

## **OCCUPATIONAL THERAPY IN NURSING HOME LIAISON SERVICE**

The purpose of this report is to provide an overview of the role of Occupational Therapy in a nursing home liaison service. The Alzheimer's Society (2013) estimate that 80% of residents living in care homes have dementia. Given this high number, creating the right environment for people with dementia is relevant to all residents in all types of care homes. Prior to going into a care home it is likely that they will have alongside their cognitive impairment had several hospital admissions, possibly falls or other frightening episodes, or experienced a period of loss such as bereavement. Can we really expect care home staff to have the expertise and time to address all these issues?

### **Occupational Therapy Theory and Philosophy**

The heart of Occupational Therapy philosophy is that all people share an innate occupational nature which exists in the framework of environment and time. Time reveals itself as a vacuum, inviting us to fill it with 'doing'. Without occupation/activity time weighs heavily on us irrespective of our physical and psychological needs. Occupational Therapy enables people to engage in activities and occupations that provide meaning and satisfaction and that support their physical and emotional well-being (Kielhofner, 2007).

### **Occupation/Activity**

What is occupation and why is it important? Occupation is defined as everything we 'do'. To be emotionally and physically well we need to actively participate in daily life. This is not an added bonus of good care but an essential requirement. When a person is left to sit for most of the day with little movement or stimulation a number of detrimental physical, psychological and social changes can occur.

The provision of meaningful occupation or activity appropriate to individual residents' interests and abilities is a complex process. Sadly, the level of inactivity within care homes remains high and engaging people with dementia a particular challenge. Occupational Therapy assessment and intervention can determine what constitutes 'good' activity provision within care homes for residents with dementia. It can identify a practical, evidence-based benchmark tool to evaluate current practice and promote excellence in care home activities. Quality of life in care homes means encouraging occupational outcomes that help to deliver dignity, respect and personalised care.

Integrated and person centred care is accepted to be the best way to meet their needs, yet 441,000 older people living in nursing and residential care homes in the UK do not have the same access to Occupational Therapy as those living in their own. College of OT (2014)

The Alzheimer's Society's "Home from Home" report identified:

*“Availability of activity is a major determinant of quality of life and affects mortality rates, depression, physical function and behavioural symptoms”*(2007,p5).

The National Institute for Health and Care Excellence (NICE) states:

*“A lack of activity and limited access to essential healthcare services can have a detrimental impact on a person's mental wellbeing”* (2013,p1).

However the Alzheimer's Society's "Home from Home" report found that the typical person in a care home spent only two minutes interacting with staff or other residents over a six hour period of observation, excluding time spent on care tasks. In addition, some residents with severe dementia had been left alone in their room for hours with no attempt from staff to engage with them (Alzheimer's Society, 2007). A lack of physical activity puts people at greater risk of falls and other health complications, with social engagement influencing a person's mortality to an even greater degree. The link between quality care that includes access to occupation and reduced demands on healthcare services is clear.

Commissioning for care homes should take into account this highly vulnerable group who go into care homes for extra support, but not to relinquish the activities they enjoy. There has been progress, the National Institute for Health and Care Excellence (NICE) Quality Standards on mental wellbeing of care home residents, calls for more spontaneous and planned opportunities for people to participate in meaningful activity. These Quality Standards state that:

- Older people in care homes are offered opportunities during their day to participate in meaningful activity that promotes their health and wellbeing (Quality statement 1);
  - and
  - Older people in care homes are enabled to maintain and develop their personal identity. (Quality statement 2).
- (NICE 2013)

Care homes will continue to be an important component of care provision for older people with dementia and for 20 per cent of over 85-year-olds; it is their permanent place of residence, their home. They are part of their local communities and should not be left in a vacuum when it comes to proactive care.

*‘Care homes can provide an environment for someone to thrive and activity is key to people achieving good health and social care outcomes.’*

## **Enabling Occupation**

Occupational Therapists working within nursing home liaison services can offer support and training to staff to recognise how their beliefs impact on their practice and how approach and language can be enabling to a resident, or encourage dependency.

Understanding how to adapt an activity so that someone can participate when they may have cognitive impairment, sensory impairment, frailty, limited range of movement, ongoing pain or discomfort, are skills that we cannot expect from care home staff. and lies in the expertise of the Occupational Therapist.

If asked about their perceptions of a care home, many people will picture a communal room with residents sitting around the sides. The main activity in an older person's day is to go into the communal lounge and sit, leaving only to use the toilet, eat lunch or return to their room. Research by the Alzheimer's Society has shown that many care homes are still not providing person-centred care for older people. One of the major problems identified was that older people in care homes do not have access to enough activities or ways to occupy their time. The Occupational Therapy assessment and intervention in the use of occupation for meaningful activity and environmental factors such as how a communal room is laid out and availability of appropriate seating is vital

The Occupational Therapists role in assessing correct positioning when seated can increase a person's awareness of what is going on around them, help their communication and improve their reach and ability to do activities. This is designed to promote a conversation between management, staff, residents and their family so that they can improve and maintain quality of life in the care home.

When residents experience long periods of immobility, seating can become a health need. Poor positioning can cause skin to break down; pain and discomfort; joint stiffness; poor posture; fixed contractures; and increase the risk of falls. An older person's independence can be influenced by their seating and positioning over the full 24 hours of a day.

However, expanding training and advice by Occupational Therapists would enable residents and care staff to understand:

- the importance of seating and positioning
- how it can enable a resident's awareness of what is going on around them
- manage barriers to occupation
- adapt tasks; and
- increase ability to take part in activities

Assessment for seating and positioning by an Occupational Therapist may only be commissioned for residents in receipt of continuing healthcare funding or a personal budget.

The use of OT specific cognitive functional assessments e.g. Routine Task Inventory, can to determine residents level of cognition and occupational performance .Also, the Pool Activity Level (PAL) Instrument is very helpful in assessment and guiding carer support at the appropriate level for each

individual (Pool,2012).Occupational Therapy believes that occupation/activity is a measure of quality of care.

### **Putting It into Practice**

There are many aspects of Occupational Therapy, the complexities of which are not always appreciated by the lay-person; therefore the care worker team may require training to appreciate the aims, objectives and risk assessment of activities that they deliver, and to help residents reach their full potential and well-being. Research shows that when staff are given such training from an OT it raised their understanding and interest in the importance of graded activities that are appropriate to each resident's ability and interests (Boyd et al, 2014).

Occupational Therapy promotes balance, motor, sensory, perceptual, cognitive, intrapersonal and interpersonal skills, spirituality, self-confidence, self-esteem, mood, and independence to name a few. Through engagement in graded activity, it helps to keep residents mobile and flexible, thereby promoting independence and control. For example, ball games keep arms flexible which helps a resident retain the ability to raise an arm to brush their own hair.

Residents who want to, should be included as much as possible in daily routines and failure free activities. . Meaningful activity is all about correct activity care-planning and finding the 'right fit' for individuals.

### **When You Get It Right...**

The following examples will help to evidence the benefits of activities:

At a Dementia Nursing Home in Devon, a comment from the daughter of a resident demonstrates an Occupational Therapist's intervention and analysis of personalised activities that can make to a person's life:

*"I think Occupational Therapy activities in a home can be very under-valued by management, other members of staff and visitors. Too many people have the attitude that those with dementia aren't worth bothering with or that 'where's the point they won't remember in a couple of minutes'. Some people don't seem to realise that when a person is made to feel 'Happy' even if they can't remember why they feel 'happy' the wonderful feel good factor can stay with that person for a long time. When you are just sat in a home and there is almost nothing going on around you, you switch off into a world that is a very sad and lonely place. Therefore being part of an activity is so important. My Dad has benefited from your visits because you bring LIFE into his life. You treat him as an individual who has needs, and who needs to know he matters. Your analysis of activities that have been important to him brings emotional and well being into his life and make him 'Happy'. They make him feel that he is ALIVE and that someone cares. Having the ability to participate in an activity that has been important throughout his life allows him to be part of a bigger picture giving him a sense of belonging. You found out what his likes and dislikes are and provide him with stimulation and graded activities to suit his needs. Besides football Dad loves music, singing and dancing. You found that out. Dad has lost the ability to have a conversation but you found that you can communicate with him and make him happy by singing with him. You always make him smile and give*

*us as family glimpses of my Dad as he used to be and that's irreplaceable.  
Thank you so much."*

Occupation is at the heart of the Occupational Therapy profession. Presently, there are few Occupational Therapists employed in nursing home liaison teams but it is an emerging role for Occupational Therapists and it makes total sense that Occupational Therapists - specialists in activities, should be playing a larger part in training, guidance and leading the way to 'getting it right'. Every individual in every nursing home deserves to be given opportunities to engage in meaningful activities of their choice as a right not a privilege.

The report has explored some of the benefits, complexities and barriers to person-centred activity provision in nursing homes and promoting good practice.

### **Areas that may indicate a referral to the Liaison Mental Health Occupational Therapist for support:**

- When a person is expressing “**signs of ill being**”, and/or “**expressed needs**” which staff are having difficulties resolving. The OT can explore the possible reasons for the signs being displayed (explore the “unmet need/s” that the individual maybe expressing) and any possible non-pharmacological management of the behaviour. This is in line with the NICE/SCIE, 2007 guidelines which only recommends antipsychotics be used after other approaches have been tried and unless the person is at immediate risk of harming self or others, or severely distressed.  
**Note**, If urgent an available member of the team will see.
- For assessment of an individual’s ability to carry out **activities of daily living (ADL)**, e.g. washing, dressing, feeding, leisure activities, productive tasks, where advice is needed on the appropriate care support when a person has cognitive functional difficulties (e.g. difficulties with memory, concentration, orientation, motivation, problems solving and safety awareness).
- Specialist seating and positioning assessments
- When staff need support to implement from theory to practice the principles from the Dementia Awareness Training to promote person centred care.
- When staff need advice on therapeutic home environments to support an individual’s wellbeing and ability to manage daily activities.
- When Activities Coordinators need advice and support in their role, including networking.
- Family/carer advice, support and education, and sign posting.

### **Example:**

The resident referred to the Mental Health Occupational Therapist in the nursing home liaison team. The referral noted that the resident was “verbally aggressive and agitated”. More information was taken from care home staff and family regarding the residents behaviour/ communication to staff/ expressed need e.g. when, where occurs, how it occurs, frequency that it occurs. The resident’s cognitive functional level was determined by a combination of carer report, skilled observation and standardised assessment tools. Personal history including past job, family, personality, likes/dislikes and interests, habits and routines was obtained. Possible physical reasons such as undetected pain, mood and side effects of medications were also considered and addressed.

The resident previously worked as a carpenter and was also in the army. The person was assessed to be functioning within Allen’s cognitive Level 3. From this understanding of their cognitive functioning level it was determined that the individual can carry out one step repetitive tasks with close supervision or verbal prompting. Verbal aggression and agitated highlighted by staff maybe due to inappropriate stimulation, for example daily activities not being matched to the individuals remaining abilities and personal preferences. The OT may advise on adapting tasks and activities to enable an individual to utilise their remaining skills and strengths. The advice given may include one step activities such as sanding wooden items; polishing shoes and/or listening to a favourite piece of music for a short period; utilising shorter instructions; giving extra time to complete activities; where appropriate placing items for activities in the resident’s hand i.e. hand cloth; starting the action with items to support participation; prompting the resident to change the area that they are attending to. Change of environment may also be helpful i.e. quieter lounge, out door walk.

JanetBevan/PrincipalOT/CwmtafUHB/OPMH/June15

References:

Alzheimer's Society (2007). **Home from Home: A report highlighting opportunities for improving standards of dementia care in care homes**, 4.1 Lack of activities and occupation, p. 5.

