for the five quarters for all participants who completed at least 2 logs.

Table 2: Mean costs of hospital service use per quarter

timepoints		Inpatient MH	Inpatient Other	Inpatient Residential	A&E MH	A&E Oth	Outpatient MH	Outpatient Oth
One	Mean	**63.70**	**25.45**	**0.00**	**14.35**	**12.96**	**66.31**	**38.21**
	N	242.00	242.00	242.00	242.00	242.00	242.00	242.00
	Std. Deviation	555.51	156.66	0.00	97.07	60.69	324.55	118.48
	Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Maximum	7,896.00	1,848.00	0.00	1,344.00	560.00	2,720.00	1,088.00
Two	Mean	**21.53**	**16.28**	**2.71**	**11.35**	**18.75**	**13.18**	**35.35**
	N	227.00	227.00	227.00	227.00	227.00	227.00	227.00
	Std. Deviation	150.60	99.03	40.89	56.08	100.96	57.12	126.54
	Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Maximum	1,504.00	616.00	616.00	448.00	1,120.00	544.00	1,088.00
Three	Mean	**24.26**	**22.71**	**5.68**	**6.71**	**7.74**	**25.70**	**35.72**
	N	217.00	217.00	217.00	217.00	217.00	217.00	217.00
	Std. Deviation	332.68	186.06	59.00	41.89	40.30	194.82	121.37
	Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Maximum	4,888.00	2,464.00	616.00	336.00	448.00	2,312.00	816.00
Four	Mean	**0.00**	**14.90**	**0.00**	**19.87**	**22.58**	**42.77**	**36.19**
	N	124.00	124.00	124.00	124.00	124.00	124.00	124.00
	Std. Deviation	0.00	95.03	0.00	163.49	163.45	252.72	112.54
	Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Maximum	0.00	616.00	0.00	1,792.00	1,792.00	2,720.00	816.00
Five	Mean	**0.00**	**13.69**	**0.00**	**0.00**	**0.00**	**27.20**	**63.47**
	N	45.00	45.00	45.00	45.00	45.00	45.00	45.00
	Std. Deviation	0.00	91.83	0.00	0.00	0.00	128.37	193.64
	Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Maximum	0.00	616.00	0.00	0.00	0.00	816.00	1,088.00

Total costs for all hospital costs across the five quarters are shown in Figure 15. There is a broad downward trend in costs over time from a mean of £223.50 (n=240) in quarter 1 to £115.32 by quarter 4 (n=123). Mean costs fall further in quarter 5, but this is based on data from 44 individuals. While none of the changes in the components of the median costs of inpatient care change significantly over time using the Wilcoxon Signed Rank Test, costs in quarter 2 (p=0.049) and quarter 3 (p=0.008) are found to be significantly lower than in quarter 1. They are almost significantly different in quarter 4 as well (p=0.053).

Figure 15: Mean hospital costs per quarter (n=240)



Specialist community mental health costs

Data were also collected on the use of specialist community mental health services. These included the costs of contacts with different community mental health teams, the use of group or individual counselling, use of supported employment services and attendance at recovery colleges. Table 3 provides a summary of these costs over the five quarters.

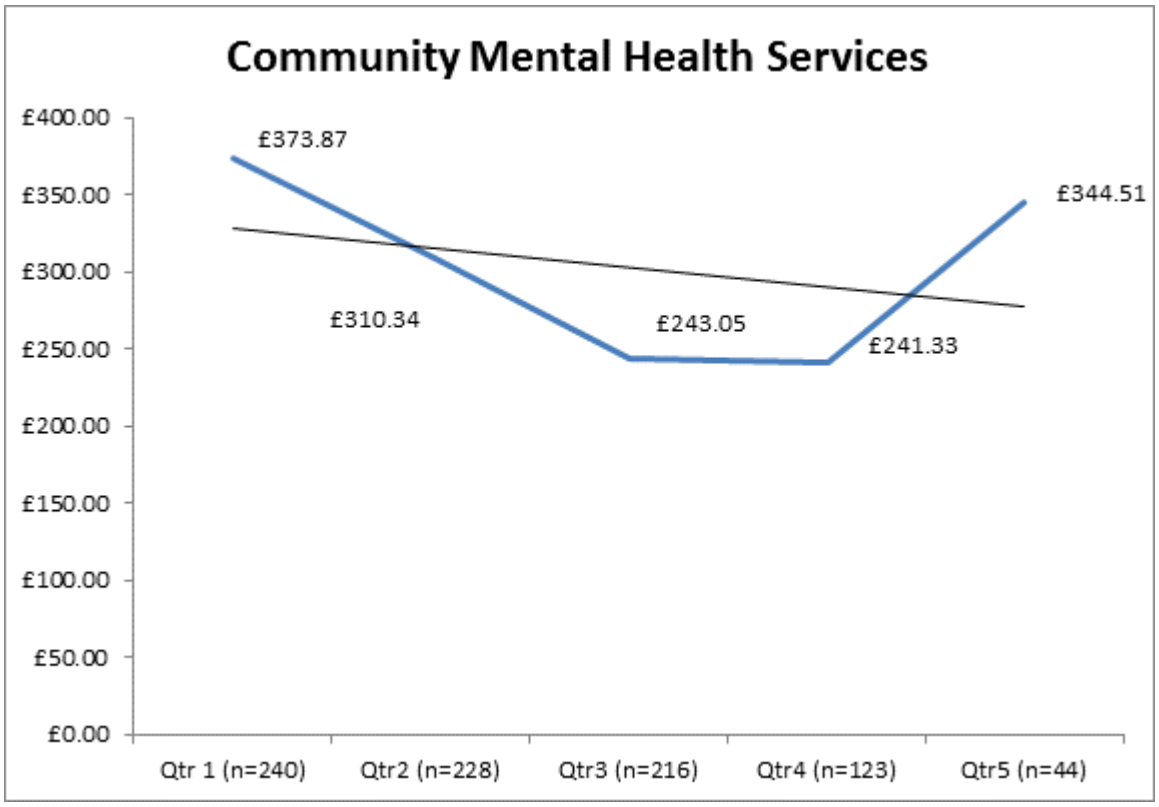
Table 3: Mean costs of community mental health services per quarter (n=297)

timepoints		Community Mental Health Teams	Crisis Resolution / Home Treatment Teams	Other Mental Health Teams	Group Counselling	Individual Counselling	Supported Employment	Recovery College
One	Mean	**149**	**35**	**20**	**60**	**90**	**10**	**9**
	N	242	242	242	242	242	242	242
	Std. Deviation	459	247	202	270	306	60	113
	Minimum	0	0	0	0	0	0	0
	Maximum	3,056	2,865	3,056	2,304	1,920	384	1,707
Two	Mean	**90**	**10**	**32**	**60**	**76**	**3**	**10**
	N	227	227	227	227	227	227	227
	Std. Deviation	341	53	192	253	232	36	86
	Minimum	0	0	0	0	0	0	0
	Maximum	3,056	382	1,910	2,304	1,248	384	1,051
Three	Mean	**92**	**9**	**6**	**37**	**63**	**5**	**26**
	N	217	217	217	217	217	217	217
	Std. Deviation	316	53	43	266	243	45	272
	Minimum	0	0	0	0	0	0	0
	Maximum	2,674	382	382	3,456	1,248	384	3,414
Four	Mean	**85**	**42**	**8**	**35**	**84**	**9**	**5**
	N	124	124	124	124	124	124	124
	Std. Deviation	251	347	51	178	275	59	49
	Minimum	0	0	0	0	0	0	0
	Maximum	1,528	3,820	382	1,248	1,248	384	525
Five	Mean	**102**	**4**	**102**	**58**	**83**	**0**	**3**
	N	45	45	45	45	45	45	45
	Std. Deviation	408	28	683	236	244	0	20
	Minimum	0	0	0	0	0	0	0
	Maximum	2,483	191	4,584	1,152	1,152	0	131

