RYCT & CSP intervention costs

Jennifer Beecham, Jennifer Wenborn, Georgina Charlesworth and Shaheen Ahmed[1]

Introduction

Increasingly, psychological interventions are provided in groups, rather than one-to-one. Estimating unit costs for group interventions is complex and can be time-consuming. The *Unit Costs of Health and Social Care* volumes have addressed this estimation issue twice recently (Barrett & Byford, 2008; Bonin & Beecham, 2012). In this short article, we describe an approach to cost estimation that resolves a further complication, where the number of team members facilitating and supporting each session varied, as well as the number of participants.

To illustrate the method, we use data about a group intervention provided to people with dementia and their family carers: *Remembering Yesterday, Caring Today* (RYCT).[2] We also describe the costs associated with the *Carer Support Programme* (CSP), a one-to-one intervention. Both interventions were evaluated as part of the NIHR-funded SHIELD research programme (Charlesworth et al., 2011). As well as contributing data to the full cost-effectiveness evaluation, the approach described below allows cost variations to be analysed: between iterations of the interventions and between those receiving the interventions.

The RYCT programme

Remembering Yesterday Caring Today (RYCT) is a manual-based group reminiscence intervention (Schweitzer & Bruce, 2008). There are 12 weekly two-hour sessions covering themes such as childhood and family life; courting and marriage; and food and cooking. Each session uses multisensory triggers and activities, such as (small) group discussions, object handling and singing songs. The seven subsequent monthly reunion sessions build on these themes or introduce new ones, depending on the preferences of the group.

Under the SHIELD evaluation, RYCT ran in community settings such as church halls. One or two trained facilitators led the sessions, supported by a team of volunteers, health and social care staff, and trainees, each of whom had attended RYCT training. An NHS Trust or local voluntary organisation hosted RYCT in seven sites, across which the 10-month programme was run 13 times.

Cost per team member

Over the course of the intervention, an Excel workbook was used to record the following information about team members.

- Status: volunteer or employees' professional background and grade (AfC band or similar)
- Number of hours allocated per person per session. Generally, one full day was allocated for the Lead Facilitator(s) and three to five hours for other team members, including travel time
- Travel mode and mileage to each session.
- Team attendance at each session

Together, these data allowed us to estimate a cost for each team member to attend a session. For employees, costs included professional group/grade,[3] additional salary on-costs such as employers' National Insurance and superannuation contributions, direct and indirect organisational overheads, and their travel costs. These cost estimations for paid staff, plus reimbursed participant travel expenses, reflect the public sector perspective.

Cost per session

Team member costs per session were then combined with the team attendance data; between three and seventeen team members were present at each session. Each time a particular team member attended a session, we applied their unique 'team member cost'. These costs were totalled for each session and programme overheads (such as training, administrative support, venue, refreshments and materials for training and the intervention) then added.

[1] Jennifer Beecham, PSSRU, London School of Economics and University of Kent; Jennifer Wenborn, Division of Psychiatry; Georgina Charlesworth, University College London and Dementia Research Centre, North East London NHS Foundation Trust, 3. Research Department of Clinical, Educational and Health Psychology, University College London; Shaheen Ahmed, Age Concern Havering.

[2] The RYCT/CSP programme (ISRCTN3795 6201) is part of the Support at Home – Interventions to Enhance Life in Dementia (SHIELD) programme (Applicaton No. RP-PG-0606-1083) which is funded by the National Institute for Health Research (NIHR) Programme Grants for Applied Research scheme, held by North East London NHS Foundation Trust (NELFT). The grant-holders were Professors Orrell (UCL; Chief Investigator), Woods (Bangor), Challis (Manchester), Moniz-Cook (Hull), Russell (Swansea), Knapp (LSE) and Dr Charlesworth (UCL).

[3] Salaries for all sites were estimated at 2011 London rates, assuming a standard 1549 working hours per annum.

- The cost per session – between £222 and £2,443 to the public sector – is mainly driven by the number of team members present.

For the societal perspective, two additional calculations were made: a cost per session, that included the costs of the time spent by volunteers at a replacement value (health care assistant), and then in a separate calculation, their attendance was valued at an opportunity cost (minimum wage).

Cost per dyad per session

The intervention focus was the dyad: the family carer and the person with dementia attended the sessions together and so were treated as one 'unit' in the cost analysis. Their attendance at each session was recorded on another Excel spreadsheet. Thus, we could calculate the cost-per-dyad-per-session by dividing the cost-per-session by the number of dyads attending each session.

