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ABSTRACT

Aim

The aim of the study was to scope and explore hydration practices in care homes.

Background

Older residents do not regularly consume adequate fluids to support health. Achieving this is difficult with residents who have coexisting health, sensory and functional problems, as well as challenging hydration habits.

Design

This project used a sequential exploratory mixed method design to scope and explore existing hydration practices.

Methods

Data were collected via two stages. First was a survey of hydration practices. Twenty-nine responses were received from 81 care homes (response rate: 35.8%). Second was the exploration of practitioners' experiences and perceptions of hydration practice via semi-structured interviews (54 staff: 43 interviews). Descriptive statistics summarised the survey findings. Open coding and thematic analysis were applied to the qualitative data **and details of the methods are reported in adherence to COREQ criteria.**

Results

It is important to provide hydration support in addition to regularly offering drinks to residents. Hydration practices include: use of social interaction to encourage drinking; verbal and non-verbal prompts to drink; giving fluids with routine practices and social activities; providing drinks-related activity, use of aids and equipment to support drinking, and creating a drink-friendly environment. Practices are implemented in care homes, however no one care home implements all these hydration strategies at any one time.

Conclusions

Older care home residents need support and encouragement to drink adequate fluids which can be difficult to achieve with residents who have complex needs and challenging drinking

habits. In addition to the routine offer of drinks, hydration support should be used to facilitate residents to drink sufficient amounts of fluid.

Relevance to clinical practice

Staff working in care homes have an important role in assessing the hydration needs of residents and using multiple hydration practices to support residents to achieve their hydration requirements.

WHAT DOES THIS PAPER CONTRIBUTE TO THE WIDER GLOBAL CLINICAL COMMUNITY?

- This study generates knowledge that consuming sufficient fluid requires more than the regular offer of drinks in care homes
- This paper presents hydration practices that can support and encourage older care home residents to drink sufficient fluid everyday
- Hydration practices include the use of social interaction to encourage residents to drink adequate volumes of fluid; verbal and non-verbal prompts to drink; giving fluids with routine practices and social activities; providing drinks-related activity, and creating a drink-friendly atmosphere in the care home.

KEY WORDS

Hydration support, fluid intake, older people, care home residents, residential care, nursing home

HYDRATION PRACTICES IN CARE HOMES FOR OLDER PEOPLE

Running title: Hydration practices in care homes

BACKGROUND

Drinking an adequate amount of fluid is essential to life across the life span (W.H.O., 2008). Yet older adults are particularly at risk of dehydration due to decreased fluid intake and increased fluid loss (Picetti et al., 2017). In the UK, Regulation 14 of the Health and Social Care Act acknowledges the importance of older people drinking sufficient fluid by emphasising the responsibility that care home providers have in ensuring that residents have adequate nutrition and hydration to sustain life and good health. A number of reports, however, indicate the presence of suboptimal hydration and dehydration within the care home population (RCN, 2010; Hydration for Health Initiative, 2012; Wolff, Stuckler & McKee, 2015; Murray, 2017).

The Hydration for Health Initiative (2012) also suggested that between 50–92% of care home residents have inadequate fluid intake. Often, residents only consume two to four glasses per day, which exposes them to sub-optimal hydration (Kayser–Jones et al., 1999; Woodward, 2007; Gasper, 2011). This would suggest that increasing the amount of fluids consumed would be an effective intervention to ensure optimum hydration. On a simple level, this is achieved through increasing intake at each ingestion, and ensuring multiple ingestion episodes throughout the day. The importance of staff regularly offering beverages and diligently prompting residents to ingest that drink have been identified as key factors in reducing the incidence of dehydration (Spangler, Risley & Billyew, 1984; Simmons, Alessi & Schnelle, 2001; Robinson & Rosher, 2002).