Overall mean costs of community mental health services in Quarter 1 were £373.87 (n=240). There is a downward trend in costs over time with costs falling to £310.34 in quarter 2 (n=228). They remained lower at Quarter 4 £241.22. Mean costs increased to £344.51 in Quarter 5 compared to baseline three month and but that difference was not significant and the sample size was just 44 (Figure 16). Median costs were significantly lower by Quarter 3 (p=0.004) and remained significantly lower at Quarter 4 (p=0.040).Interpretation here though needs to be cautious, although not itself

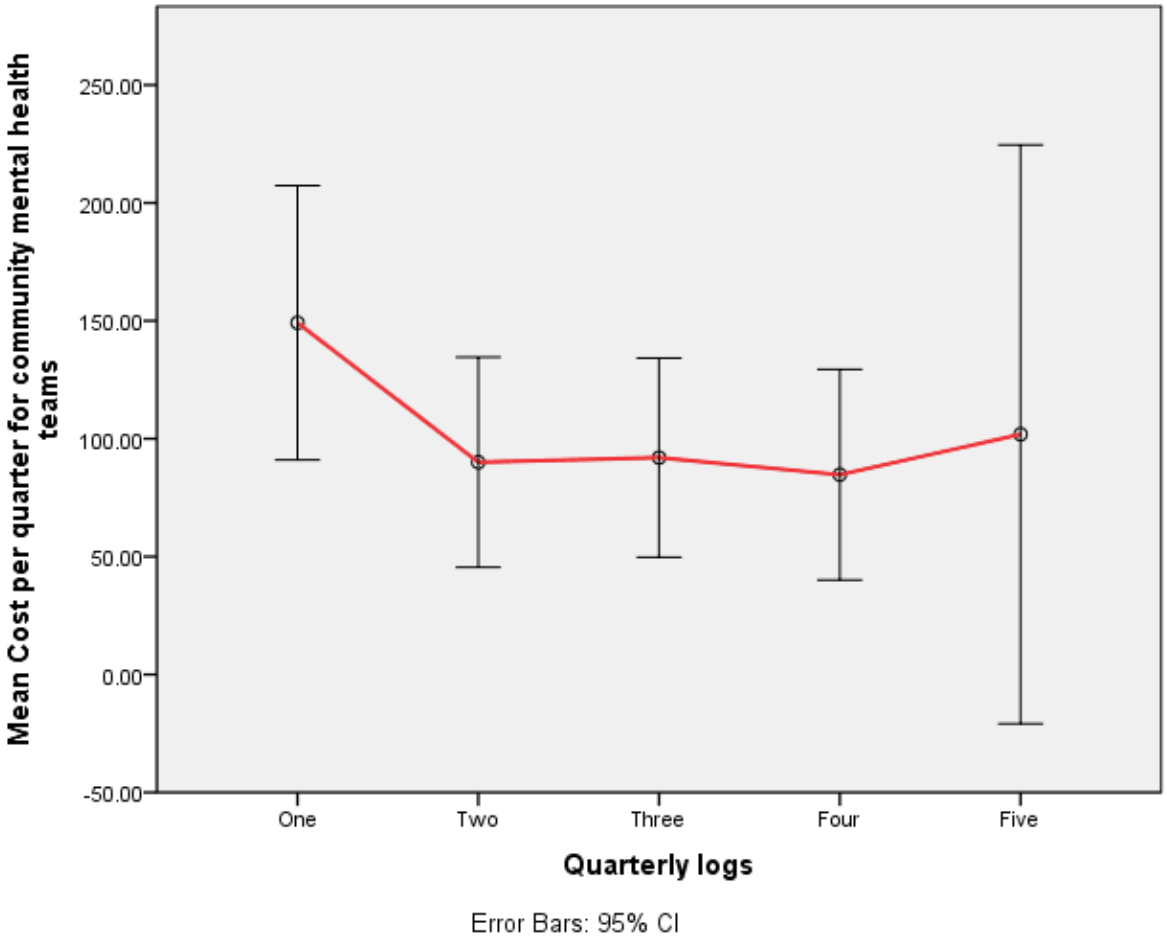
significant, any increased costs for recovery college participation might be considered a positive outcome of peer group support rather than a cost to avoid.

Figure 16: Total mean community mental health service costs per quarter



A key contributor to the overall reduction in the cost of community mental health services is the reduction in the cost of community mental health teams. The median costs of all contacts with community mental health teams (Figure 17) fell significantly between quarter 1 and quarter 2 ($p=0.037$) and remained significantly lower in quarter 3 ($p=0.009$); the difference is no longer significant after quarter 3. The costs of group counselling are also significantly lower at quarter 3 ($p=0.015$).

Figure 17: Total mean community mental health team costs per quarter



Other community health services

The final set of resource use and costs concern other community health services, such as contacts with general practitioners (GPs), GP nurses and health visitors, as well as contacts with complementary and alternative medicine practitioners, use of home help services and attendance at social clubs/ day centres. Table 4 provides summary data on these costs; GP costs are the most substantive element of these costs – mean costs at quarter 1 of £56.