Boyd et al (2014). **Bored to death: tackling lack of activity in care homes**. British Journal of Mental Health Nursing 16 (2), 98-102.  
Inspection Programme 2012, Summary, p.6.

Kielhofner G (2007). Model of human Occupation: Theory and Application. Fourth Ed. Edinburgh, Lippincott, Williams & Wilkins.

National Institute for Health and Care Excellence (2013). **Quality Standard 50: Mental wellbeing of older people in care homes. Quality Statement 1: Participation in meaningful activity**. London: NICE. Available at <http://publications.nice.org.uk/mental-wellbeing-of-older-people-in-care-homes-qs50/quality-statement-1-participation-in-meaningfulactivity>.

Pool J (2011). **The Pool Activity Level (PAL) Instrument for occupational profiling: British London**

Tancock, K. (2014) **Residential care means more than a chair to sit in** Health Service Journal 14(3)

# Prescribing of psychotropic medication for nursing home residents with dementia: a general practitioner survey

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**Objective:** The aim of this study was to identify factors influencing the prescribing of psychotropic medication by general practitioners (GPs) to nursing home residents with dementia.

**Subjects and methods:** GPs with experience in nursing homes were recruited through professional body newsletter advertising, while 1,000 randomly selected GPs from south-eastern Australia were invited to participate, along with a targeted group of GPs in Tasmania. An anonymous survey was used to collect GPs' opinions.

**Results:** A lack of nursing staff and resources was cited as the major barrier to GPs recommending non-pharmacological techniques for behavioral and psychological symptoms of dementia (BPSD; cited by 55%; 78/141), and increasing staff levels at the nursing home ranked as the most important factor to reduce the usage of psychotropic agents (cited by 60%; 76/126).

**Conclusion:** According to GPs, strategies to reduce the reliance on psychotropic medication by nursing home residents should be directed toward improved staffing and resources at the facilities.

**Keywords:** dementia, nursing homes, general practitioners, antipsychotic agents, benzodiazepines

## Impact statement

The findings of this research suggest that, according to general practitioners (GPs), reforming the prescribing of psychotropic medication in nursing home residents with behavioral and psychological symptoms of dementia is best achieved by increasing the availability of non-pharmacological, diversional and other behavior modification resources.

## Introduction

Behavioral and psychological symptoms of dementia (BPSD) occur in up to 90% of patients with dementia over the course of their illness, lead to distress to patients and caregivers, and increase health care costs associated with hospitalizations.<sup>1</sup>

Guidelines routinely suggest non-pharmacological interventions as the first-line therapy for BPSD, with certain psychotropic agents, such as antipsychotic medication, being second line due to the limited benefit and risk of serious adverse effects.<sup>2</sup> The use of antipsychotics in these patients has been associated with an increased risk of mortality, hip fractures, thrombotic and cardiovascular events, and hospitalizations.<sup>3</sup> Psychosocial approaches are preferred, tailoring them to the needs of the patient and creating a physical environment to reduce distress.<sup>4</sup>

There are concerns that there is a significant gap between guideline recommendations and practice in nursing home facilities when managing BPSD in Australia.<sup>5,6</sup>

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Internationally, similar concerns have also been echoed recently.<sup>7</sup> The factors involved in prescribing and withdrawing psychotropic agents by general practitioners (GPs) in the nursing home setting include GPs having a very low willingness to discontinue antipsychotics for fear of worsening symptoms<sup>8</sup> and an overexpectation of benefit from antipsychotic therapy in BPSD.<sup>9</sup> One study found that GPs were critical of their knowledge and management in this area and suggested that efforts should focus on educational interventions for GPs.<sup>10</sup> In Australia, however, there are no published papers on the barriers to the evidence-based prescribing of psychotropic medication for people with BPSD in nursing homes.

We aimed to identify the factors influencing the prescribing of psychotropic medication to residents of Australian nursing homes with BPSD, and therefore determine strategies to promote more appropriate use of these medications.

## Subjects and methods

### Participant recruitment

Three iterative strategies were required to recruit enough Australian GPs to ensure an adequate sample size. Initially, GPs with experience in patient care in nursing homes were recruited through professional body advertising in newsletters in the state of Tasmania. This strategy had limited success. Next, 1,000 GPs mostly from southeastern Australia were randomly selected from an Australian Health Directory and mailed, with a follow up email sent to the surgeries with listed email addresses. Finally, a targeted group of 273 GPs in Tasmania who were known to have patients in nursing homes, based on their previous involvement in clinical activities, was invited by mail to complete the survey. While the GPs in this study were from only two states in Australia, their demographics were similar to the wider GP population in Australia.<sup>11</sup> This study received ethical approval from the Tasmanian Social Sciences Human Research Ethics Committee (ethics reference number H0014615). Consent was assumed through completing the survey.

### Questionnaire development

The anonymous 26-question survey was self-completed through either a paper-based version or an online version using Lime Survey.<sup>12</sup> Participants were invited to enter a prize draw for an electronic device as an incentive.

This original questionnaire was developed from the clinical experience of the researchers and the results of international research.<sup>8–10,13,14</sup> The questionnaire was piloted in a small group of GPs and pharmacists and refined based on their feedback.

## Analysis

The outcomes of interest included GP perception of the factors that are most important to reduce psychotropic prescribing and barriers to using non-pharmacological techniques for BPSD, based on those found in the literature. The self-reported prescribing habits in BPSD and expectation of benefit were also of interest, with a Likert scale used to determine how effective the GPs believed the medication to be in practice. The survey relied on the GPs' definition of settled and stabilized patients.

Data were analyzed using SPSS version 22 (IBM Corporation, Armonk, NY, USA).<sup>15</sup> Chi-square tests were used, with a *P*-value of <0.05 considered significant. Responses to a 5-point Likert-type scale were collapsed into two categories. The first category included "rarely to some patients," while the second category included "50% to most or all patients," as given in Table 1. Responses to ranking questions were presented with the top two ranked questions, as shown in Figures 1 and 2.

## Results

### Demographics

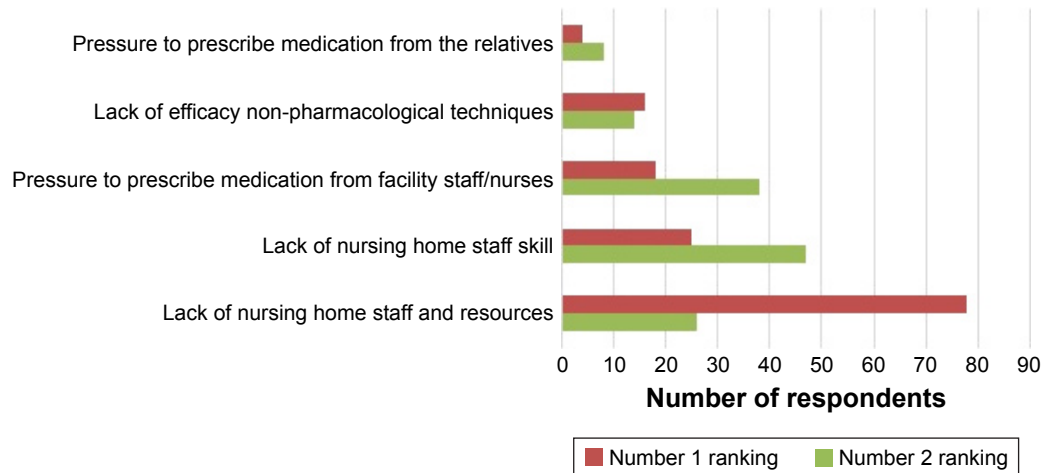
In total, 177 responses were returned. The majority (89%; 158/177) of the respondents were from Victoria and Tasmania, with most (61%; 109/177) having been registered as a medical practitioner for 20–40 years (Table 2). The uptake of the survey was probably limited by needing access to GPs with the appropriate patients. Response rates were difficult

**Table 1** Prescribing habits

Variable	50% to most or all patients	Rarely to some patients
<b>Thinking about your patients, what do you believe is the extent of positive benefit (such as a reduction in behaviors) for the following agents in BPSD?</b>		
Second-generation antipsychotics	63% (112/177)	36% (63/177)
First-generation antipsychotics	25% (44/177)	70% (125/177)
Benzodiazepines	23% (41/177)	76% (134/177)
Antidepressants	35% (62/177)	65% (113/177)
<b>In the following situations, would you prescribe an antipsychotic in dementia?</b>		
Physical aggression	63% (111/177)	37% (64/177)
Verbal aggression	32% (56/177)	66% (116/177)
Agitation and unsettled	43% (76/177)	56% (100/177)
Calling out	14% (24/177)	85% (150/177)
Wandering	10% (17/177)	89% (157/177)
<b>In your experience, to what extent do adverse effects from the following agents limit their prescribing in BPSD?</b>		
Second-generation antipsychotics	32% (56/177)	68% (121/177)
First-generation antipsychotics	65% (112/177)	35% (59/177)
Benzodiazepines	54% (96/177)	45% (79/177)
Antidepressants	23% (40/177)	77% (136/177)

**Abbreviation:** BPSD, behavioral and psychological symptoms of dementia.

**What are the barriers to you recommending non-pharmacological management of BPSD?  
Please number them in order of significance, with 1 being the biggest barrier**

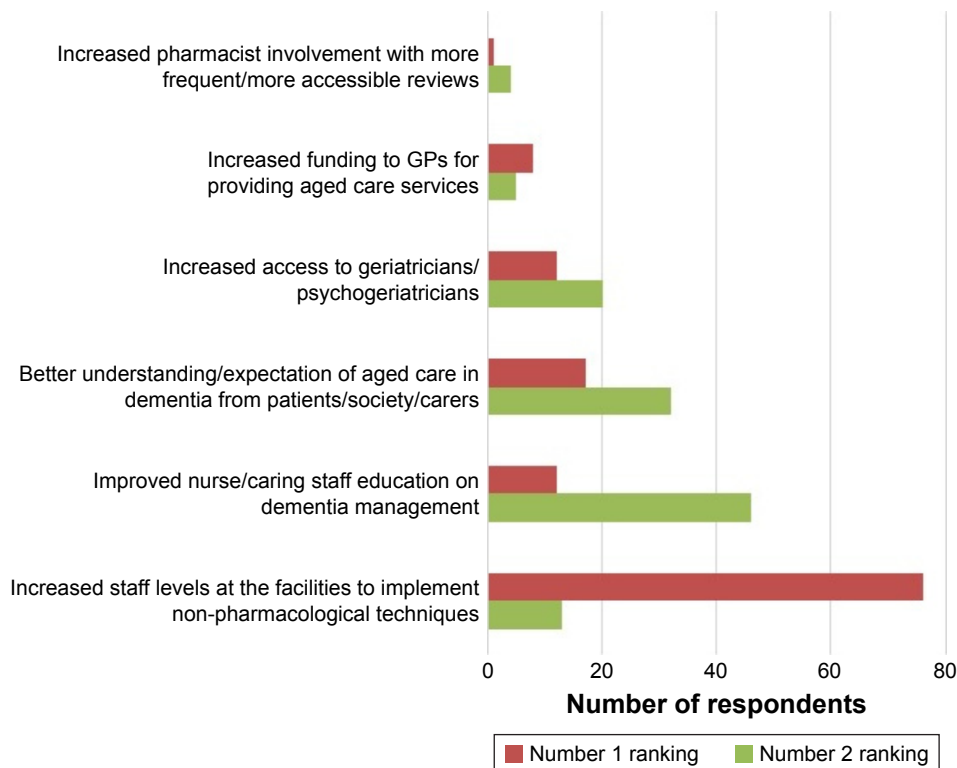


**Figure 1** Barriers to non-pharmacological management of BPSD.  
**Abbreviation:** BPSD, behavioral and psychological symptoms of dementia.

to calculate, with an unknown number of GPs ineligible to complete the survey because they did not have nursing home patients under their care at the time of the study. Of the 1,000 randomly selected GPs, it is expected that approximately

half would have been eligible to complete the survey, based on a 2015/16 survey indicating 49% of GPs have provided care in a residential aged care facility in the previous month.<sup>16</sup> This suggests that a response rate of ~21% was

**Which of the following would help to reduce the usage of psychotropic agents in BPSD?  
Please number them with 1 being the most influential**



**Figure 2** What would help reduce the usage of psychotropic agents in BPSD?  
**Abbreviations:** BPSD, behavioral and psychological symptoms of dementia; GPs, general practitioners.