- The cost per dyad per session – between £40 and £684 to the public sector – is mainly driven by the number of dyads attending each session (between two and 16), but also by the number of team members present

Cost per dyad per programme

In turn, these figures were totalled for each participating dyad to arrive at a cost-per-dyad-per-programme. This varied for each dyad, depending on which sessions they attended, and how many. Thus a unique intervention cost for each dyad was calculated which reflects how much of the intervention they received.

- The cost per programme per dyad is mainly, but not entirely, driven by the number of sessions each dyad attended, between 0 (where the dyad were allocated to the intervention group but did not attend any session) and 19 (attendance at all sessions).

RYCT results

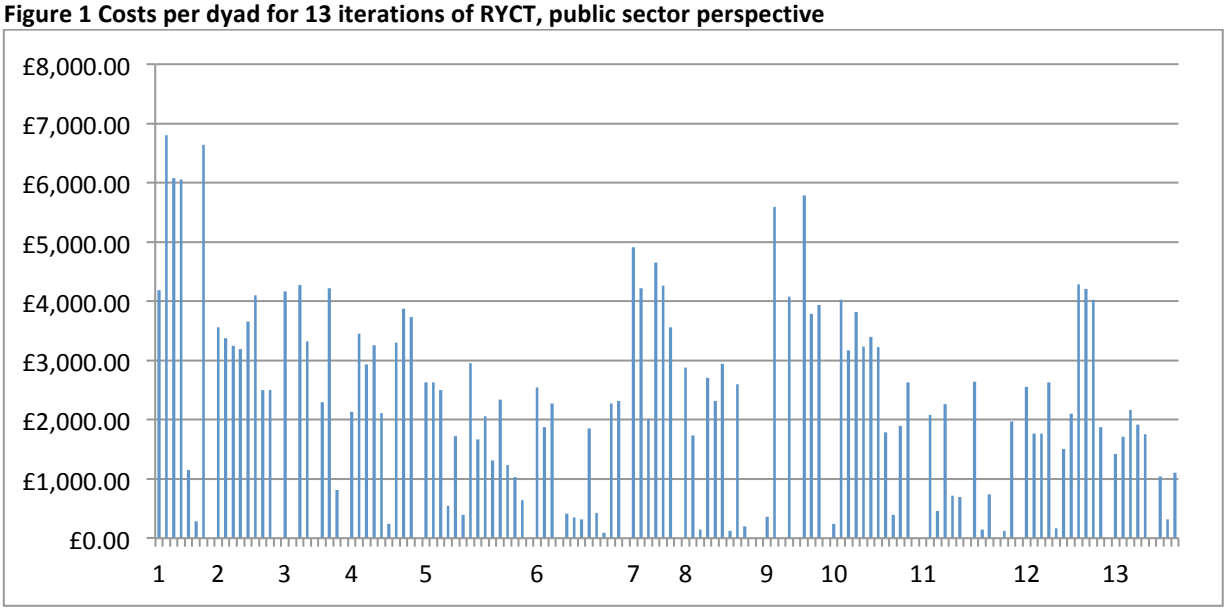
Thus, for each dyad, we have three figures representing the total intervention cost. Table 1 shows the costs of the full RYCT programme for 127 participating dyads to the public sector and for both societal perspectives employed. The more intensive 12-week part of the programme absorbed 75 per cent of the total costs.

Table 1 Costs per dyad for the 10-month RCYT programme (2011 prices)

Cost per dyad	Public sector cost	Including volunteer time: replacement cost	Including volunteer time: opportunity cost
Mean	£2,227	£2,953	£2,403
Median	£2,148	£3,066	£2,709
Range	£0 - £6,804	£0 - £8,106	£0 – £7,118

Mean and median costs are similar, although the range is wide. Figure 1 shows the distribution of costs-per-dyad-per-programme from the public sector perspective. The highest costs can be seen for the first time the RYCT programme was run (left hand side of the figure, Round 1) but also at Rounds 7 and 9. Not only are there high levels of cost variation between the iterations of the programme, but also within each Round.