Resident factors can confound drinking behaviour and hydration status. These include cognitive, physical, sensory, behavioural problems and frailty (Simmons, Alessi & Schnelle 2001; Woodward, 2007; Ulrich & McCutcheon, 2008; Schols et al., 2009; Gasper, 2011; Bunn et al., 2015; Paulis et al, 2018). For example, age-related changes can lead to a decrease in renal perfusion, increased sensitivity to antidiuretic hormone, and a diminished sense of thirst (Cowen, Hodak, & Verbalis, 2013). These factors, combined with limited

mobility, decreased functional ability, visual impairment, communication problems, incontinence, altered alertness, diminished mental status, and cognitive impairment that impacts on swallowing expose older adults to increased risk of dehydration (Hoffman, 1991; Rush & Schofield 1999; Nazarko, 2000; Larson, 2003; Reed et al., 2005,; Bourdel-Marchasson, 2007, Faes et al., 2007; Carter, 2015). Furthermore, Schols et al. (2009) argued that multimorbidity and polypharmacy can overstress the normal age related physiological changes in the water and sodium balance thus increasing risk of dehydration particularly in hot weather.

Older adults with dementia are particularly at high risk of dehydration (Wu et al., 2011; Bunn et al. 2015; Paulis et al, 2018). Diminished ability to remember to drink, forgetting to drink when provided with a beverage, refusing to drink or not being able to drink are amongst the problems experienced by people with dementia (Shaw and Cook, 2017). In addition, some residents may have anxiety about incontinence or choking, and intentionally reduce fluid intake as a personal strategy to manage these problems. These residents are highly unlikely to be considered as at risk of dehydration and yet have potential to be so, as the onset of impending dehydration usually develops slowly and can go unnoticed (Bennett, Thomas & Riegel, 2004; Campbell, 2011).

Workforce and organisational factors can also inhibit hydration support. In the context of a care home, staff are often required to choose between competing care activities (Godfrey, 2012). Supporting residents to ingest adequate amounts of fluids can be very intensive and time-consuming work and this has to be balanced with other aspects of care (Amella, 2002; Mentis, 2006; RCN, 2010; BGS, 2010; Gasper, 2011). Other barriers include lack of hydration policy or procedure, poor leadership within the care home team, and inadequate staff competence and diligence in performing routines for hydration support and monitoring fluid balance (Simmons, Alessi & Schnelle, 2001; Mentis, 2006).

Despite these challenges, some innovative practices that encourage residents to drink have been documented, including 'Morning Mocktails,' and 'Hydration Stations' (Henderson,

2016). Mocktails are non-alcoholic drinks that are made of mixed juices, and look and taste like a cocktail. The attractive colours and flavours entice residents to drink. Some hydration intervention studies provide evidence for the effectiveness of high contrast red drinking vessels (Dunn et al., 2004), the offer of drinks with different tastes (such as a change in the brand of tea), temperatures and texture (Robinson & Rosher, 2002; Murray, 2017), and preference elicitation (Simmons, Alessi & Schnelle, 2001). Bunn et al.'s (2015) systematic review suggests a trend toward increasing fluid intake via multi-component interventions could be effective. This is particularly the case in the context of long-term care because the majority of older residents have many coexisting health, sensory and functional problems, therefore it is unlikely that a single intervention would be effective. Nevertheless, Bunn et al.'s (2015) review highlights the paucity of evidence relating to hydration interventions to support those living in nursing and residential care homes to drink sufficient fluid.

HYDRATION IN CARE HOMES: A SERVICE PRIORITY

In England the Vanguard initiative was set up to identify and test new care models with the purpose of developing blueprints for the transformation of National Health Service community and primary services in England (NHS England, 2017a). One of the five types of Vanguard was Enhanced Health in Care Homes. The Enhanced Health in Care Homes programme aimed to make health services for care home residents more accessible, cost effective, and tailored to their needs, so that quality of life and quality of care is improved and unnecessary hospital admissions avoided. The Pathway of Care work stream of the Newcastle Gateshead Care Home Vanguard programme, had a number of priority areas including increasing hydration and decreasing dehydration of care home residents (NHS England, 2017b). Analysis of service statistics in this locality suggested that dehydration in older people living in care homes was a major cause of admission to hospital. This study was commissioned to develop an evidence base of hydration practices in care homes in Gateshead and Newcastle. The purpose of generating this evidence was to inform decisions

by the Pathways of Care group regarding planning service delivery, policy and commissioning to optimise hydration friendly environments within the locality.