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**Table 2** Demographics

Variable	Percentage/number
Total number of responses	177
Female	43% (76/175)
Male	57% (99/175)
<b>Length of time registered as a medical practitioner</b>	
For <5 years	10% (17/177)
For 6–10 years	6% (10/177)
For 11–20 years	15% (27/177)
For 20–40 years	62% (109/177)
For ≥40 years	8% (14/177)

achieved (105/490). For the 273 Tasmanian GPs known to have residents in nursing homes, the response rate was 23% (64/273).

### Barriers to non-pharmacological interventions and psychotropic medication reduction

“Aged care facility staffing and resources” was clearly highlighted as the number 1 barrier to non-pharmacological methods being utilized in BPSD. Likewise, directing funding to adequately staff facilities was the preference to reduce psychotropic usage in aged care (Figures 1 and 2).

### Prescribing habits

Responses to selected questions concerning prescribing habits are given in Table 1. The vast majority expressed a desire to reduce psychotropic medication in completely settled or stabilized patients. When asked what they would do if a patient had been taking an antipsychotic for 6 months with no ongoing difficulties, 76% (135/177) indicated they would reduce the dosage of an antipsychotic with a view to cessation if possible. Similarly, when asked about benzodiazepine prescribing for BPSD in settled patients, 90% (159/176) indicated they would be likely to reduce or cease the benzodiazepine.

### Management of BPSD

When asked if they routinely recommend non-pharmacological interventions before considering medication in BPSD, 81% (144/177) agreed or strongly agreed. About half (47%; 84/177) agreed that they feel they require more training to improve how they manage BPSD, with 24% (42/177) disagreeing.

The majority of respondents, 71% (126/177), indicated that they review their aged care residents’ medication three-monthly or more often, with 19% (34/177) reviewing the medication six-monthly, and the remainder annually or less.

### Influences on prescribing for BPSD in nursing homes

Most GPs indicated that nurses (91%; 160/177) and family of residents (59%; 105/177) influence their prescribing. Interestingly, only one-third (33%; 58/177) indicated that nurses have requested psychotropic dose reductions and about the same from family (36%; 64/177). The majority of GPs (81%; 143/177) reported having had to decline a request from family or staff to prescribe an antipsychotic, with 39% (69/177) having to regularly refuse. Experienced GPs (20–40 years of experience) were significantly less likely (5%; 9/109) to rate pressure to prescribe from aged care facility staff as a barrier to non-pharmacological techniques than GP practising <5 years (29%; 5/17). Pharmacists were cited as the most likely health profession to request dose reductions (51%; 91/177); however, they were stated to only influence the actual prescribing by 28% (50/177). Over half of GPs (56%; 100/177) were confident that pharmacist-conducted residential medication management reviews (RMMRs) are beneficial in BPSD management, with a further 25% (44/177) who were unsure.

Concern for a reduced quality of life when withdrawing psychotropic agents received a mixed response, with 42% (75/177) agreeing they were concerned that withdrawing medication would impact negatively on the quality of life, leading to a return of challenging behaviors and disturbing psychological symptoms. About the same number (41%; 73/177) disagreed with this statement.

Confidence to reduce dosing after a failed first attempt was quite variable, with 35% (62/177) stating they did not feel confident to trial a second dose reduction, 23% (41/177) were undecided, and 42% (74/177) feeling confident to trial a second reduction attempt.

### Discussion

Our findings imply that reforming the prescribing of antipsychotic medication in nursing homes is best targeted toward staffing levels and increasing the availability of diversional and other behavior modification resources. Similarly, a study from the Netherlands found staffing issues as a factor related to psychotropic drug prescribing.<sup>17</sup>

In this study, increasing funding to GPs was not shown as priority to reduce psychotropic prescribing in nursing homes. This contrasts with other studies into servicing nursing homes in Australia<sup>18</sup> and the USA<sup>13</sup> which found that levels of reimbursement and time were important barriers to GPs providing a range of services in this setting. It is possible that in our study GPs perceived that increased funding to

them would not improve access to behavioral and support therapies in dementia care as they are not fund holders for these services.

GPs in our study, and similarly in a Dutch study,<sup>9</sup> overestimated the benefit in symptom relief of second-generation antipsychotics compared with symptom outcomes in field studies<sup>19</sup> and therapeutic guidelines,<sup>2</sup> with 63% of GPs expecting benefit in half of all patients. The number needed to treat for second-generation antipsychotics in dementia is expected to be 5–14.<sup>19</sup> This overexpectation of benefit, as given in Table 1, could be contributing to overusage. Better dissemination of practice guidelines cautioning about the limited benefit of antipsychotic medication in BPSD may prompt practitioners to more rationally prescribe these medications.

The preference for more training was expressed by around half of the respondents in our study. An educational solution to this problem is also supported by research from Ireland which found that efforts should focus on supporting GPs by means of educational interventions and health services promoting collaboration.<sup>10</sup>

Our research found a strong willingness, in principle, to reduce psychotropic medication in BPSD with, for example, two-thirds of GPs being confident to try a second reduction attempt after a failed attempt. Concern about a negative impact on the quality of life after drug withdrawal was evenly split among respondents. This contrasts to a study from Belgium, which found GPs resistant to reduce antipsychotic medication, including after a failed attempt, and their concern for a negative effect on the quality of life are a large barrier to discontinuation of antipsychotics.<sup>8</sup>

Our results suggest that nursing staff have the largest influence on prescribing psychotropic medication in this setting, indicating the importance of nursing home staffing and resources for non-pharmacological interventions. This is consistent with suggestions that any reforms to improve the treatment of mental illness and BPSD in nursing homes will need to begin with considering the physical design, staffing, and skills of staff within nursing homes.<sup>20</sup> A Senate inquiry into the care of Australians living with dementia and BPSD in 2014 heard that staffing levels and training are inadequate, with no legislated staffing ratios in nursing homes.<sup>21</sup> Stakeholders reported that restraints are being used too readily to cover staff and resourcing limitations. In the inquiry, the Australian Medical Association (AMA) indicated that, with under-resourced aged care facilities and limited qualified nursing staff and sufficient numbers of carers, the need for restraint is an unfortunate reality.

Research internationally is mixed in relation to staff numbers and qualifications, and the quality of nursing homes in general. A systematic review found that focusing on the numbers of nurses fails to address the influence of other staffing factors, including training and care organization, with quality being a difficult concept to capture.<sup>22</sup> It goes on to state that further research is needed to determine the most cost-effective manner to utilize the combination of nursing skill levels. Another study found that there was no association with caregiver professional training and the care given, with a complex relationship between staffing and the quality of care provided.<sup>23</sup> While our study demonstrates the perceived need for increased staffing and resources at the facility, further research is required to determine the best models for the delivery of cost-effective and efficient non-pharmacological interventions in BPSD. This dementia care redesign in nursing homes could be informed by Effective Practice and Organization of Care (EPOC) methodology.<sup>24</sup> Repeating a similar survey in nursing staff to assess their experiences would also be worthwhile to help determine whether these perceptions are shared across professions.

Limitations of this study include the relatively small sample size and the apparent low response rate. A further limitation is relying on the GPs' recall of what they would prescribe or withdraw in certain situations. This limitation is likely to bias the responses toward the perceived best practice; however, it will provide an idea of what the GPs would like to do if there were no barriers to this practice. Although the questionnaire was not validated, it was sampled in a small number of GPs before use and refined based on their feedback. In addition, the types and severity of dementia did not form part of the survey.

## Conclusion

GPs described inadequate nursing staff levels and resources as the main factors that limit the use of non-pharmacological interventions and their ability to reduce the usage of psychotropic agents in nursing homes.

## Acknowledgment

We would like to acknowledge Dr Juanita Westbury for her early input.

## Disclosure

The authors report no conflicts of interest in this work.

## References

1. Cerejeira J, Lagarto L, Mukaetova-Ladinska EB. Behavioral and psychological symptoms of dementia. *Front Neurol.* 2012;3:73.

2. eTG. Therapeutic Guidelines. *eTG Complete*. Melbourne, VIC, Australia: Therapeutic Guidelines Limited; 2015.
3. Chiu Y, Bero L, Hessel NA, Lexchin J, Harrington C. A literature review of clinical outcomes associated with antipsychotic medication use in North American nursing home residents. *Health Policy*. 2015; 119(6):802–813.
4. Association IP. The IPA Complete Guides to Behavioural and Psychological Symptoms of Dementia, BPSD, Specialists Guide. International Psychogeriatric Association; Northfield, IL, USA: 2015.
5. NPS\_MedicineWise [webpage on the Internet]. *Antipsychotic Overuse in Dementia – Is There a Problem?* 2013. Available from: <http://www.nps.org.au/publications/health-professional/health-news-evidence/2013/antipsychotic-dementia>. Accessed June 27, 2016.
6. Hilmer SN, Gnjjidic D. Rethinking psychotropics in nursing homes. *Med J Aust*. 2013;198(2):77.
7. Helvik AS, Saltyte Benth J, Wu B, Engedal K, Selbaek G. Persistent use of psychotropic drugs in nursing home residents in Norway. *BMC Geriatr*. 2017;17(1):52.
8. Azermai M, Vander Stichele RR, Van Bortel LM, Elseviers MM. Barriers to antipsychotic discontinuation in nursing homes: an exploratory study. *Aging Ment Health*. 2014;18(3):346–353.
9. Cornege-Blokland E, Kleijer BC, Hertogh CM, van Marum RJ. Reasons to prescribe antipsychotics for the behavioral symptoms of dementia: a survey in Dutch nursing homes among physicians, nurses, and family caregivers. *J Am Med Dir Assoc*. 2012;13(1):80.e1–e6.
10. Buhagiar K, Afzal N, Cosgrave M. Behavioural and psychological symptoms of dementia in primary care: a survey of general practitioners in Ireland. *Ment Health Fam Med*. 2011;8(4):227–234.
11. The Department of Health [webpage on the Internet]. *General Practice Statistics*. 2017. Available from: <http://www.health.gov.au/internet/main/publishing.nsf/content/General+Practice+Statistics-1>. Accessed August 31, 2017.
12. LimeSurvey [homepage on the Internet]. *LimeSurvey Project Team/Carsten Schmitz (2015)/LimeSurvey: An Open Source Survey Tool/LimeSurvey Project*. Hamburg, Germany: 2015. Available from: <http://www.limesurvey.org>. Accessed September 12, 2017.
13. Hinton L, Franz CE, Reddy G, Flores Y, Kravitz RL, Barker JC. Practice constraints, behavioral problems, and dementia care: primary care physicians' perspectives. *J Gen Intern Med*. 2007;22(11):1487–1492.
14. Cohen-Mansfield J, Jensen B. Physicians' perceptions of their role in treating dementia-related behavior problems in the nursing home: actual practice and the ideal. *J Am Med Dir Assoc*. 2008;9(8):552–557.
15. IBM\_Corp. IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp; 2013.
16. Britt H, Miller GC, Henderson J, et al. [webpage on the Internet]. *General Practice Activity in Australia 2015–2016. General Practice Series No. 40*. 2016. Available from: <http://purl.library.usyd.edu.au/sup/9781743325131>. Accessed September 12, 2017.
17. Smeets CH, Smalbrugge M, Zuidema SU, et al. Factors related to psychotropic drug prescription for neuropsychiatric symptoms in nursing home residents with dementia. *J Am Med Dir Assoc*. 2014;15(11):835–840.
18. Gadzhanova S, Reed R. Medical services provided by general practitioners in residential aged-care facilities in Australia. *Med J Aust*. 2007;187(2):92–94.
19. Schneider LS, Dagerman K, Insel PS. Efficacy and adverse effects of atypical antipsychotics for dementia: meta-analysis of randomized, placebo-controlled trials. *Am J Geriatr Psychiatry*. 2006;14(3):191–210.
20. Looi JC, Macfarlane S. Psychotropic drug use in aged care facilities: a reflection of a systemic problem? *Med J Aust*. 2014;200(1):13–14.
21. Commonwealth of Australia. Care and management of younger and older Australians living with dementia and behavioural and psychiatric symptoms of dementia (BPSD). In: Australia Co, editor. *Community Affairs References Committee*. Canberra, ACT, Australia: 2014.
22. Spilsbury K, Hewitt C, Stirk L, Bowman C. The relationship between nurse staffing and quality of care in nursing homes: a systematic review. *Int J Nurs Stud*. 2011;48(6):732–750.
23. Winslow JH, Borg V. Resources and quality of care in services for the elderly. *Scand J Public Health*. 2008;36(3):272–278.
24. Hodgkinson B, Haesler EJ, Nay R, O'Donnell MH, McAuliffe LP. Effectiveness of staffing models in residential, subacute, extended aged care settings on patient and staff outcomes. *Cochrane Database Syst Rev*. 2011;(6):Cd006563.