Figure 1 Costs per dyad for 13 iterations of RYCT, public sector perspective



The Carer Support Programme (CSP)

This one-to-one intervention gave newer family carers access to an adult Carer Supporter (CS) who was an experienced family carer or close friend of a person with dementia (Charlesworth et al., 2008). A Carer Supporter Co-ordinator (CS-C), employed for a day a week in a local NHS Trust or voluntary sector organisation, screened, recruited and supported volunteer CS in each of the seven sites. They also matched CS and carers. The CS-C were supported by a Carer Supporter Manager (CS-M) based in a voluntary sector organisation. As with RYCT, the seven sites provided 13 iterations of CSP.

The Carer Supporters were all (unpaid) volunteers who attended training and agreed to abide by the Code of Conduct and Statement of Confidentiality. The CS provided emotional and informational support to the family carer, listened to them, and signposted carers to other local resources. They were asked not to carry out tasks that would otherwise be undertaken by a paid worker (such as home care workers), or to give advice or provide respite care. Each CS was asked to support their family carer face-to-face or by telephone for at least one hour per week for the first 12 weeks, and then two one-hour visits each month for a further seven months.

Cost estimation

As with the RYCT programme, data were collated on Excel spreadsheets. These reported the time spent by CS on travel and training and in providing support to family carers, expenses' claims, and CS-C time spent directly supporting each CS.

The public sector costs comprised the 'overarching' costs associated with activities that allowed volunteers to provide support to family carers: recruiting, training, organising and supporting the CS. We included costs for the CS-Manager (0.56 wte), the CS-Coordinators, and any additional support from the host organisation. These overarching costs were allocated to each dyad in line with the amount of time the CS spent supporting that family carer. As with the RYCT programme, we also estimated costs from a societal perspective using two values for volunteers: a replacement cost (health care assistant) and then an opportunity cost (minimum wage).

CSP results

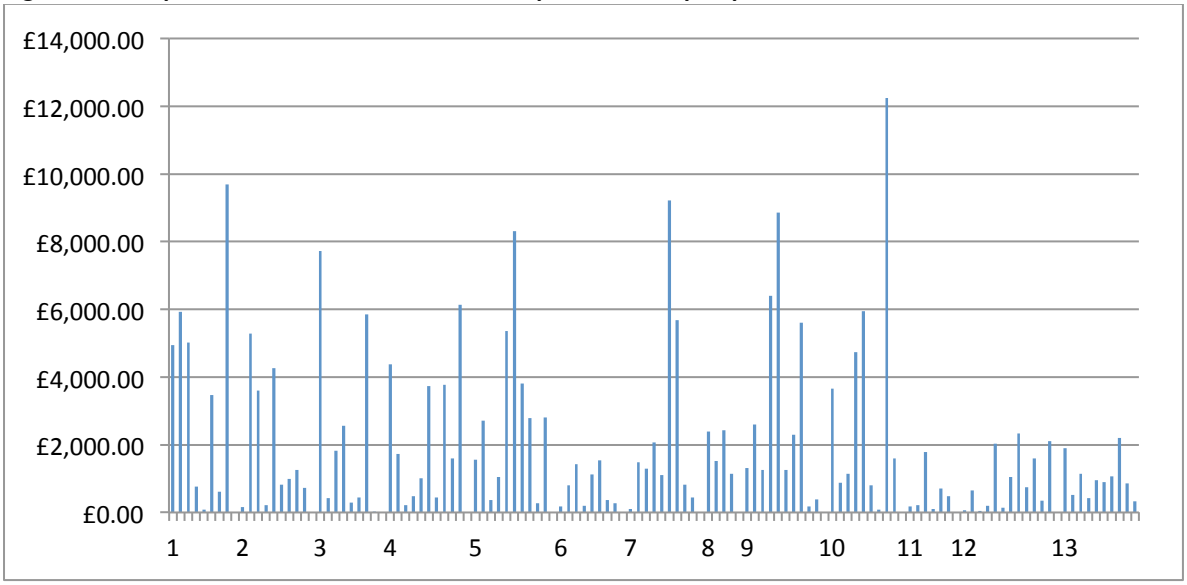
Table 2 shows the costs from the public sector and societal perspectives for the Carer Support Programme, which was provided to 109 participating family carers who were supporting people with dementia.