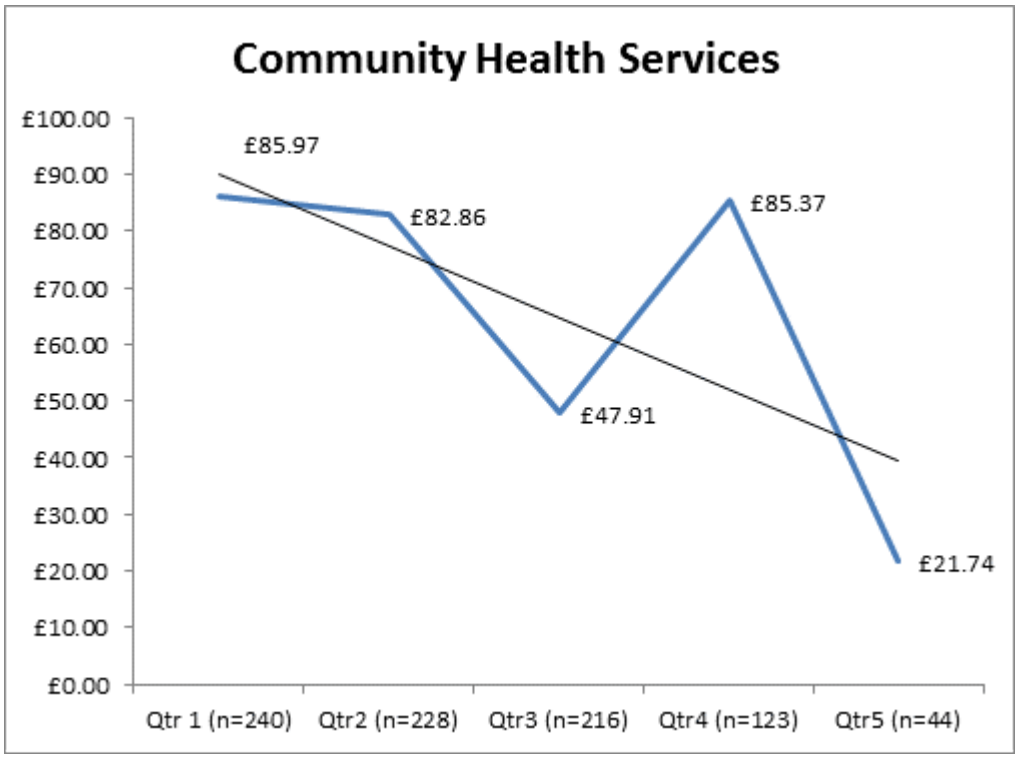
Table 4: Mean costs of other community health services per quarter (n=297)

timepoints		GP	Practice Nurse	Health Visitor	Mid wife	Compl Med	Home Help	Community Groups	Other
One	Mean	**56**	**2**	**0**	**0**	**11**	**0**	**8**	**8**
	N	242	242	242	242	242	242	242	242
	Std. Deviation	278	14	0	0	94	1	61	42
	Minimum	0	0	0	0	0	0	0	0
	Maximum	3,744	194	0	0	1,300	18	640	416
Two	Mean	**34**	**2**	**0**	**4**	**7**	**24**	**6**	**6**
	N	227	227	227	227	227	227	227	227
	Std. Deviation	127	10	5	59	40	260	44	43
	Minimum	0	0	0	0	0	0	0	0
	Maximum	1,404	115	55	893	300	3,276	480	512
Three	Mean	**26**	**1**	**0**	**0**	**6**	**0**	**11**	**4**
	N	217	217	217	217	217	217	217	217
	Std. Deviation	101	3	0	0	47	0	57	36
	Minimum	0	0	0	0	0	0	0	0
	Maximum	936	43	0	0	600	0	416	384
Four	Mean	**27**	**1**	**1**	**0**	**6**	**34**	**15**	**0**
	N	124	124	124	124	124	124	124	124
	Std. Deviation	115	5	7	0	34	382	79	0
	Minimum	0	0	0	0	0	0	0	0
	Maximum	1,170	43	55	0	300	4,259	640	0
Five	Mean	**18**	**3**	**0**	**0**	**0**	**0**	**0**	**0**
	N	45	45	45	45	45	45	45	45
	Std. Deviation	52	9	0	0	0	0	0	0
	Minimum	0	0	0	0	0	0	0	0
	Maximum	234	43	0	0	0	0	0	0

Again when comparing pairs of median cost data – quarter 1 with other quarters, the median costs in total other community health data appear to be significantly lower in quarters 3 (p= 0.040) and quarter 4 (0.040) and almost significantly lower in quarter 5 (p = 0.053). Figure 18 shows mean costs per quarter for all participants. Median

costs for use of GP services are also significantly lower for Quarter 4 compared with Quarter 1.

Figure 18: Mean community mental health team costs per quarter



6.4 Change in overall costs

Figure 19 shows mean total costs per quarter for all participants who have completed at least 2 quarterly logs and provided a response for all categories of cost. For quarter 1 total mean costs per participant are £2,141, these costs rise to £2,514 in quarter 2. Looking at differences in median costs, these are significantly lower for quarters 3 (p=0.015) and quarter 4 (p=0.014). We also ran the analysis to include individuals who did not report all categories of cost; we assumed here that missing data were equivalent to zero cost. Figure 20 shows mean total costs per quarter with these imputed data for missing cost values. While overall mean costs are all time points are now lower, mean costs for quarters 3, 4 and 5 remain lower than at baseline. Median costs at quarter 3 and quarter 4 remain significantly lower than those at baseline (P=0.001) and (P=0.009) respectively. There was little change in the breakdown of costs between different quarters. At baseline productivity costs accounted for approximately 60% of total costs, by quarters 3 and 4 proportionately they still accounted for 60% of total costs. Hospital costs accounted for 13% of total

costs at baseline and 12% by quarter 3. Community mental health costs accounted for 21% of costs at baseline and 22% of costs at quarter 3.