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# A scoping review of crisis teams managing dementia in older people

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**Background:** Research on crisis teams for older adults with dementia is limited. This scoping review aimed to 1) conduct a systematic literature review reporting on the effectiveness of crisis interventions for older people with dementia and 2) conduct a scoping survey with dementia crisis teams mapping services across England to understand operational procedures and identify what is currently occurring in practice.

**Methods:** For the systematic literature review, included studies were graded using the Critical Appraisal Skills Programme checklist. For the scoping survey, Trusts across England were contacted and relevant services were identified that work with people with dementia experiencing a mental health crisis.

**Results:** The systematic literature review demonstrated limited evidence in support of crisis teams reducing the rate of hospital admissions, and despite the increase in number of studies, methodological limitations remain. For the scoping review, only half (51.8%) of the teams had a care pathway to manage crises and the primary need for referral was behavioral or psychological factors.

**Conclusion:** Evidence in the literature for the effectiveness of crisis teams for older adults with dementia remains limited. Being mainly cohort designs can make it difficult to evaluate the effectiveness of the intervention. In practice, it appears that the pathway for care managing crisis for people with dementia varies widely across services in England. There was a wide range of names given to the provision of teams managing crisis for people with dementia, which may reflect the differences in the setup and procedures of the service. To provide evidence on crisis intervention teams, a comprehensive protocol is required to deliver a standardized care pathway and measurable intervention as part of a large-scale evaluation of effectiveness.

**Keywords:** dementia, home treatment, crisis resolution, crisis, mental health, community mental health services

## Introduction

The Dementia UK report<sup>1</sup> identified people with dementia as significant users of health and social care services. People with dementia occupy a third of beds in acute medical wards, and reducing the stay of people with dementia in hospital by 1 week could generate savings of approximately £80 million a year.<sup>2</sup> Yet dementia care is frequently being delivered in an ad hoc and inefficient manner, and consequently older people in the community can experience a “conveyor belt” of care, resulting in residential care, particularly after a crisis incident and subsequent hospital admission.<sup>3</sup> A crisis can be defined as “a process where there is a stressor(s) that causes an imbalance requiring an immediate decision which leads to a desired outcome, and therefore crisis resolution. If the crisis is not resolved, the cycle continues (pg.2)”.<sup>4</sup> A key failing of service provision is the lack of information and support for people with dementia and

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their carers requiring immediate help.<sup>5</sup> The Prime Minister's Challenge on Dementia 2020 recognizes the importance of support provided post-diagnosis.<sup>6</sup> Support for family carers and the provision of rapid, simple interventions or professional support for long-term care home placement can avoid crisis hospital admissions.<sup>7</sup>

Mental health services available for younger people intend to provide coping strategies, attempt to address social and family factors that can lead to a crisis, and encouragement to draw on pre-existing support networks to manage their condition and avoid hospital admissions.<sup>8</sup> Similar services for older people with dementia are not provisioned as equitably,<sup>9</sup> and there is a lack of formal evaluation of the provision of these services.<sup>10</sup> Through joined up preventative and coordinated health care, services can be tailored to enable people with dementia to stay in their own homes, avoiding hospital admissions and crisis situations.<sup>11</sup> Previous survey research exploring the provision of Crisis Resolution Teams (CRTs) across 79 Trusts in England found that while 99% of responding Trusts provided acute mental health services, less than a third of Trusts offered the same CRT across age groups through a specialist team, adult CRT, or intermediate care team.<sup>10</sup> People with dementia were only able to access crisis services in a tenth of areas, with just one in six teams frequently providing services to older people. An exploration of the attitudes of staff working with older people experiencing mental health issues<sup>12</sup> highlighted the following: a lack of staff training in dementia, crisis work taking longer to manage, and pressure on resources. However, McNab et al investigated on older people's home treatment teams (HTTs) that provided support to carers and signposted the person with dementia to local services and reported high patient satisfaction and a reduction in bed occupancy.<sup>13</sup> There is, however, a systematic review of crisis teams that identified only low-level quality evidence for the effectiveness of such teams in reducing admissions to hospital,<sup>14</sup> suggesting a gap in the current literature. Potentially, a separate service for older adults is necessary as there is an increased likelihood that ill health impacting mental health requires specialized care.

Overall, the evidence surrounding older people's services that work with people who have dementia and are experiencing a crisis is dated, and it is unclear if anything has changed. This literature review intends to identify studies specifically targeting older people with dementia who experience a crisis to provide an update and highlight where future research is required. The online survey allows for an update of current knowledge on services that are working with people with dementia in crises.

## Aims

- To conduct a systematic review to investigate the impact of crisis teams on outcomes, such as reducing hospital admissions for people with dementia, in comparison with usual care.
- Use an online scoping survey of teams managing crisis in people with dementia in England to broaden our understanding of what is currently working in practice.

## Methods

### Systematic review

A previous systematic review on the effectiveness of older adult crisis teams was carried out for the Home Treatment Programme study as part of the Support at Home Interventions to Enhance Life in Dementia project (RP-PG-0606-1083) led by Professor Orrell. The grant for the Achieving Quality and Effectiveness in Dementia Using Crisis Teams (AQUEDUCT) study was awarded to Professor Orrell and is developed from the Home Treatment Programme study. So, the updated systematic review is built on the original work carried out,<sup>14</sup> whereas the scoping survey aims to fill the gap in the existing literature by demonstrating the current use of older adult crisis teams in England.

### Types of articles included in the review

All methodological designs were eligible for inclusion in this review, such as controlled comparison studies, including randomized controlled trials (RCTs), controlled before and after studies, interrupted time series, observational studies, theoretical papers, and government frameworks and policies. Studies were included if a crisis experienced by a person with dementia met the criteria of "an urgent need for an assessment and intervention for a person living in the community".<sup>15</sup>

### Types of comparison groups

Experimental intervention: Older people with dementia in receipt of any mental health crisis resolution/home treatment intervention.

Control: Control groups included "treatment as usual," standard community treatment, waiting list controls, and matched controls.

### Types of outcome measures

Primary outcomes included the number of hospital admissions, length of hospital stay, maintenance of community residence, and patient quality of life. Secondary outcome measures included the patient's cognition, activities of daily living, mortality rates, use of medication, level of patient

and/or carer satisfaction, level of service use, and health and social care costs.

## Types of participants

Participant inclusion criteria for the studies were participants aged 65 years or older, with a diagnosis of dementia, and living in the community.

## Search methods for identification of studies

Electronic searches of databases searched on July 27, 2015 included MEDLINE, EMBASE, PsycINFO, CINAHL, and LILACS, and gray literature sources were also included. A previous systematic search identified studies dating back to 1965–2008, and consequently this search period ranged from January 2008 to July 27, 2015.<sup>14</sup> The search terms used for database searches included old\*, elder\*, aged, patient care management, patient care team, case management, intensive case management, care management, managed care programs, community mental health team, specialist mental health service, community mental health, community mental health services, community mental health centers, community care, long-term care, community based long-term care, dementia care, intermediate care, crisis resolution, crisis intervention, home treatment, home care, home nursing, home care services, care coordination, care pathway, managed care, outreach, assertive outreach, disease management, carer support, family intervention, admiral nursing, assessment and service arrangement, health services for the aged, geriatric health service, and family-based therapy. The search terms were identified in a previous systematic review,<sup>14</sup> and the review was updated. A large number of search terms were used to be as inclusive as possible of potentially relevant work being undertaken in practice.

## Data collection and analysis

In accordance with the defined inclusion criteria, titles, and abstracts of citations obtained from the search were examined by a researcher (AS) and irrelevant articles discarded. For the citations considered potentially relevant the full text was obtained and further information was sought from study authors if required. Two independent reviewers (AS, JY) assessed the methodological quality of papers using the Critical Appraisal Skills Programme Centre (CASP) checklists for cohort and case-control studies.<sup>16</sup> All studies were assigned a level of evidence of low, acceptable, or high according to the criteria included in the checklists. Where there was

difference of opinion, the two reviewers discussed the study using the checklist until an agreement was reached.

## Online scoping survey

### Service identification procedure

The online survey was developed drawing on the Memory Clinics Audit 2014 template. The NHS England website was used to identify all appropriate NHS Trusts, and these were entered onto a Microsoft Excel spreadsheet. Internet searches were carried out to determine if each Trust had a specific dementia crisis service, and where contact details were available, a follow-up telephone call to the service was made to confirm the manager's contact details. There were, however, many Trusts where the existence of specific dementia crisis services was unclear. In these instances, each Trust website was accessed to identify contact details for the Community Mental Health Team (CMHT) and/or memory clinic. When contact was made, it was explained that contact details were being sought for a crisis service working with people with dementia, with the intention of disseminating a survey to all managers of these services across England. When the older adult or adult service was contacted, the researcher clarified that the demographic of patients included people with dementia. The name of the service lead or manager and email address were collected for each service within every Mental Health Trust in England. Wherever possible, the contact person within the service was also asked to identify other services within their Trust that worked in a similar capacity, and any other contacts were followed up. The AQUEDUCT (RP-PG-0612-20004) programme manager used her direct work email to contact each service manager to encourage completion and to provide a point of reference for the survey.

## Survey design

Information was provided prior to entering the survey, including an introduction to the AQUEDUCT study, the purpose of the survey, definition of a crisis, and how the results would inform the research study. The survey included 29 questions and was conducted using SurveyMonkey software; it was designed to be completed by the manager of the service. Screening questions included the type of service that the manager was responsible for and whether they provided specialist interventions for people with dementia and their carers in the community. If the respondent stated that crisis was not within the scope of their service, they were automatically exited from the survey.