METHODS

Aim and objectives

The aim of this study was to explore hydration practices and the factors that influence resident outcomes in English care homes. This was achieved via three objectives: to investigate practices to monitor daily fluid intake and dehydration of care home residents; to explore approaches to assessing residents' hydration requirements and support required; and to explore hydration practices within care homes. Whilst the reporting of this study adheres to COREQ criteria, this paper does not represent the study's findings in entirety, but presents one aspect: the practices that care home staff adopt when providing hydration care (The full report can be accessed via Cook et al. 2017).

Design

This project used a sequential exploratory mixed method design (Cresswell & Plano Clark 2012) to first scope existing hydration practices quantitatively before exploring hydration practices in depth via qualitative methods. Data were collected via two stages. First was a region-wide survey of hydration practices in care homes. Second was the exploration of practitioners' perceptions relating to hydration practice via semi-structured interviews.

Measures

Stage one data were collected via a survey conducted in all care home services in two North East England local authority areas between February and August 2017 to capture:

- care home guidance and standards regarding resident hydration
- type and level of staff training in relation to hydration, and recognition and response to dehydration
- practices to encourage and support fluid intake by residents
- approaches to assessment of resident hydration status

- willingness to take part in the case study investigation.

This questionnaire was based on a modified version of the 'Hospital Water Audit' (Royal College of Nursing & National Patient Safety Agency, 2007). It was piloted with two care home managers, a consultant nurse with expertise in care of older people in care homes, and a gerontological nurse researcher. During the pilot, the survey was tested for face validity, acceptability and distribution method. Versions for different modes of distribution were developed, including via Bristol Online Surveys, Word document sent via email, postal copies and structured interview completed by the research team over the telephone.

Stage two data were collected via face-to-face semi-structured interviews with care home staff, conducted by the authors. These were designed to explore individual practices for supporting resident hydration in care homes, general hydration policies, recognising and responding when a resident's fluid intake decreases, raising awareness of hydration issues and methods to share best practice. These topics were developed via discussions within the survey pilot to identify core topics suitable to explore in greater detail. A semi-structured approach was used to allow participants to discuss a range of practices and approaches and also allow analysis of stage one data to inform discussions.

Sample and procedure

Within stage one data collection, all care home managers (n=81) in 2 North East England local authority areas were invited to take part in the survey. Of these care homes 22 were registered as nursing homes; 35 residential care; and 22 multi provision nursing and residential care (the registration status of 2 homes was unknown). A total of 29 responses were received (response rate: n=29, 35.8%), from 18 (62%) homes offering residential or nursing and residential care, and 11 (38%) from care homes that were reported as providing residential and/or nursing dementia care (see table 1). Multiple modes of distribution were used to encourage the response rate, with electronic and postal questionnaires being used in the first instance, before follow-up telephone calls acting as a reminder and to offer

completion via structured interview were used. Responding homes had a mean number of 40.17 residents, but this included a wide range from 19 residents in the smallest home to 88 in the largest home.

INSERT TABLE 1 HERE

From the survey respondents, 8 care homes were selected from two local authorities to provide in-depth qualitative case studies of existing hydration practices and policies. In order to ensure the inclusion of all relevant information the selection of care homes was designed to optimise diversity in relation to the following criteria: type of care home (e.g. nursing, residential, EMI); care home location; number of resident occupants (see table one). Across the 8 sites, all staff were invited to participate and a total of 54 staff took part in 43 individual or small group interviews (see table 2). No approached staff declined to participate or withdrew. All interviews were audio recorded. A pragmatic approach was taken to data collection to ensure the research was unobtrusive on the home's daily routine, with staff participating during breaks and quiet periods. As such, although individual interviews were prioritised to explore individual practice in depth, groups of up to three staff members were used where shift patterns dictated availability.