Figure 19: Total mean costs per quarter

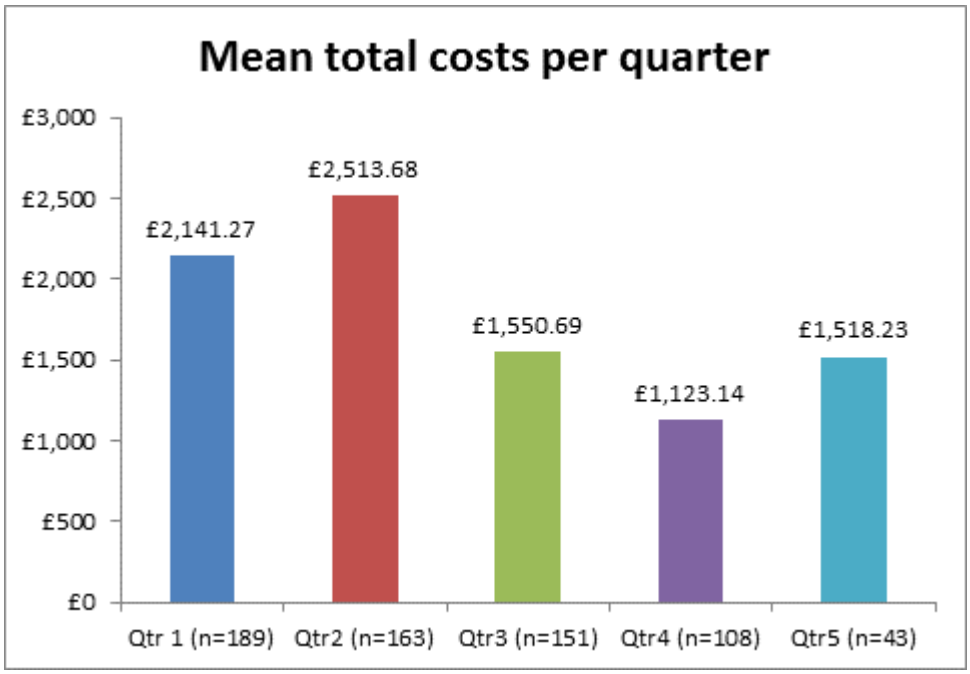
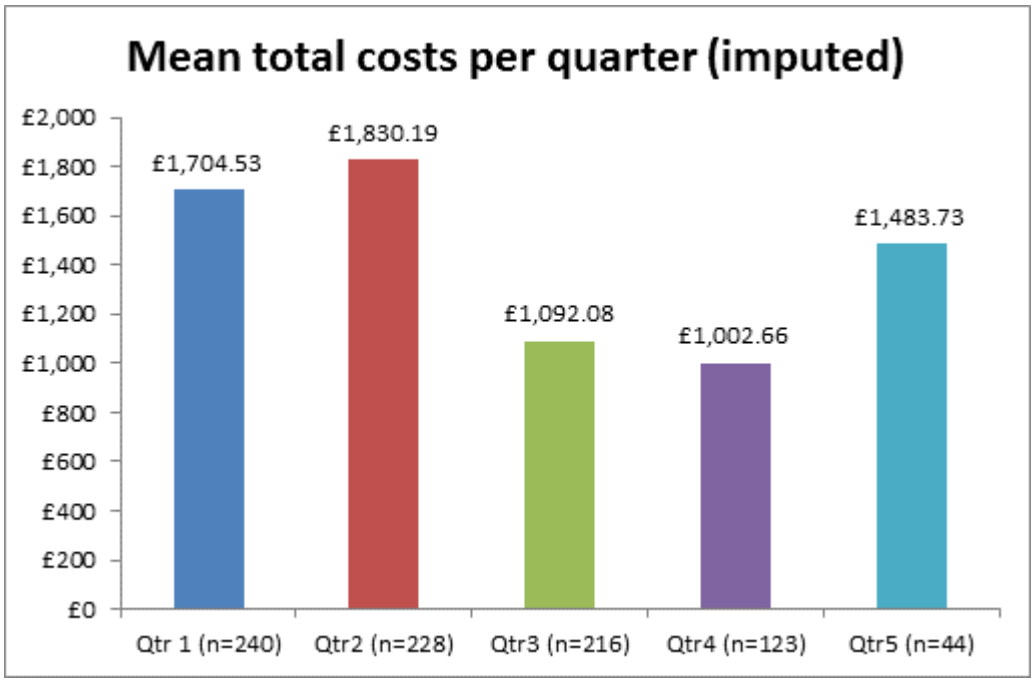


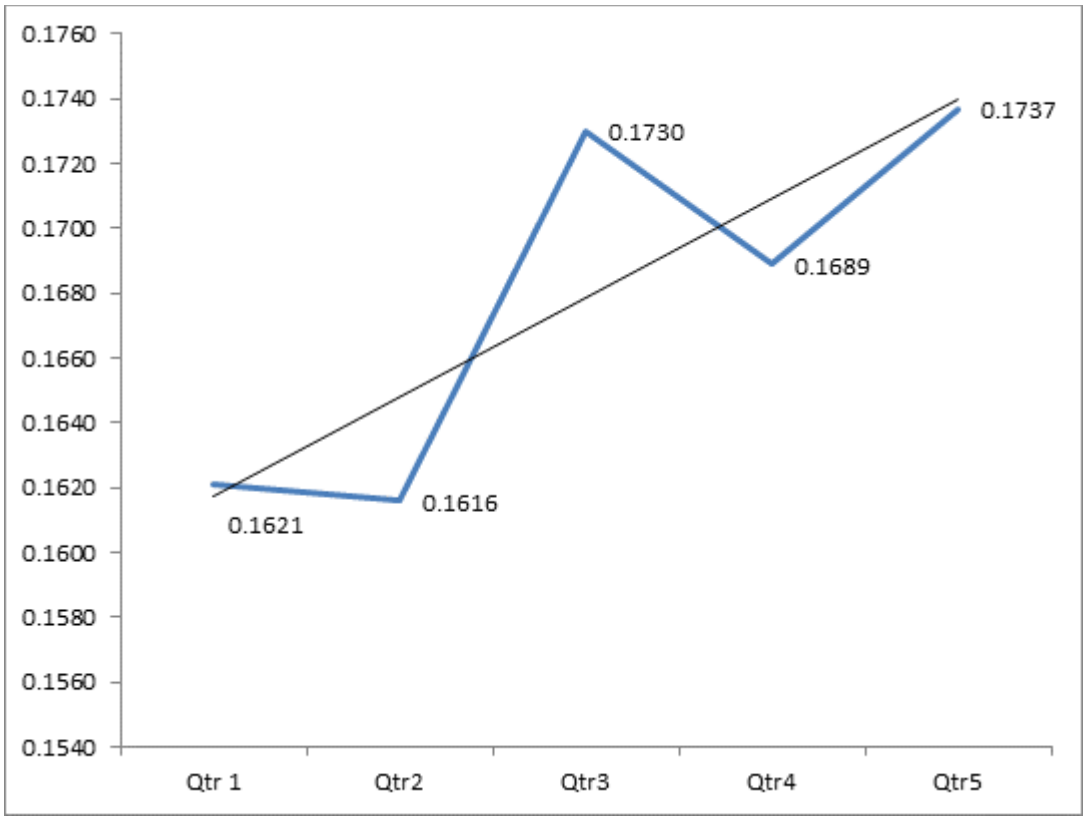
Figure 20: Total mean costs per quarter with imputed values



7. Impacts on quality of life

We are also examined changes in quality of life from baseline quality of life (QALY) scores obtained at quarter 1 with subsequent QALY scores reported at later quarters. We began with all 593 people for whom at least one quarterly log had been completed. QALY scores were available for 459 people for quarter 1, and then for 262, 239, 141 and 47 people for the four subsequent quarters. Figure 20 shows mean QALY scores for the three month time periods from Quarters 1 to 5, indicating that mean score improved from Quarter 3 onwards.