The online scoping survey collected responses on what type of service the respondent was responsible for, whether it was a specialist service for older people in crisis, employer type, job role, work grade, and years in practice. In terms of organizational details, questions related to days and hours of operation, composition of team, service eligibility criteria, referral process, primary diagnosis and primary needs of those entering the service, and time spent in profession specific versus generic working. In relation to referrals, this included the average number of referrals per week, average number of service users on a person's caseload, whether the service follows a care pathway, interventions and assessments used, and the challenges and benefits to delivering home treatment. The respondents were also asked if their service participated in research and whether they would like to be contacted in the future.

## Ethics

Ethical approval was not required for the scoping survey as the work carried out was not considered to be a research study. All questions required for the survey were sent to Research and Innovation, Nottinghamshire Healthcare NHS Foundation Trust to determine the suitability of questions asked. The scoping survey was approved by the sponsor Trust, with staff member informed consent deemed unnecessary as individuals were not directly interviewed and identifiable information was not collected, unless the person completing the survey volunteered his/her contact details after having completed the survey.

## Results

### Systematic review

#### Included studies

A total of 5,344 references were identified in the initial search of the databases; after duplicates were removed ( $n=1,759$ ), 3,509 were excluded by screening of title and abstract only. A further 71 papers were excluded on the basis that either 1) they did not include people with dementia or 2) they did not include working with people with dementia experiencing crisis. Three papers from this search and a further four studies identified in a previous search were included in this review (Figure 1).<sup>14</sup> These comprised six cohort studies,<sup>17–22</sup> and a non-randomized concurrent control treatment outcome trial.<sup>23</sup> Table 1 summarizes the key points of each study.

### Quality assessment

An overall CASP assessment of each study considered whether the evidence was high quality (++) , acceptable (+), or low (0) and is reported in Table 2. One study provides high

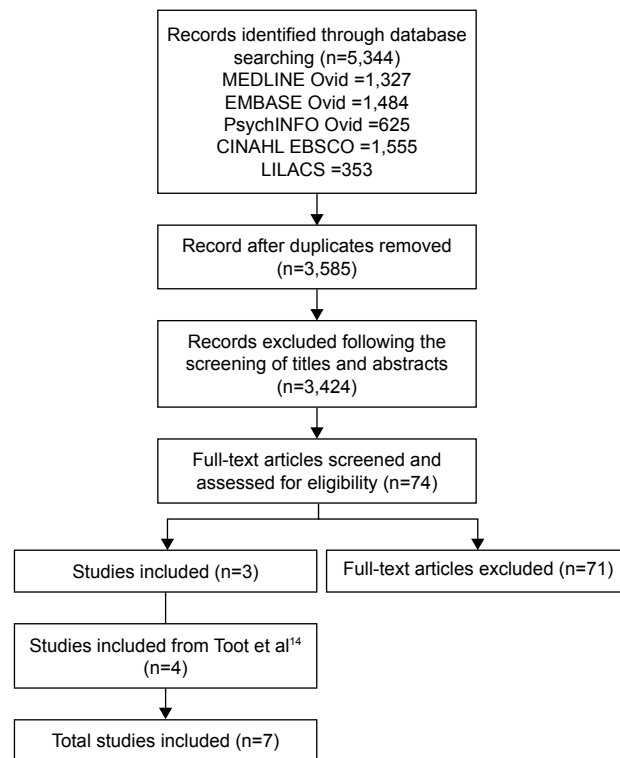


Figure 1 Consort diagram of included studies.

methodological quality,<sup>18</sup> four studies provide acceptable methodological quality,<sup>17,20,22,23</sup> and two studies were considered to have low methodological quality.<sup>19,21</sup>

### Studies comparing hospital admissions for people with dementia with or without access to a crisis service

Villars et al<sup>22</sup> reviewed a geriatric team in Toulouse providing an individualized care plan for people experiencing behavioral and psychological symptoms of dementia (BPSD) based on observations during the person's hospital stay, through telephone support. The main outcome included early emergency room rehospitalization. The results suggested a reduced length of stay over 2 years but this difference was not significant ( $p=0.56$ ) for those in receipt of telephone support compared to the previous year.

Johnson et al<sup>23</sup> engaged a specialist multidisciplinary team to provide support to people with dementia experiencing psychiatric complications with the intention of reducing psychiatric hospitalization in Kansas. The results were compared to a control group of participants previously hospitalized in an inpatient psychiatric hospital. For those in receipt of the intervention, there was a decrease in mortality rates and significant decrease in rehospitalization with people remaining in their homes for longer and significant improvements in caregiver outcomes ( $p \leq 0.001$ ) and

**Table 1** Included studies and study features

Study reference and type of study	Description of intervention and participants (n)	Description of control group	No of follow-ups and follow-up points	Results control group	Results intervention group	Summary of results
Ratna <sup>17</sup> cohort study	Community orientated old age psychiatry service; providing intensive 24-hour crisis support in the community. Intervention group n=142	Two retrospective cohorts from the Sainsbury et al <sup>24</sup> study where there was no crisis services	Referral (intervention group n=142; Combined comparison groups n=337)	Total number of admissions, n, % Combined comparison groups at referral n=132, 39%	Total number of admissions, n, % At referral n=41, 29%. At follow-up n=48, 34%	Reduction in numbers of hospital admissions (at referral follow-up) Reduction in length of hospital stay at follow-up
	Sainsbury et al; <sup>24</sup> Chichester comparison group n=216	Follow-up 1; 24 months (intervention group n=142; combined comparison groups n=119)	Average length of hospital stay (mean stay in days)	Average length of hospital stay (mean stay in days)	Average length of hospital stay (mean stay in days)	Increase in proportion of people remaining in community at follow-up
	Sainsbury et al; <sup>24</sup> Salisbury comparison group n=121	Comparison groups at follow-up n=101	Combined comparison groups at follow-up n=101	Mortality rates (%)	Mortality rates (%)	Improvement in mortality rates at follow-up
		Maintenance of community residence, n, %	Maintenance of community residence, n, %	At follow-up n=69, 49%	At follow-up n=69, 49%	
		Combined comparison groups at follow-up n=42, 35%	Combined comparison groups at follow-up 44%	Mortality rates (%)	Mortality rates (%)	
		Combined comparison groups at follow-up 44%	Refer to Ratna <sup>17</sup>	Total number of admissions, n, %	Total number of admissions, n, %	No difference at referral compared to Ratna <sup>17</sup>
Doyle and Varian <sup>18</sup> cohort study	Crisis intervention service operating through Community Mental Health Team (CMHT) Intervention group n=70	The 24-hour community orientated old age psychiatry service as described in Ratna <sup>17</sup>	Referral Follow-up 1; 36 months	Total number of admissions, n, %	Total number of admissions, n, %	Lower proportion of people remaining in community at community residence, n, %
				At follow-up n=22, 31%	At follow-up n=22, 31%	follow-up compared to Ratna <sup>17</sup>
				Mortality rates (%)	Mortality rates (%)	No difference in mortality rates at follow-up compared to Ratna <sup>17</sup>
Richman et al <sup>19</sup> prospective descriptive study	Outreach support team based within a day hospital, providing support in crisis waiting list for an inpatient bed (n=40)	No comparison group	Referral 3 months	Assumption of 100% admission rates for crises	Total number of admissions, n, %	Reduction in number of hospital admissions
	Crisis resolution home treatment team (CRHTT) Pre CRHTT (n=65) Post CRHTT (n=102)		Data were collected 6 months pre CRHTT and 6 months post CRHTT	Total number of admissions, n, %	Total number of admissions, n, %	Reduction in number of hospital admissions (statistically significant)
Dibben et al <sup>20</sup> cohort study				Total number of admissions, n, %	Total number of admissions, n, %	No difference in length of hospital stay
				Assumption of 100% admission rates for crises	Assumption of 100% admission rates for crises	Significant reduction in psychiatric inpatient days from 129.4 days per 1,000 patients per year in 2003 to 23.6 days per 1,000 patients per year in 2007. Significant increase in percentage of enrollees receiving routine mental
Ginsburg and Eng <sup>21</sup> cohort study	Mental and Behavioral Health (MBH) team pre, during, and post set up of team	Previous year to set up of MBH (2004, 2005, 2006, 2007)	Yearly follow-up for 4 years (2004, 2005, 2006, 2007)	2004, patients served = 1,082 Admissions = 11 Psychiatric bed days = 140	2005, patients served = 1,107 Admissions = 2 Psychiatric bed days = 30	per year in 2003 to 23.6 days per 1,000 patients per year in 2007. Significant increase in percentage of enrollees receiving routine mental

(Continued)

Table 1 (Continued)

Study reference and type of study	Description of intervention and participants (n)	Description of control group	No of follow-ups and follow-up points	Results intervention group	Summary of results
Villars et al <sup>22</sup> cohort study	Individualized care plan targeting the problems observed during the hospital stay	Previous year early ER admissions	Early ER rehospitalization 1 month after discharge	2007, patients served =1,227 Admissions =3 Psychiatric bed days =29 Total number of early ER admissions 2008=8.02% 2009=7.47%	health services growing from 10.1% of enrollment in 2004 to 24.4% in 2007 No statistical significant decrease in ER rehospitalization rate at 1 month after discharge. Vocal disruptive behavior is significantly more prevalent in the readmitted population Following intervention the Neuropsychiatric Inventory Questionnaire showed a reduction in symptoms $p < 0.001$ . Delayed nursing home placement due to the BRIDGE intervention
Johnson et al <sup>23</sup> non-randomized concurrent control treatment outcome trial	Kansas Dementia Crisis Bridge Project Intervention group n=77 Control group =52	Psychiatric hospital with catchment area of rural and suburban residents	Data collected before and during crisis period hospitalization following hospital discharge	1.2% rehospitalization	

caregiver-reported neuropsychiatric symptoms in people with dementia ( $p \leq 0.01$ ).

Ginsburg and Eng<sup>21</sup> reviewed a new Mental and Behavioural Health Team for older people with dementia or mental illness in the community compared to the previous year when there was no team in San Francisco. The primary outcomes include number of patients seen, psychiatric admissions, and bed days. The study demonstrated a reduction in psychiatric inpatient days compared to previous years.

Dibben et al<sup>20</sup> examined the effectiveness of a Crisis Resolution HTT service including working with older adults with a functional or organic diagnosis in West Suffolk. The service was extended to include older people due to the closure of a dementia ward and 2-day hospitals. The study found a significant reduction in hospital admissions post-setup of the crisis resolution HTT ( $p \leq 0.001$ ), but there were no significant changes in the other outcomes of bed days and level of satisfaction of service user.

Richman et al<sup>19</sup> conducted a naturalistic evaluation of a community outreach support team for older adults with mental illness in crisis in Cheshire and Wirral Partnership NHS Trust. The team was introduced in response to the closure of 20 beds in the geriatric ward, aiming to reduce hospital admissions and bed occupancy, encourage early discharge, and support patients at home. Thirty participants were supported in the community and 10 participants were admitted to hospital over the timeframe of the study, suggesting that this type of service might be beneficial in reducing the number of hospital admissions.

Doyle and Varian<sup>18</sup> compared a 24-hour crisis service offered in Folkstone, Kent with a 9:00 to 17:00 crisis intervention team (data from Ratna<sup>17</sup>) for older people with mental health problems, including dementia. The main outcomes included number of psychiatric hospital admissions, maintenance of community residence, and mortality rates. There was a greater referral rate in the 24-hour service ( $p \leq 0.01$ ), a lower proportion of people remaining in the community in the 24-hour service at follow-up compared to the control group ( $p \leq 0.001$ ), and no difference in mortality rates.