INSERT TABLE 2 HERE

Data analysis

Data from the survey were entered into an Excel file in preparation for transfer to SPSS for descriptive analysis. Spot checks were carried out on survey data to ensure accuracy of data entry. Descriptive statistics were generated to summarise individual questions or issues. Free text responses were coded in nominal variables.

Interview and **small group interview data**, lasting between 5 and 46 minutes, were transcribed verbatim in preparation for analysis, supported by field notes to capture data which was unclear or inaudible. Transcribed Word files were grouped by the care home site in the first instance to allow case descriptions to be developed in order to give an overview of hydration practices within an individual care home. All interview transcripts then underwent a process of open coding whereby data were read, line-by-line, by the research team in order to identify sections of data which highlighted emerging issues in relation to hydration practice. Following this, coded data were merged into another Word file to identify the relationship between codes across sites and interviews as part of a process of axial coding (Braun & Clarke, 2006). This allowed an overall picture of hydration practice to be identified, while still maintaining an understanding of the relationship between and importance of individual case study sites. Following completion of the study, findings were presented back to participants for discussion as a process of member checking.

Ethical considerations

Research ethics committee approval to undertake the study was obtained from the Faculty of Health and Life Sciences, Northumbria University. Questionnaire data submitted via Bristol Online Surveys were automatically generated via the web portal, with each submission given an anonymised identity code to ensure each response could be grouped individually without being identifiable. Meanwhile, all participants in the interviews and focus groups were taken through detailed informed consent procedures prior to agreeing to take part.

FINDINGS

Hydration procedures and practices in care homes

As can be seen in table 3 all respondents reported that they actively promoted hydration for residents and that there were procedures in place for staff to encourage residents to drink more fluids when they were ill, during hot weather, when residents were on trips or visits,

and when residents were exercising. The majority of respondents also indicated that they promoted the importance of hydration with family members and friends of residents. One issue which received less consistent responses was that of daily fluid intake targets. Twenty three respondents (n=23, 79%) stated that the care home had a recommended daily fluid intake target for residents. Of these, 11 (n=11, 13.6%) respondents stated this level was based on variable or personalised factors such as individual height and weight, individual preference or need, or GP / Nurse consultation. In contrast 9 (n=9, 11%) respondents reported using a set daily fluid intake target for all residents, and these targets ranged between 500mls to 2 litres per day.

INSERT TABLE 3 HERE

When the survey respondents were asked about hydration-promoting strategies they reported that the most common practices involved offering choice and availability of fluids (hydration stations, frequent tea trolleys); organisational practices (inclusion in resident review, the use of fluid balance charts, visual prompts, include in care plans) and offering food high in fluid content in order to increase fluid intake (see table 4). These strategies were discussed in depth during the stage two interviews with care home staff. All interview participants spoke of their efforts to offer a range of fluids throughout the day (*offer drinks*), and in some circumstances such as '*hot weather*' or when residents were '*ill*' they endeavoured to provide more beverages or food high in fluid content (*offering more drinks*). The majority of interviewees also described strategies they used to support, and encourage residents to drink (*supporting and encouraging drinking*). These themes are discussed in detail in the following sections.

INSERT TABLE 4 HERE

Practices to optimise fluid intake: offer drinks, offer more drinks; supporting and encouraging drinking

Offer drinks

All of the participants discussed their knowledge of residents' preferences, hydration requirements and problems with drinking. The majority reported that they routinely provide fluids when residents woke or when they had meals:

So, first thing on a morning we normally give tea, coffee. For breakfast. And then mid-morning you go around offering snacks like, a biscuit or cup of tea or juice. At dinner time they'll be offered tea and juice with their meal. Then mid-afternoon we normally go around with tea, coffee and biscuits. And then tea time it'll be, like, tea or coffee or juice.....And then again throughout the day and right the way through the night. (Care Assistant 12)

This carer highlighted the routine in the care home of providing fluids throughout day and night. Most participants, however, suggested that residents did not always ingest an adequate volume of fluids through this approach therefore staff ensured that residents had continual access to water and other beverages:

Obviously we have lots of drinks out, you know, for the residents who are able to help themselves....They have fridges in their rooms and they have water bottles. In the lounges, we always have tubs of juice and a selection of different drinks there for people to help themselves. For the residents who can't drink by themselves, the carers are constantly promoting fluids, offering drinks on a regular basis. (Manager 2)

The availability of fluids throughout the home ensured that residents had visual cues that prompted them to drink. The participants were also mindful that some residents had mobility problems and indicated that it was important for drinks to be accessible in all locations, such as '*hydration stations*.' Choice of drink was considered to be as important as availability:

Choice. Choice is number one. If somebody is given a choice, whether it be by showing two drinks – you know if they can't communicate very well, they'll always go for the one that looks more appealing to them. (Care Assistant 18)

There were reports of residents being offered a range of beverages including tea, coffee, hot chocolate, milk shakes, lemonade, orange juice, lemon juice, blackcurrant, mango and pineapple. Participants stressed the importance of offering drinks with different flavours, textures, temperatures and colours:

It's different flavours, and encouraging them to enjoy taste. Because when I do the activities, it's nice to have variety. We all like variety. We can have different juices. (Activities co-ordinator 4)

If it's a hot day, they don't want a cup of tea. They prefer a milkshake or an ice lolly. Mashed down – so it's like a slush. We can do that sort of thing. But a lot of the residents prefer the milkshake. (Care Assistant 13)

The fluid content of food was identified as an important contribution to daily intake. In all of the care homes the menu included a range of food that was high in fluid content:

Aye, yeah. So one of the things – like homemade soup, definitely. Rice puddings. They like rice pudding, aye. And their semolina. They like cake and ice cream and choc-ices and things like that. Ice lollies. I've made fruit and jelly, and they'll have ice cream on the side with that. They also like mousses. (Catering manager 1)

When it is observed that residents have a low fluid intake, staff ensure that they are encouraged to eat food high in fluid content such as porridge, soup, yoghurt and jelly. This adds to their daily fluid intake. All of the participants recognised the importance of ensuring that residents did not just drink – they should drink sufficient fluids to maintain health.

Offering more drinks

Participants spoke of the circumstances when they aimed to increase targeted fluid intake for individual residents. Many suggested that the care home was a warm environment and this increased in hot weather. They observed that some of their residents had difficulty in maintaining thermal homeostasis when the temperature of the built environment rose. Increased perspiration and profuse sweating in these conditions increased fluid loss. For those on medications such as diuretics the effect of water loss, due to sweating, worsened the dehydrating effect of high temperatures. One of the responses to this situation was to ensure that residents were offered cool water and clear juices:

Especially through the hotter weather. We just keep going in with jugs and topping their cups up. So they've always have a cool drink with them.....If it's a warm day, we normally offer more juice. (Care Assistant 5)

In some care homes the staff froze fruit juice that could be either sucked or added to drinks to enhance the flavour. Offering ice-pops and ice-cream was particularly popular with residents. The participants suggested that it was important to offer additional fluids because many of the residents did not indicate that they were thirsty, consequently they did not ask for additional drinks.

When residents increased their physical activity, care staff argued that they encouraged them to drink more:

Drinking... Well, they have exercise classes on in here. And they've also got tai chi classes. And that always breaks them out into a little sweat. So as the instructor is about to stop, we have the jugs ready. And that sort of encourages them to drink – she says '*come on, pick your glasses up.*' (Care Assistant 18)

In these extracts it is clear that fluids were offered at intervals during exercise sessions, and residents were prompted to drink with a verbal cue. Drinking in this situation is part of the

social aspect of the group exercise activity and provided opportunities for drinking as a pleasurable experience.