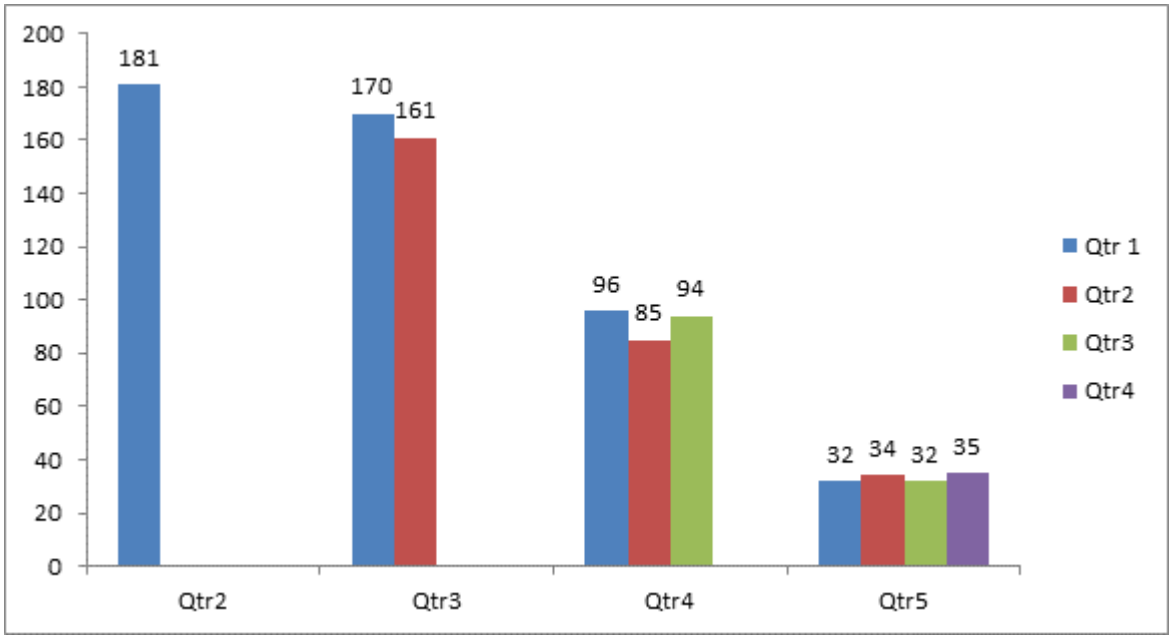
Figure 20. Mean 3 month QALY scores per quarter



However, statistical analyses, both analysis of variance over time (P=0.450), and the Wilcoxan signed-rank test between pairs of QALY scores at any two quarters (e.g. between quarter 1 and quarter 3 or between quarter 2 and quarter 3) indicate that these changes in quality of life are not statistically significant. Figure 21 provides a breakdown on the number of pairs of QALY values used in these analyses. There

are far fewer pairs of data involving quarter 5. Overall the number of pairs of data range from 181 when comparing quarter 1 QALY data with quarter 2 QALY data, or 161 when comparing quarter 2 data with quarter 3 data, to 32 when comparing quarter 1 or quarter 3 data with quarter 5 QALY data. Analysis of Variance data over time also did not report any significant change (p=0.450).

Figure 21. Number of pairs of QALY values in analyses



8. Regression modelling analyses

8.1 Changes in costs over time

A modelling approach known as Generalised Estimating Equations was used to further explore changes in various costs over time. Excluding productivity impacts and looking solely at health and social care impacts, the model only identified two of the 23 components of health and social care costs where there were significant reductions in costs by quarters 3 and 4: impacts on other mental health teams and GP practice nurses.

The cost of other mental health teams were significantly reduced by 89% at quarter 3 (p=0.000) and 93% by quarter 4 (p=0.005) compared with baseline costs (Table 5). GP nurse use costs decreased by 97% by quarter 3 (p=0.029) and by 99% at by quarter 4 (p=0.014) (Table 6): However mean costs per participant for both these

aspects of service use were very low so it is difficult to draw conclusions from this modelling work. Looking at productivity costs there were increases in costs of lost volunteering opportunities (p=0.036) and family care costs (p=0.028) in quarter 2 (Tables 7 and 8).

Table 5: Results of GEE modelling analysis: Costs other mental health teams.

C_Other_MHT	exp(b)	Std. Err.	z	P>z	[95% Conf.	Interval]
Time						
2	0.837692	0.587025	-0.25	0.800	0.212125	3.308085
3	0.109444	0.062325	-3.88	0.000	0.035847	0.334137
4	0.065733	0.064332	-2.78	0.005	0.009655	0.44755
5	1	(omitted)				
_cons	13.6894	13.74275	2.61	0.009	1.913664	97.92715

Table 6: Results of GEE modelling analysis: costs GP Practice Nurses

c_nurse	exp(b)	Std. Err.	z	P>z	[95% Conf.	Interval]
Time						
2	0.670791	0.353509	-0.76	0.449	0.238782	1.884397
3	0.309618	0.16612	-2.19	0.029	0.108176	0.886184
4	0.265702	0.143868	-2.45	0.014	0.091939	0.767876
5	1	(omitted)				
_cons	1.484386	0.681251	0.86	0.389	0.603799	3.64923

Table 7: Results of GEE modelling analysis: costs of lost volunteering

Cost_lost_~g	exp(b)	Std. Err.	z	P>z	[95% Conf.	Interval]
Time						
2	8.515382	8.6929	2.1	0.036	1.151484	62.97243
3	1.126915	0.810186	0.17	0.868	0.275377	4.611641
4	0.443436	0.426668	-0.85	0.398	0.067269	2.923113
5	1	(omitted)				
_cons	24.12821	16.35827	4.7	0	6.389008	91.12062

Table 8: Results of GEE modelling analysis: costs family informal support

Cost_Famil~e	exp(b)	Std. Err.	z	P>z	[95% Conf.	Interval]
Time						
2	3.61357	2.111749	2.2	0.028	1.149474	11.35988
3	1.746677	0.58011	1.68	0.093	0.910983	3.349
4	1.476213	0.336462	1.71	0.087	0.944368	2.307579
5	1	(omitted)				
_cons	472.4327	164.9339	17.64	0	238.3261	936.501

8.2 The impact of socio-demographic characteristics on total 12 month costs

The impacts of socio-demographic and baseline characteristics on total cost at 12 months were initially explored using age, gender, sexuality, ethnicity, use of previous mental health services, presence of morbidities, and geographical location. A Generalised Linear Model with gamma and log distributions was found to be the best-fitting model for this analysis.

The total costs were defined as the cumulative costs from baseline to the end of the follow-up period, covering the entire one year. The cost components include total costs for productivity lost and hospital costs, community-based mental health services and other community services over 12 months.

Excluding the number of peer support projects attended the most significant predictor for total costs at 12 months was age (Table 9). Compared with people aged

18 to 24, significantly higher costs were shown in those aged 25-64. However, older people aged 65 and above had significantly lower total costs. Women had 34% lower costs than men but this difference was not significant. Use of formal mental health services was associated with a 53% increased costs, but the difference was not significant, while having a long-term physical health conditions or disability was associated with less total costs by 66%, but again this was not significant. Overall, there were no significant predictors for total costs at the end of follow-up, except age at registration.