Ratna<sup>17</sup> provided a community-based psychogeriatric service in North London for older people with mental illness, including dementia. The main outcomes included number of psychiatric admissions, length of hospital stay, maintenance of community residence, and mortality rates. A previously conducted study provided their control group data.<sup>24</sup> Ratna<sup>17</sup> demonstrated a reduction in number of hospital admissions and bed days, an increase in proportion of community residence, and decreased mortality rates.

## Online scoping survey

### Demographics

Two hundred and thirty-four individual services potentially managing crises in people with dementia were identified across England, 200 of which had available contact details for managers or service leads who ran the service or ran a number of services. Sixty-two managers, representing 23 English counties, began the online questionnaire, although two managers did not provide consent at the start of the survey and were automatically exited and three people voluntarily exited. The survey was completed in full by 22 respondents (35%), and the median number of questions answered by respondents was 13 (out of 29).

The names of services varied and included Dementia and Intensive Support Team, Mental Health Service for Older People, Memory Assessment Service (MAS), Mental Health Intensive Recovery, Dementia Crisis Support Team, Dementia Rapid Response Team, and Intensive Recovery Intervention Service. Overall, 49 of the respondents (86%) considered their service to provide a specialist intervention/support for people with dementia and their carer experiencing an acute crisis at home. Twenty-seven respondents listed their managerial role as responsible for a CMHT (or similar) (47.4%), 24 as responsible for a HTT (or similar) (42.1%), and six as responsible for a memory service (10.5%). Table 3 and Figures 2 and 3 summarize the characteristics of these three models.

### MASs

Of the six teams who identified themselves as a MAS, four teams indicated their employers (three NHS and one local authority). All teams operated Monday–Friday between 9:00 and 17:00, all used eligibility criteria and had a screening process, and only one team used a standardized care pathway or protocol.

The median number of referrals received by memory assessment teams per week was 18, ranging from six to 20. The median percentage of referrals with a primary diagnosis of dementia across teams was 85% ranging from 20% to 100%. Teams received referrals from general practitioners (GPs), consultant psychiatrists, outpatients, acute mental health, acute physical health, liaison psychiatry, other health or social care, self-referral, and carer referral. Team leaders were nurses with the exception of one who was an occupational therapist (Figure 3 for team composition), and on an average team members spent 80% of their time carrying out profession-specific work.

The highest ranked primary care needs of patients referred to the services were behavioral and psychological (eg, anxiety or low mood, delusions, hostility or aggression, and wandering) and the lowest ranked were environmental factors (eg, physical

hazards around the home, unable to access essential amenities). The highest ranked intervention utilized by teams was specialist, professional health care practitioner input (eg, medication review, occupational therapy assessment, and clinical psychology input), and the lowest ranked intervention was home care support (eg, provision of home care services).

### CMHTs

Of the 27 teams who identified themselves as a CMHT, 19 teams indicated their employers were the NHS. Sixteen teams indicated their operational hours, 15 of which operated Monday–Friday 9:00–17:00, with one team operating Monday–Sunday and offering an extended hours service. Seven teams used eligibility criteria and three teams stated that they did not. Ten teams indicated that they had a screening process, with four teams using a care pathway/protocol and five teams indicating that they did not use a care pathway or protocol. The median number of referrals received by CMHTs per week was 10, ranging from zero to 25.

The median percentage of referrals with a primary diagnosis of dementia across teams was 72.5%, ranging from 20% to 100%. Teams received referrals from GPs, consultant psychiatrists, outpatients, acute mental health, acute physical health, liaison psychiatry, community mental health recovery/community recovery teams, HTTs, the voluntary sector, other health or social care, self-referral, carer referral, primary care liaison teams, and memory services; one indicated that they operated an open referral system. Team leaders included mental health practitioners, nurses, occupational therapists, psychologists, and social workers (see Figure 3 for more details and team composition), and on an average team members spent 40% of their time carrying out profession-specific work.

The highest ranked primary needs of patients referred to the services were environmental factors and the lowest ranked were behavioral and psychological factors. The highest ranked intervention utilized by teams was environmental (eg, equipment, communication devices, and assistive technology) and the lowest ranked was specialist, professional health care practitioner input.

### HTTs

Of the 24 teams who identified themselves as HTT, 21 indicated their employer type (20 NHS, 1 social enterprise). Twenty teams stated their operational hours, one of which operated Monday–Friday 9:00–17:00. While 19 teams operated Monday–Sunday, 17 of these offered an extended hours service, with two offering a 24-hour service. Out of the 17 teams who responded, 16 of these specified they had

**Table 2** Quality assessment of included studies

Study	1. Did the study address a clearly focused issue?	2. Was the cohort recruited in an acceptable way?	3. Was exposure accurately measured to minimize bias?	4. Was the outcome accurately measured to minimize bias?	5a. Have authors identified all important confounds?	5b. Have they taken account on the confounds in the design/ analysis?	6a. Was the follow-up of subjects complete?	6b. Was the follow-up of subjects long enough?
<b>CASP checklist cohort studies:</b>								
Dibben et al <sup>20</sup>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ginsburg and Eng <sup>21</sup>	Yes	Yes	Yes	Yes	No mention of what common mental disorders are experienced Number of ppts with dementia not reported	No	Yes	Yes
Doyle and Varian <sup>18</sup>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Richman et al <sup>19</sup>	Yes	Yes	Yes	Yes	No control group identified	No control group	Yes	Yes
Ratna <sup>17</sup>	Yes	Yes	Yes	Not known	Yes	Yes	Yes	Yes
Villars et al <sup>22</sup>	Yes	Yes	Yes	Yes	Yes	Analyses have not differentiated between severe and mild dementia	Yes	No
<b>Study</b>	<b>1. Did the study address a clearly focused issue?</b>	<b>2. Did the authors use an appropriate method to answer their question?</b>	<b>3. Were the cases recruited in an acceptable way?</b>	<b>4. Were the controls selected in an acceptable way?</b>	<b>5. Was exposure accurately measured to minimize bias?</b>	<b>6a. What confounding factors have the authors accounted for?</b>		
<b>CASP checklist case-control studies:</b>								
Johnson et al <sup>23</sup>	Yes	Yes	Yes	Yes	Yes	Yes	Differences between control and intervention groups No reporting of participants family situation	

**Abbreviations:** CASP, Critical Appraisal Skills Programme Centre; CRHTT, crisis resolution home treatment team; CMHT, community mental health team; ER, emergency room; NP, neuropsychiatric; ppts, patients.

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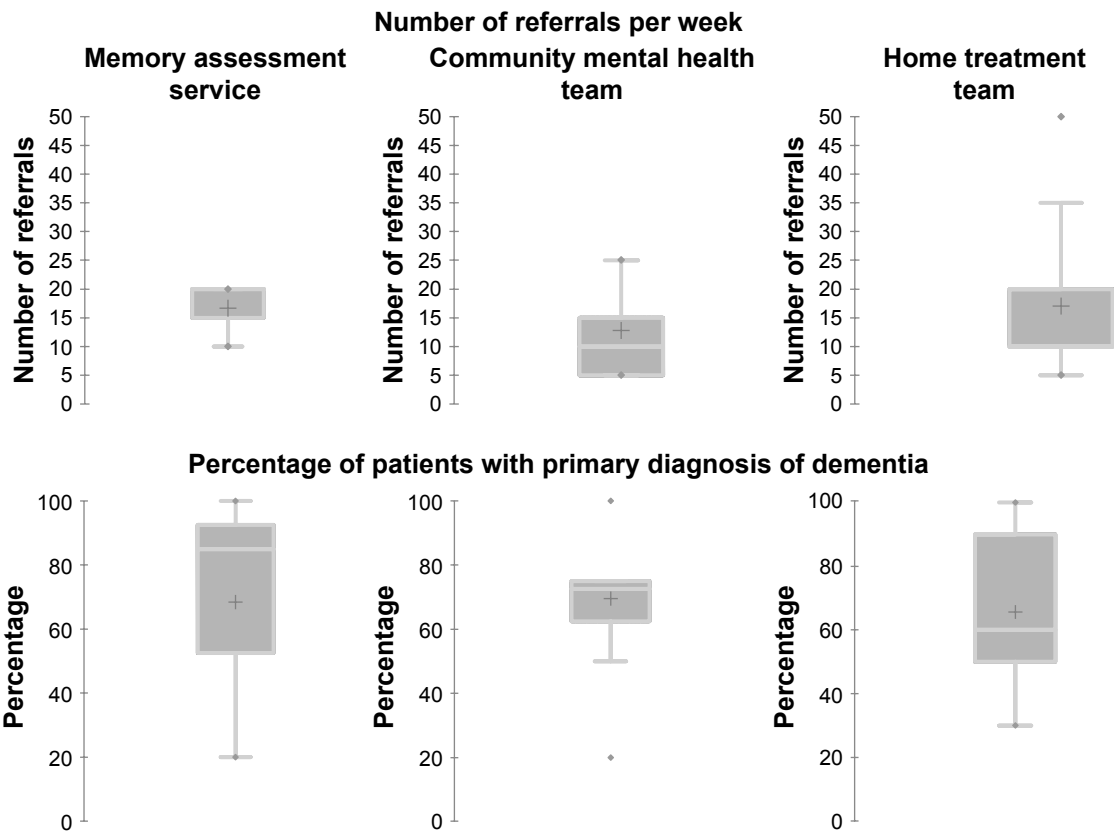
7. What are the results of this study?	8. How precise are the results?	9. Do you believe the results?	10. Can the results be applied to the local population?	11. Do the results of this study fit with other available evidence?	12. What are the implications of this study for practice?	Rating
Admissions reduced by 31% General trend for greater satisfaction in carers and service users No difference in involuntary admissions No odds ratios	Quite	Yes	Yes within reason – all health care contexts are different	Yes	Recommendation of use of CRHTT for older people	+
Increased access to mental health services Reduction in admissions and psychiatric bed days High staff satisfaction with treatment	Not very	Yes	Potentially, in supported living environments	Not a lot of other evidence is discussed in relation to the findings	Mental health professionals should be a part of integrated living teams	0
Patients in long stay hospital beds similar for both groups Both services good at predicting when hospitalization needed and mobilizing support to prevent further admissions More people in residential care in office hours group – although more residential care also available in this group 30 admissions to inpatient psychiatric care were avoided through the establishment of this team.	Good	Yes	Yes	Yes	Crisis teams operating within office hours can be as effective as 24-hour teams	++
The population seen in crisis was similar to that referred to other services Assessments made in the home are as effective in determining who should go to hospital and who can be managed in the community This model is effective at stabilizing patients to enable care in the community	Good	Yes	Yes in areas where CMHT exists but domiciliary crisis services do not Yes – but few areas would be able to support a 24-hour crisis service	Yes	This kind of intervention may reduce admission to inpatient psychiatric care Crisis services are able to support people at home	0
No significant differences in early ER rehospitalization	Quite	Yes	Yes	Yes	This type of intervention was welcomed by families and nurses but did not prevent or reduce rehospitalization	+
6b. Have the authors taken account of the potential confounds in design/analysis?	7. What are the results of this study?	8. How precise are the results?	9. Do you believe the results?	10. Can the results be applied to the local population?	11. Do the results of this study fit with other available evidence?	Rating
No statistical adjustment	Reduction in NP symptoms, 79% resolution in crisis, less hospital admissions than control group, delayed nursing home placement	Quite – no confidence intervals and no reporting of ppts who declined	Yes	Can be applied in areas where complete lack of services. Not sure how well these findings integrate into UK health system	Yes	+

**Table 3** Characteristics of survey respondents according to team model

Characteristic	Memory assessment service (%)	Community mental health team (%)	Home treatment team (%)	Total responses for each survey question
Employer type				
NHS	3 (75)	19 (100)	20 (95)	44
Local authority	1 (25)	0	0	
Social enterprise	0	0	1 (5)	
Days of operation				
Monday–Friday	3 (100)	15 (94)	1 (5)	39
Monday–Sunday	0	1 (6)	19 (95)	
Hours of operation				
9:00–17:00	3 (100)	15 (94)	1 (5)	39
Extended eg, 7:00–22:00	0	1 (6)	17 (85)	
24 hours	0	0	2 (10)	
Eligibility criteria				
Yes	3 (100)	7 (70)	16 (94)	30
No	0	3 (30)	1 (6)	
Referral/screening process				
Yes	3 (100)	10 (100)	16 (94)	30
No	0	0	1 (6)	
Pathway/protocol				
Yes	1 (33)	4 (44)	9 (60)	27
No	2 (67)	5 (56)	6 (40)	

eligibility criteria for their service. Sixteen teams indicated that they had a screening process and one did not. Nine teams used a care pathway/protocol and six teams indicated that they did not use any form of care pathway or protocol.