Table 2 Cost per carer for the full ten-month CSP programme

Cost per dyad	Public sector cost	Including CS time: replacement cost	Including CS time: opportunity cost
Mean	£2,136	£2,837	£2,339
Median	£1,143	£1,817	£1,390
Range	£32 - £12,249	£36 - £14,489	£33 - £12,782

For the CSP, in contrast to the RYCT programme, median costs are much lower than the mean. However, the final row of the table again shows a wide range of costs per carer. This is illustrated in Figure 2 from the public sector perspective (CS time valued at £0) for each iteration of the CSP programme. There is considerable cost variation within, as well as between the iterations. Five dyads (Rounds 1, 5, 7, 9 and 10) have total CSP intervention costs higher than £8,000.

Figure 2 Costs per carer for 13 iterations of CSP, public sector perspective



Conclusion

Mean public sector costs for the RYCT or CSP interventions are remarkably similar at just over £2,100 per dyad (2011 prices). Median costs are slightly higher for the RYCT programme, but the range is wider for the CSP where the highest cost per dyad is twice as much as the RYCT highest cost. These costs accrue over a ten-month period so the mean weekly cost would be around £50 for either RYCT or CSP. To set these costs in context, the national average cost for an older person with mental health needs who stays in hospital for a week is £2,233, the average cost per week for a private sector nursing home for the same year was £719, and the costs of a home care worker for a weekday hour is £18 (Curtis, 2011).

Both RYCT and CSP rely on time contributions from local volunteers, particularly CSP. If health care assistants were employed by the health trust to replace the Carer Support hours provided by volunteers, the mean public sector costs for both RYCT and CSP would rise by a further third (around £700; see the second data column in Tables 1 and 2).

Costs for both interventions show considerable variation within each of the 13 iterations. For the CSP these relate directly to the amount of time each Carer Supporter spends with the family carer. For RYCT, the group intervention, the picture is more complex. The number and type of team member attending each session caused the cost-per-session to vary. After the Round 1 pilot, sites were asked to moderate the staff numbers at each session to the expected participant numbers, but considerable variation in the cost-per-dyad-per-session remains, in part caused by participant attendance. To encourage attendance, participants could be offered help with travel to the sessions (taxis, for example), and they were contacted before the session to remind them of date and timing. Even so, attendance at some sessions was low, with the complexity of daily caring tasks and health issues often leading to last-minute non-attendance. These variations in the 'dose' of intervention that each participant received (represented by the cost-per-dyad-per-programme) might make a difference to outcomes either for the family carer or the person with dementia. This is just one of the questions that will be addressed in the full economic analysis.

References

Barrett, B. & Byford, S. (2008) The challenges of estimating the unit cost of group based therapies, in L. Curtis (ed.) *Unit Costs of Health and Social Care 2008,* Personal Social Services Research Unit, University of Kent, Canterbury.

Bonin, E. & Beecham, J. (2012) Costing multi-site , group-based CBT workshops, in L.Curtis (ed.) *Unit Costs of Health and Social Care 2012,* Personal Social Services Research Unit, University of Kent, Canterbury.

Charlesworth, G., Burnell, K., Beecham, J., Hoare Z., Hoe, J., Wenborn, J., Knapp, M., Woods, B. & Orrell, M. (2011) Peer support for family carers of people with dementia, alone or in combination with group reminiscence in a factorial design: study protocol for a randomized controlled trial, *BMC Trials*, 12, 205.

Charlesworth, G., Shepstone, L., Wilson, E., Thalanany, M., Mugford, M. & Poland, F. (2008) Does befriending by trained lay workers improve psychological well-being and quality of life for carers of people with dementia, and at what cost? *Health Technology Assessme*nt, 12, 1-78.

Curtis, L. (2011) *Unit Costs of Health and Social Care 2011,* Personal Social Services Research Unit, University of Kent, Canterbury.

Schweitzer, P. & Bruce, E. (2008) *Remembering Yesterday, Caring Today – Reminiscence in Dementia Care: A Guide to Good Practice,* Jessica Kingsley Publishers, London.

Acknowledgements

Many thanks to Shaheen Ahmad and Vicki Grant for collating the data on which these costs are based, and to the staff members and volunteers who recorded the details. We also extend our thanks to the SHIELD researchers and those who provided the RYCT and CSP interventions.

Disclaimer

This paper reports independent research funded by the National Institute for Health Research under its Programme Grants for Applied Research Programme (RP-PG-0606-1083). The views expressed in this publication are those of the author(s) and not necessarily those of the NHS, the National Institute for Health Research or the Department of Health.