Table 9: GLM model to identify factors that predict changed costs (excluding intensity peer support)

Total costs	Coef.	Exp(b)	Std. Err.	z	P>z	[95% Conf.	Interval]
Age							
25-34	3.662	38.945	1.176	3.110	0.002	1.357	5.967
35-44	3.250	25.778	1.003	3.240	0.001	1.283	5.216
45-54	2.753	15.689	0.991	2.780	0.005	0.811	4.695
55-64	3.559	35.130	1.100	3.240	0.001	1.403	5.715
65+	-3.013	0.049	0.952	-3.160	0.002	-4.879	-1.147
Gender							
Female	-0.412	0.662	0.707	-0.580	0.560	-1.799	0.974
Use_MH							
Yes	0.427	1.533	0.679	0.630	0.529	-0.903	1.757
Physical Health	-1.069	0.343	0.704	-1.520	0.129	-2.449	0.311
location							
Small-medium sized town	-0.166	0.847	0.863	-0.190	0.848	-1.857	1.526
Village/rural	0.671	1.957	1.150	0.580	0.559	-1.582	2.924
_cons	-0.123	0.885	0.652	-0.190	0.851	-1.401	1.156

Next, we tested each variable one by one by adding the number of peer support projects attended at each quarter. A Generalised Linear Model with Gaussian and log distribution was found to be the best-fitting model for this analysis. The results were slightly different (Table 10). Age was no longer a significant predictor for costs. Instead, gender, ethnicity and location showed some interesting results. Women were almost significantly more likely to have lower costs than men by 57%

(p=0.057). People from mixed white and Asian backgrounds were almost significantly more likely to incur six times higher costs compared with white British people (p=0.064). Living in a small & medium sized town was associated with significantly higher costs, relative to living in large cities (p=0.002).

Table 10: GLM model accounting for peer support project use per quarter

Total costs	Coef.	Exp(b)	Std. Err.	z	P>z	[95% Conf.	Interval]
PS3	-0.078	0.925	0.070	-1.120	0.261	-0.215	0.058
Age							
25-34	9.302	10957.134	597.192	0.020	0.988	-1161.173	1179.777
35-44	8.236	3772.873	597.192	0.010	0.989	-1162.239	1178.710
45-54	5.478	239.351	597.195	0.010	0.993	-1165.003	1175.959
55-64	8.139	3424.987	597.192	0.010	0.989	-1162.335	1178.613
65+	0.318	1.374	655.845	0.000	1.000	-1285.115	1285.750
Gender							
Female	-0.855	0.425	0.449	-1.900	0.057	-1.736	0.025
Sexuality							
Lesbian/gay	-7.805	0.000	751.233	-0.010	0.992	-1480.194	1464.584
Bisexual	1.378	3.965	0.890	1.550	0.122	-0.366	3.122
Prefer not to say	-5.105	0.006	816.842	-0.010	0.995	-1606.086	1595.875
Ethnicity							
White Eastern European	-10.686	0.000	5693.858	0.000	0.999	-11170.440	11149.070
White other	0.737	2.090	1.081	0.680	0.495	-1.382	2.856
Arab	-1.523	0.218	5752.151	0.000	1.000	-11275.530	11272.490
Black/Black British African	-8.553	0.000	719.495	-0.010	0.991	-1418.737	1401.631
Asian/Asian British Pakistani	-9.828	0.000	2237.744	0.000	0.996	-4395.727	4376.070
Mixed White & Black African	7.596	1990.979	5774.167	0.000	0.999	-11309.560	11324.760
Mixed White & Asian	4.189	65.971	2.260	1.850	0.064	-0.240	8.618
Mixed White & Black Caribbean	-7.413	0.001	5693.858	0.000	0.999	-11167.170	11152.340
Mixed other Mixed background	0.353	1.423	0.767	0.460	0.646	-1.152	1.857
Other	-8.988	0.000	1864.057	0.000	0.996	-3662.473	3644.498
Use of MH							
Yes	0.792	2.208	1.027	0.770	0.441	-1.222	2.806
PhysHealth							
Yes	-0.366	0.693	0.572	-0.640	0.522	-1.486	0.754
Location							
Small-medium sized town	1.797	6.035	0.586	3.070	0.002	0.649	2.946
Village/rural	-1.791	0.167	3.244	-0.550	0.581	-8.149	4.567
_cons	-5.232	0.005	597.192	-0.010	0.993	-1175.707	1165.243

9. Further modelling the potential economic benefits of supporting peer support

Having looked at the potential impact on resource use and costs of peer support programmes based on participation in Side by Side a further element of the economic analysis was to explore potential costs and benefits of peer support programmes using an approach known as decision analytical modelling. The potential costs and benefits of different variants of approaches to peer support will be available in more detail in a separate paper that we are preparing. Peer support can come in many different varieties, in different settings, with different levels of resources, including salaried peer or non-peer facilitators/participants, all of which will impact both on the acceptability and level of engagement with peer support programmes and also with the costs of implementing peer support. The level of engagement may for instance differ by gender or BME status; it might also be influenced by the 'referral' route to peer support, as well as by practical issues such as the availability and/or costs of transportation.

9.1 Methods and approach

In this section of this report we briefly set out the approach adopted and *provide an illustrative example of the results of the modelling approach*. As this section will indicate, the *work should be treated cautiously given the high level of uncertainty not only over pathways of peer support but also over levels of potential effectiveness*.

To model the potential cost effectiveness of peer support, the first issue that we had to determine was the nature of one or more alternative support pathways that decision makers could also consider. In England peer support programmes (at least those funded by Clinical Commissioning Groups) are exceptions rather than the norm and we have assumed that any peer support programme is in addition to care./support as usual. Therefore the comparison we have used is care as usual – which in this case is assumed to mean no access to peer support.

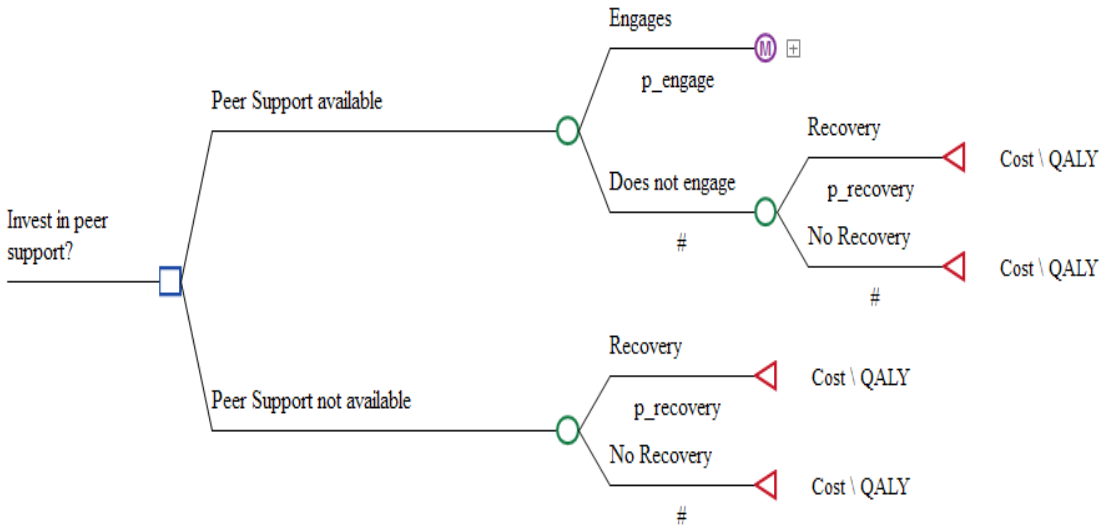
We then had to consider the form that peer support might take. In the scenario shown in this report we have assumed that peer support takes place weekly on a face to face basis in a local venue that is not connected to the health system, e.g. it could be at a community cafe, art or sports centre or pub. In this baseline model we

have assumed that there is no cost for the venue itself; in practice however peer support groups potentially may have to pay a fee for venue hire which would increase delivery costs. We have also assumed that none of the participants received any payment (such as for facilitating the group). We assumed that it is delivered in a way that is consistent with key principles for peer support.