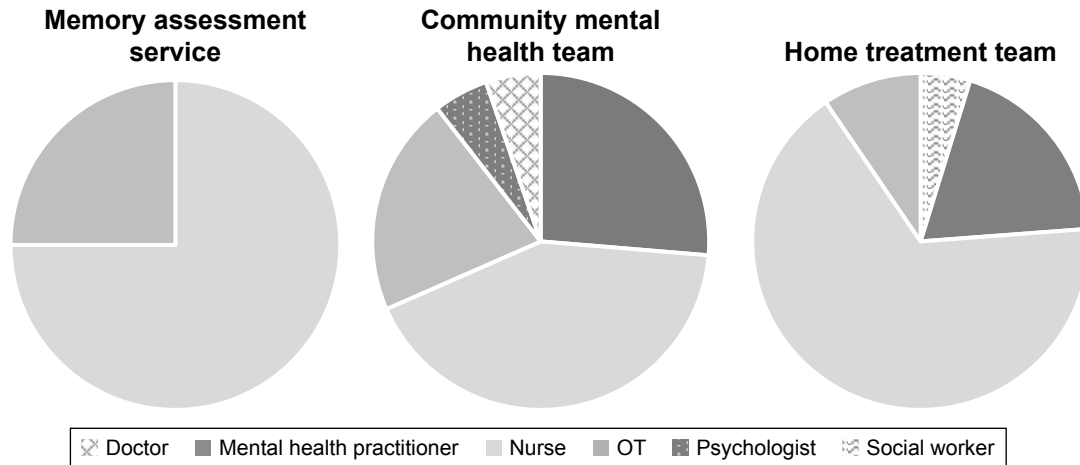
The median number of referrals received by memory assessment teams per week was 10, ranging from zero to 50. The median percentage of referrals with a primary diagnosis of dementia across teams was 60%, ranging from



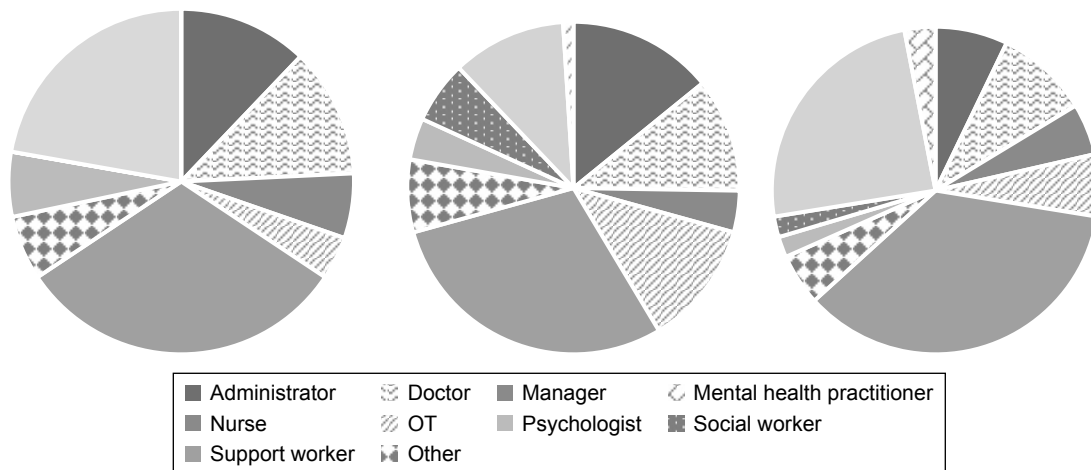
**Figure 2** Referral characteristics for each model of team managing crisis in dementia.

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Professional designation of team leader



Team composition



Percentage of time spent doing profession-specific work

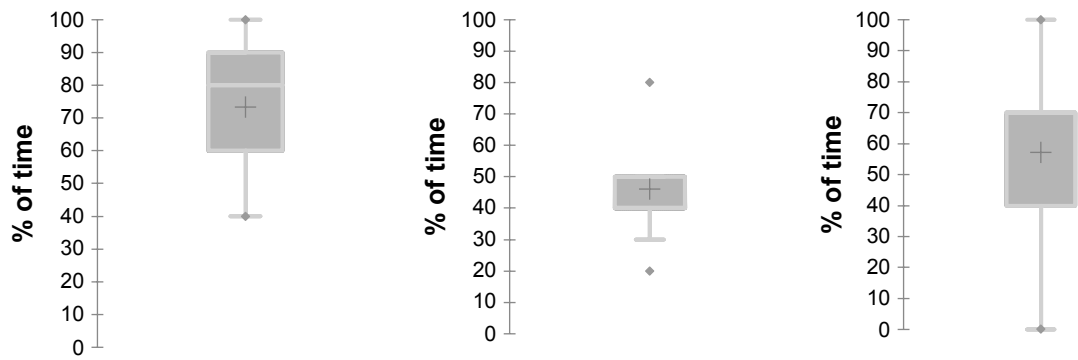


Figure 3 Characteristics of teams managing crises in people with dementia.

30% to 100%. Teams received referrals from GPs, consultant psychiatrists, outpatients, acute mental health, acute physical health, liaison psychiatry, community mental health recovery/community recovery teams, HTTs, the voluntary sector, other health or social care, self-referral, carer referral, ambulance services, and single point of access;

one indicated that they operated an open referral system. Team leaders included doctors, mental health practitioners, nurses, and occupational therapists (see Figure 3 for more details and team composition), and on an average team members spent 70% of their time carrying out profession-specific work.

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The highest ranked primary care needs of patients referred to the services were behavioral and psychological factors and the lowest ranked were environmental factors. The highest ranked intervention utilized by teams was specialist, professional health care practitioner input and the lowest ranked was environmental.

## Assessment measures

Across the three team models, there were no differences in the standardized assessments used and all models used a range of different assessments. Twenty-six respondents (96.2%) use standardized assessments, and 24 different assessment tools were listed. The measures tended to be cognitive assessment tools, such as the Addenbrooke's Cognitive Examination-III, the Montreal Cognitive Assessment, and the Mini Mental State Examination. Most teams also used an assessment for the presence of anxiety or depression such as the Hospital Anxiety and Depression Scale or the Cornell Scale for Depression in Dementia. Notably, risk assessment was only mentioned by one team and no measures of crisis, quality of life, or caregiver burden were listed.

## Challenges and benefits of delivering home treatment interventions

The respondents identified a number of challenges to delivering home treatment interventions. Examples include recognizing the gap between health and social care systems, the desire to have a social worker working within the team, timely nature to accessing social care, lack of access to community services, low staffing levels and high workloads, difficulty associated with the complexity of cases, and the geographical spread of the service. Examples of the benefits of delivering a home treatment include remaining patient centered, improved quality of life for the patient, supporting service users to remain in their own home for longer, avoidance of unnecessary hospital admissions, and the opportunity to provide intensive support to the people with dementia and their carer that could prevent future crises.

## Discussion

National policies support the use of similar services for older people with mental health problems,<sup>25-27</sup> and our survey, despite being limited in its response rate, contributes to our current understanding of crisis teams working with people with dementia in practice.

There was, however, a satisfactory initial uptake rate (33.5%) and a good completion rate (35%). This appears to be a similar response rate to a previously reported review of

email responses to surveys.<sup>28</sup> The responses indicate that the provision of services is inconsistent and practice delivery varies greatly. This variation includes the naming of services, setup and delivery, policies, and procedures; however, this aligns with previous research.<sup>10,14</sup> This may be a contributing factor to the lack of rigorous evidence and evaluation of these types of services in the literature.<sup>14</sup>

The review has identified more studies than found in the previous systematic review of the literature,<sup>14</sup> which has furthered our knowledge and understanding of crisis teams. Regarding the systematic review in accordance with the Oxford Centre for Evidence-based Medicine used in the previous systematic review,<sup>14</sup> two of the three newly included papers were of grade C.<sup>21,22</sup> There was one paper, however,<sup>23</sup> that was considered grade B, demonstrating a slight improvement in the reported study design. It is important to note, however, that it was only possible to report on the availability of evidence generated from the search and there may have been reports of service delivery in practice that were subsequently missed. However, this search of the literature did not identify high-quality studies such as RCTs, and predominantly cohort studies were included that compared findings to previous years of running the service or to a comparison group from a previously conducted study. In one reported study, the control group was taken from a study published in 1965, and arguably this is too dated as services have changed since this time. The majority of studies used a mixed sample of older people with dementia or mental illness,<sup>17-21</sup> or working age and older age, but only provided analysis of overall results. Also, the reporting of effect sizes for included studies was attempted but not always available from the original paper. Consequently, due to the lack of quality in study design and reporting, it was not possible to synthesize the results across included studies in a meaningful way. In addition, the wide geographical spread makes it difficult to draw assumptions due to the heterogeneity of the included studies.

Most studies provided adequate (+) methodological quality, and there is some evidence for crisis services for older people with mental health issues positively impacting on reducing the number of hospital admissions,<sup>17,19,20</sup> readmissions,<sup>23</sup> length of stay,<sup>21,22</sup> and mortality rates.<sup>17,23</sup> This does, however, need to be interpreted with caution due to the small number of studies, variable study designs, and lack of statistical rigor. Consequently, the systematic review was limited by a lack of good quality studies, leading to lower quality evidence. The literature review demonstrated no significant improvement in the design or reported clinical

effectiveness of studies evaluating crisis team working for people with dementia.

When comparing and contrasting the different models of service delivery, operational days and times varied across models with HTTs tending to offer extended hours across 7 days, and some offering a 24/7 service. By contrast, MASs and CMHTs typically provided services Monday–Friday 9:00–17:00, which may partly be due to the evolution of such teams, for example, in response to ward closures where teams and staff members may have been accustomed to working shift patterns. This is also reflective of the overall team composition across all models where nurses feature prominently both as team leaders and as members of staff. However, differences were seen across models in that social workers were included more so in CMHTs, less so in HTTs, and not at all in MASs. However, the role definition of mental health practitioners featured in all teams is unclear and may overlap with other professional disciplines. Further enquiry into the professional boundaries and responsibilities associated with this role is needed.

The percentage of time spent doing profession-specific work differed both within and across models; yet the MASs were reported as doing the largest proportion of professional-specific work and CMHTs the smallest proportion. Taken into consideration the types of intervention offered by the teams, this is unsurprising as the interventions most frequently used by MASs involved specialist professional health care practitioner input, whereas CMHTs rated environmental interventions as the most frequently used, which may not require profession-specific work to the same extent. MASs and HTTs ranked behavioral needs as the most common type of patient need, whereas CMHTs ranked these as their least common, and in contrast to this they ranked their most common need as environmental, which was the need ranked least common by the MASs and HTTs. This suggests that the three models of crisis services are responding to different patients from diverse circumstances and therefore managing crises differently. It must be acknowledged that all models of service rated family carer factors (eg, burden, physical health, and death of carer) as the second most common type of patient need and also the second most common form of intervention (eg, education, training, and respite), highlighting that despite wide variation there are some elements that straddle all models of care. Much of the research around crisis in older people with dementia considers only BPSD, which could suggest that the work of CMHTs is unrecognized and unresearched due to their focus on environmental and carer-related factors.