We then constructed a 'pathway' which can consider the level of initial uptake by peers, their continuing level of engagement, the potential intensity or duration of participation needed to have an effect and then the potential impact on the use of health and other resources, as well as on other potential outcomes, such as education, employment and volunteering or impacts on family members. This has been done using TreeAge Pro decision modelling software.

The 'pathway is illustrated in Figure 22, where if peer support is available an individual will then have a probability of initially engaging in this form of peer support, after which they will have a likelihood of continuing to participate on a weekly basis (See Figure 23), which in turn will influence their likelihood of recovery. In this illustrative analysis changes in quality of life measured in quality adjusted life years (QALYs) and costs of the programme and impacts on other services between the peer support option and no peer support programme over a nine month period are then calculated. We chose nine months as the time frame given the limited data available to us beyond this time period. The value of potential resources and costs avoided, as well as changes in quality of life in the model, were based on what we observed in Side by Side. In doing this for this illustrative it should be noted that *we have documented here all observed savings even though not all of these resource savings were found to be significant*. We do not have detailed information on the costs of peer support programmes; in reality costs may vary enormously dependent on the precise nature of the programme. In out analysis we have looked at how changing the maximum cost per participant impacts on cost effectiveness.

Figure 22. Primary pathway for peer support group modelling

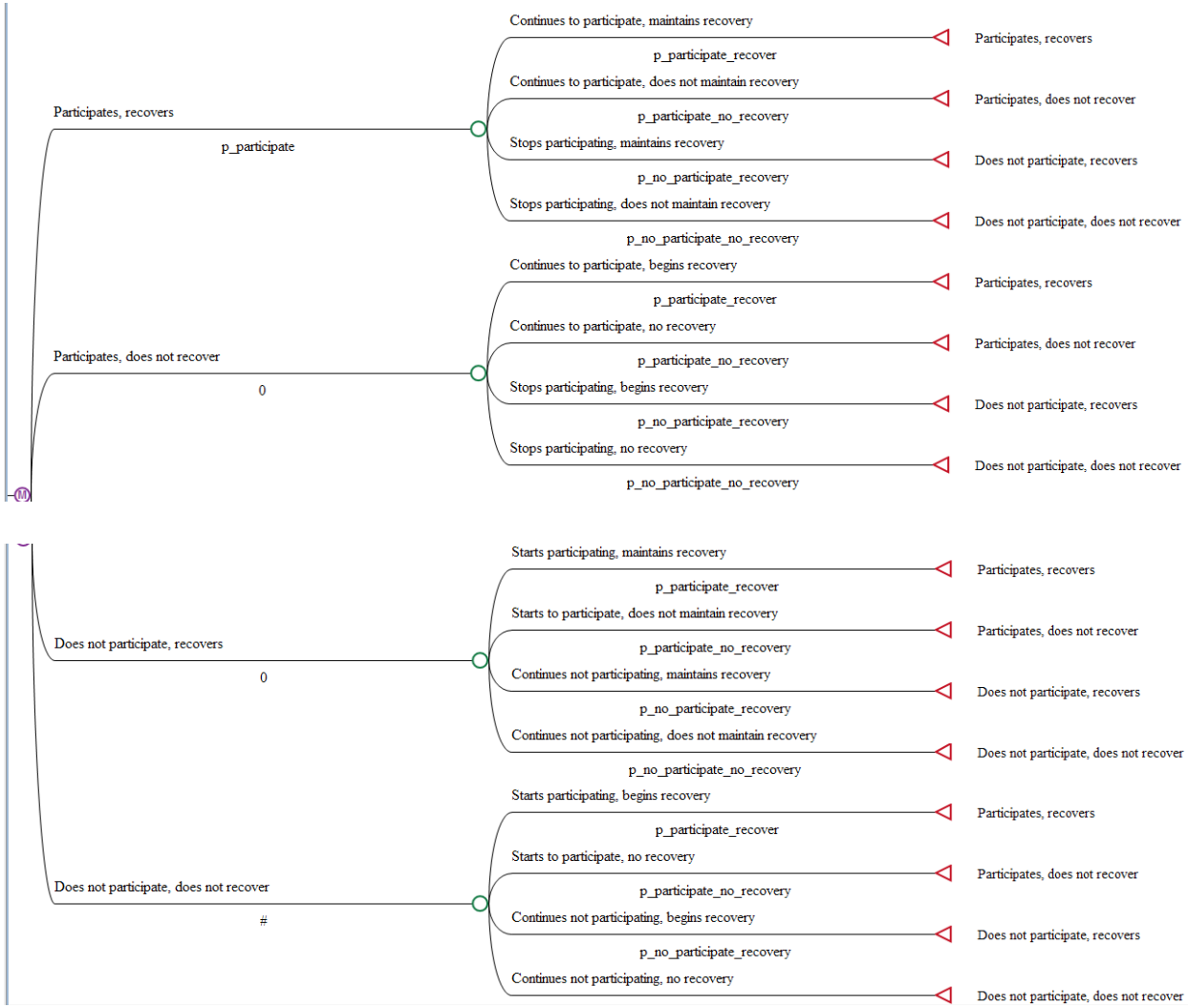


Figures 23 illustrates the Markov cycle component of the model. A Markov cycle simply is a way of documenting constant transitions between different possible pathways – in this case choosing whether or not to continue to participate in a peer support group combined with the likelihood of achieving positive recovery related outcomes. This therefore links positive recovery outcomes to the rate of participation in peer support groups – in this case an impact linked to each week of participation. So the more weeks that an individual participates potentially the greater the impact on recovery; the model can be adjusted to reflect a minimum number of peer support group sessions needed to achieve the maximum positive quality of life benefits. This reflects a possible outcome of Side by Side where positive improvements in quality of life may have meant that individuals no longer felt the need to participate in peer support groups.

In the illustrative scenario described here, given the lack of certainty around the effectiveness of peer support, we have looked at the potential scope for cost effectiveness with differing levels of effectiveness compared with people who do not participate in peer support. We assume that there would be a maximum of 8 people in any peer group support session. The scenario also conservatively assumes that only 20% of those that engage with a peer support programme sustain that engagement beyond one week. Initially we have assumed that cost per peer support

contact is assumed to be £10 similar to time costs for peer support reported in one recent English study (Camacho et al., 2017). We then report the likelihood that peer support would be considered cost effective from a societal or health system perspective, varying the costs of delivering peer support.

Figure 23. Markov pathway for peer support group modelling



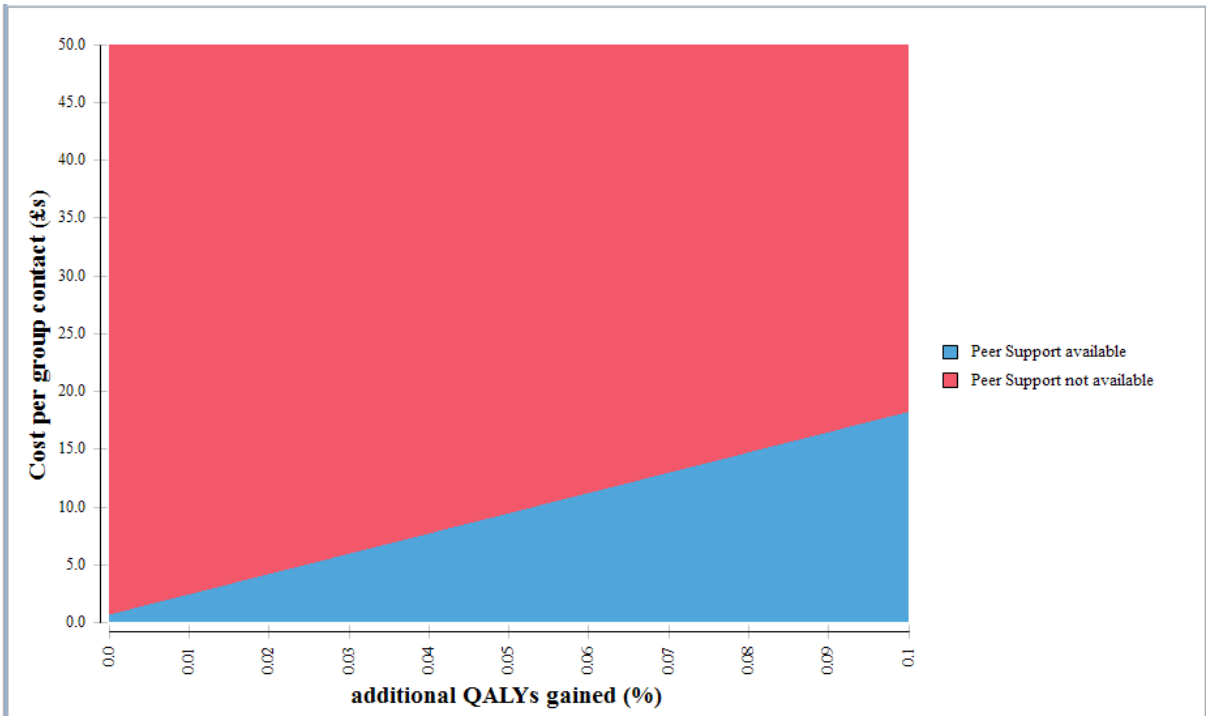
9.2 Illustrative results of scenario modelling

Approximately 43% of the reduction in resource use seen in Side by Side was for health and social care services, with the remaining reductions in economic cost linked to improved participation in employment, education, volunteering or on the need for support from family or friends. In our baseline scenario, from a health and social care perspective and using a target population of 50 people, if there is just a 3% improvement in quality adjusted life years gained then peer support will be cost saving from a health and social care perspective – with costs averted of (£-6.60). With better outcomes and lower costs peer support would be considered cost effective (i.e. in fact a common cost effectiveness threshold is a cost per QALY gained of £30,000). If a 10% improvement in QALYs gained could be achieved then the costs averted would increase to £-632.11. Much depends also on the cost per peer support contact if this were to increase to £50 per group session contact then there would be an overall costs to the health and social care system would actually increase by £1700 with a cost per QALY gained of £14,166. This is still cost effective but it illustrates how sensitive the model is to changing costs of delivery. Figure 24 shows how varying both the cost per peer support contact and additional QALYs gained impacts on whether or not peer support would be considered cost effective. It illustrates the important impact that the cost of peer support will have on the likelihood of peer support being cost effective; the lower the costs the more modest the effectiveness gains would have to be.

From a wider more societal perspective, in our baseline scenario the model becomes cost saving – having both lower costs (£-1,293) and better outcomes, assuming a 6% increase in effectiveness. It should be stressed that the modelling analysis reported here is illustrative; there remain many uncertainties around uptake and minimum level of sustained engagement needed to achieve improvements in outcomes; these uncertainties need to be looked at further. Equally, as the summary of our review of the economic literature indicates, there is still very little information on the resource impacts of participation in peer support, so the positive impacts on resource use seen in Side by Side should be treated cautiously. In saying that it is also important to recognise that the positive economic value of the input of peers is not included in this analysis; this could also be a significant contribution to mental health resources in any locality. We have also been conservative in potential quality

of life gains – small additional improvements can make a major difference to cost effectiveness and higher levels of quality of life improvement were seen in the six month follow up in the Side by Side evaluation. Focusing on quality adjusted life years gained as the principle outcome measure may also be a limitation; it is also essential going forward to look at outcomes that participants consider to be important. It will also be prudent to also look at changes in other measures of recovery, such as measures of social inclusion or changes in wellbeing (which is a different concept to quality of life).

Figure 24. Two-way sensitivity analysis varying costs of peer support and effectiveness rates



10. Conclusions

This report has covered three broad areas. It firstly confirms that there remains little information over the cost effectiveness of peer support in the published literature, most of which is not from a UK context. Secondly our analysis of experience in Side

by Side suggests that it may have a favourable impact on future costs. Compared to baseline, mean quality of life scores had improved in the six, nine and twelve month quarterly peer logs, although none of these changes were statistically significant.

Compared to baseline overall mean costs for participants who provided information on all aspects of cost were lower in the six and nine month quarterly peer logs (£1,551 and £1,123 respectively versus £2,141). Median hospital costs, as well as median community mental health costs at six and nine months were also significantly lower. Changes in costs over time were particularly driven by a reported decrease by peers in support and care received from family and friends. Although the study design means that we cannot be certain that this fall in costs was due to the use of peer support rather than other external factors, observed lower costs coupled with better quality outcomes supports greater investment in provision and ongoing evaluation of peer support programmes.

Thirdly we have explored some of the uncertainties around both the effectiveness and costs of peer support by looking at specific scenarios using a decision modelling approach. These also suggest that potentially peer support can be cost effective, and in some cases potentially cost saving. This will be dependent on the costs of delivering peer support; these will vary substantially depending on peer support format. A second factor is the overall level of sustained engagement. We used a conservative estimate of 20% in the modelling analysis – if this engagement rate is somewhat higher then there is a much greater probability of peer support being cost saving, especially if higher rates of effect can be achieved.

In summary, our analysis cautiously suggests that there is an economic case for investing in peer support initiatives but this is tempered by the recognition that peer support can cover a wide variety of actions, potentially with very different costing models. Finally, but by no means least, it is crucial going forward to capture the full value of the time and resources volunteered in peer support and not just paid inputs. Potentially, the reciprocal contributions of all involved in peer support will also create valuable additional components of any local mental health system.

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