Although the median number of referrals per week do not show a large degree of variation across team models, the range suggests that CMHTs and HTTs experience greater variation in the number of referrals. HTTs tended to have more referrals than CMHTs and experienced a greater range of referrals. The MASs and HTTs presented a similar picture of variation in the patients arriving at their service with a primary diagnosis of dementia showing that for some teams in this model all of their patients had a primary diagnosis of dementia, whereas other teams saw as little as 20% of referrals with a dementia diagnosis. By contrast, CMHTs showed much less variation with most teams seeing approximately 75% of their patients with a primary diagnosis of dementia. It is surprising to note that, despite receiving referrals from a fewer number of sources, MASs show a large variety in the type of patients accessing the service. Across all three models of service delivery, the majority of teams used eligibility criteria and a screening process and yet still saw patients with a variety of diagnoses and needs. Arguably, the disparate needs of patients referred to services may hinder streamlined service delivery. In conjunction with this, protocols are not routinely used by teams in any model of service delivery. Potentially, this could be because it would be inappropriate to use a protocol with such a wide variety of service users. A specialized dementia protocol, including appropriate clinical measures, coupled with the awareness of when it is appropriate to use such a protocol, would help to facilitate the selection of a suitable intervention for these patients. Additionally, standardized risk assessment or quality of life measures might be more appropriate than cognitive measures to determine change pre-intervention and post-intervention.

Some methodological limitations exist with the scoping survey. In order to invite Managers to participate, correct contact details were essential, yet were often provided over the telephone and required further follow-ups. Furthermore, some Managers, especially those managing across a number of services, might not be able to provide the most detailed picture of the service as they may not interact with the service frequently enough at ground level. The emphasis of the introduction to the survey was on dementia crisis teams, and consequently some Managers may not have felt that the survey was applicable to them if they also worked across other services such as interventions for older people experiencing functional mental health crises. Since services varied greatly, some of the non-completers may have been eligible to participate in the survey.

The survey, however, was able to identify a variation in the naming and setup of services of teams managing crisis in people with dementia. The survey was designed to enable all teams who manage crisis in people with dementia to participate, whether they were a designated crisis team or a specialist dementia team. This allowed for responses to be gained from teams who may otherwise not have participated and has broadened the understanding of practice in crisis management for people with dementia. Additionally, respondents were able to leave contact details at the end of the survey, which may facilitate recruitment during future stages of the AQUEDUCT research programme. Respondents from a range of areas across England participated, suggesting that responses were gained from a range of teams and were representative of current practice for the country as a whole.

Current research fails to demonstrate full translation of guidelines for crisis resolution teams into practice.<sup>29</sup> Consequently, future research could look to include gray literature, other methods to assess interventions, qualitative work, and service evaluations. A realist review is needed to unpack the complexities of delivering a complex intervention, identify facilitators and barriers to its applicability across settings, and provide an inclusive perspective of crisis teams working in the United Kingdom. The National Dementia Strategy<sup>3</sup> aimed to provide good quality care for people living with dementia in the community including responsive crisis services and this can be carried out through the reporting of simple interventions and professional support with the intention of preventing hospital admissions.

## Conclusion

The research evidence for crisis intervention teams for older adults with dementia is predominantly cohort studies. This is problematic in evaluating the effectiveness of the intervention as it is a weaker study design. There is some limited evidence to support the effectiveness of crisis intervention teams for older people with dementia in reducing hospital admissions, but further high-quality evidence is required. The scoping survey revealed a picture of wide variation both within and across the three models of service delivery, and further research is needed to clarify how best to support teams in delivering care for people with dementia who experience a crisis. Clearly defined protocols may be beneficial, particularly when a team's caseload can overlap across functional mental health and dementia, or across ages, in order to clearly define the "best" pathway of care for the person with dementia.

## Acknowledgments

This systematic review and scoping survey were conducted as part of the AQUEDUCT programme funded by the National

Institute for Health Research (NIHR) under its Programme Grants for Applied Research scheme (RP-PG-0612-20004). The AQUEDUCT team acknowledges the support of the National Institute for Health Research Clinical Research Network. The views expressed are those of the authors and not necessarily those of the NHS, the NIHR, or the Department of Health.

## Author contributions

A Streater, DM Coleston-Shields, and M Orrell designed the survey. A Streater, DM Coleston-Shields, J Yates, and M Stanyon analyzed the data. All authors interpreted the data. A Streater carried out the search for the systematic review. A Streater and J Yates carried out the quality appraisal of the included studies. All authors contributed to the drafting of the manuscript and revised and approved the final version.

## Disclosure

The authors report no conflicts of interest in this work.

## References

1. Dementia UK: the full report. *Alzheimer's Society*. London, UK: Alzheimer's Society; 2007.
2. Alzheimer's Society. *Counting the Cost – Caring for People with Dementia on Hospital Wards*. London, UK: Alzheimer's Society; 2009.
3. Department of Health. *Living Well with Dementia: a National Dementia Strategy*. London: Department of Health; 2009.
4. MacNeil Vroomen J, Bosmans JE, van Hout HP, de Rooij SE. Reviewing the definition of crisis in dementia care. *BMC Geriatr*. 2013; 13:10.
5. Audit Commission. *Support for Carers of Older People*. London: Audit Commission; 2004.
6. Department of Health. *Prime Minister's Challenge on Dementia 2020*. London: Department of Health; 2015.
7. Regan C, Cooper C. Crisis resolution teams and older people. In: Johnson S, Needle J, Bindman JP, Thornicroft G, editors. *Crisis Resolution and Home Treatment in Mental Health*. London, UK: Cambridge University Press; 2008:267–274.
8. Lloyd-Evans B, Bond GR, Ruud T, et al. Development of a measure of model fidelity for mental health Crisis Resolution Teams. *BMC Psychiatry*. 2016;16(1):427.
9. National Audit Office. *Improving Services and Support for People with Dementia*. London, UK: National Audit Office; 2007.
10. Cooper C, Regan C, Tandy AR, Johnson S, Livingston G. Acute mental health care for older people by crisis resolution teams in England. *Int J Geriatr Psychiatry*. 2007;22(3):263–265.
11. Department of Health. *Dementia: a State of the Nation Report on Dementia Care and Support in England*. London: Department of Health; 2013.
12. Johnson S, Needle J. Introduction. In: Johnson S, Needle J, Bindman J, Thornicroft G, editors. *Crisis Resolution and Home Treatment in Mental Health*. London, UK: Cambridge University Press; 2008:3–8.
13. McNab L, Smith B, Minardi HA. A new service in the intermediate care of older adults with mental health problems. *Nurs Older People*. 2006;18(3):22–26.
14. Toot S, Devine M, Orrell M. The effectiveness of crisis resolution/home treatment teams for older people with mental health problems: a systematic review and scoping exercise. *Int J Geriatr Psychiatry*. 2011; 26(12):1221–1230.

15. Hoe J, Ledgerd R, Devine M, Toot S, Challis D, Orrell M. Support at Home: Interventions to Enhance Life in Dementia (SHIELD) Home Treatment Manual 2012 Version 4.
16. Critical Appraisal Skills Programme (CASP). CASP checklists. CASP 2016. Available from: <http://www.casp-uk.net/#!/checklists/cb36>. Accessed March 13, 2017.
17. Ratna L. Crisis intervention in psychogeriatrics: a two-year follow-up study. *Br J Psychiatry*. 1982;141:296–301.
18. Doyle H, Varian J. Crisis intervention in psychogeriatrics: a round-the-clock commitment? *Int J Geriatr Psychiatry*. 1994;9(1):65–72.
19. Richman A, Wilson K, Scally L, Edwards P, Wood J. Service innovations. *Psychiatrist*. 2003;27(9):348–351.
20. Dibben C, Saeed H, Stagias K, Khandaker GM, Rubinsztein JS. Crisis resolution and home treatment teams for older people with mental illness. *Psychiatr Bull*. 2008;32(7):268–270.
21. Ginsburg IF, Eng C. On-site mental health services for PACE (Program of All-inclusive Care for the Elderly) centers. *J Am Med Dir Assoc*. 2009;10(4):277–280.
22. Villars H, Dupuy C, Soler P, et al. A follow-up intervention in severely demented patients after discharge from a special Alzheimer acute care unit: impact on early emergency room re-hospitalization rate. *Int J Geriatr Psychiatry*. 2013;28(11):1131–1140.
23. Johnson DK, Niedens M, Wilson JR, Swartzendruber L, Yeager A, Jones K. Treatment outcomes of a crisis intervention program for dementia with severe psychiatric complications: the Kansas bridge project. *Gerontologist*. 2013;53(1):102–112.
24. Sainsbury P, Costain WR, Grad J. The effects of community service on the referral and admission rates of elderly psychiatric patients. In: World Psychiatric Association Symposium, editor. *Psychiatric Disorders in the Aged*. 1965:23–37.
25. Department of Health. *The Mental Health Policy Implementation Guide*. London: Department of Health; 2001.
26. Department of Health. *Securing Mental Health for Older Adults*. London: Department of Health; 2004.
27. Department of Health. *Everybody's Business: Integrated Mental Health Services for Older Adults: a Service Development Guide*. London: Department of Health; 2005.
28. Sheehan KB. E-mail survey response rates: a review. *J Comput Mediat Commun*. 2001;6(2). DOI: 10.1111/j. 1083-6101.2001.tb00117.x.
29. Lloyd-Evans B, Paterson B, Onyett S, et al. National implementation of a mental health service model: a survey of Crisis Resolution Teams in England. *Int J Ment Health Nurs*. Epub 2017 Jan 11.

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## Community REACT team shortlisted for BMJ award

Tuesday, 2 May 2017

The Health Board's Community REACT team has been shortlisted in the Mental Health Team of the Year category at the 2017 BMJ Awards.



The REACT (Response Enhanced Assessment Crisis Treatment) team was developed in February 2012 to provide a dedicated crisis service for older people with dementia, depression or psychosis. Previously people who suffered a crisis usually ended up being admitted to hospital, and the REACT service has grown rapidly to meet demand.

Between 2012 and 2015 the service received 1057 referrals, and among those 440 would have been admitted to hospital.

Dr Sabarigirivasan Muthukrishnan, consultant to the REACT service said: "The aim is to treat patients safely in their own home environment. Referrals are usually made by secondary mental health services, though recently we've extended that to GPs. We have found that 80% of hospital admissions can be avoided, and we also help in supporting the discharge of those that have been admitted."

Dr Kate Hydon, a former GP who now works full time for the service, says it's the most satisfying job she's ever done. "We're genuinely helping people to get better where they want to be. Having to be admitted to hospital is always a big fear for patients, and they deteriorate and lose independence when they are admitted. My background as a GP has been helpful because I know GPs' problems and I can liaise successfully with them."

The team now has a core of 22 permanent staff and costs around £750,000 a year.

Dr Muthukrishnan continued: "For every pound the service costs, we save £6.34.

"We needed support from the health board to get it started but after that it has been self supporting. Feedback from patients and carers has been overwhelmingly positive."

The BMJ Awards, now in their 9th year, are the UK's leading medical awards. They recognise and celebrate the inspirational work of healthcare teams across the country. The winners will be announced on Thursday 4th May 2017.