Participants were also keen to highlight that residents required additional fluids when ill:

Well, normally when we're... If we go in to get someone out of bed, and if they're really sleepy, and they have a temperature we'll give them a drink as soon as we go to get them up. Because they need plenty of fluids when they are ill. Also if somebody has been vomiting, or if they've had diarrhoea it is important to encourage them to drink more. (Unit Manager 1)

They spoke of their efforts to tempt residents who were febrile with their favourite drinks and to offer drinks more frequently. They also stressed the importance of monitoring intake and output more intensely in these circumstances to ensure that they had an accurate understanding of the older person's fluid balance.

Supporting and encouraging drinking

In contrast to offering additional fluids when residents were likely to experience additional fluid loss such as hot weather, when exercising, and illness the participants provided detailed accounts of approaches and strategies that they adopted to support and encourage residents to drink. These approaches and strategies are summarised in **table 5 and discussed in the following sections.**

INSERT TABLE 5 HERE

Using social interaction with prompts to encourage fluids during routine activities

Having a cup of tea is quintessentially British, and just because people are living in a care home does not change a behaviour that has been enjoyed for decades. Sharing a favourite

drink that had been given as a gift from their family was viewed as an enjoyable experience and stimulated conversation:

Yeah. We involve the residents with their family and they have their drinks and meals with their loved one. (Care Assistant 28)

Carers however, were also conscious that residents may not drink sufficient fluid for a range of reasons including not wanting to consume large quantities of fluid; lack of energy; forgetting to finish a drink; or being distracted before they completed their drink. In order to address this residents were frequently offered prompts and the cook in one care home stated:

I tend to say, "*Oh, drink that up – because I need to wash the cup.*" And stuff like that. We're a tiny, little home, and they're aware that the dishes are getting washed in preparation for the next meal. (Catering staff 2)

The majority of participants indicated that residents with dementia or mild cognitive impairment needed more prompting. They required a reminder to drink the '*glass of juice next to them.*' In other situations, a resident may decline a drink. Carers would respond to this choice, however, their knowledge of the resident led them to try again:

I would ask them first. If they refuse, I would leave them a little bit. Just to see... See if that works. Go back, ask again. They usually change their mind. (Care Assistant 17)

Offering fluids with routine activities, that occurred throughout the day, was also discussed by some carers. For example, a manager described how the care team offered a full glass of water when administering medication and another as they left the resident. These simple changes to practice increased the number of ingestion episodes throughout the day and the volume of fluid consumed.

Adapted/modified drinking vessels and aids to support drinking

Participants highlighted the importance of not only what residents were offered, how often they were offered beverages, but how they were offered drinks. They mentioned that some residents would only drink '*when given their favourite cup*' and many residents preferred a '*normal*' looking cup that did not advertise their disability. Providing a range of cups and mugs of different sizes and colours was considered important.

Yes, we use the blue ones, rather than the white. Because the blue is the better colour for those with dementia. White is not a good colour for people with dementia. It's a nice shade of blue. The plates are blue as well. It is the strong contrasting colours that are good to encourage them to drink. Other residents like to have their china cup and we make sure that happens. (Unit Manager 1)

The use of colour was also adopted as an indicator for staff to know that jugs and glasses had been refreshed in one home – morning orange and afternoon clear vessels. In addition to colour, the size of cups, mugs and beakers was important and for those that struggled to drink from cups or beakers the use of straws was common practice in the care homes as a way of controlling the amount of fluid entering the mouth and the sucking action required. Some participants also suggested that the different colour and shapes of straws appealed to residents.

Offer beverages with activities and drinking related activities

Many participants spoke of the range of activities occurring their care home - exercise groups, dominoes, art groups, baking, making cards, playing cards, celebrations, summer fayres, and entertainment to name a few . They stressed that activities and events usually involved having a drink:

We usually always start and ask if they want to have a cup of tea or a drink of juice. Because it's just sometimes nice to start the activity with a drink. Well everything we do pretty much involves having a drink. (Activities Coordinator 2)

There is a strong association between doing something and drinking. *'Movie, nibbles and tipple,'* and *'Wine, dine and dance night,'* highlight the connection between the activity and drinking. This association between food and drink was viewed as pleasurable:

It's that lovely association between a drink and something to eat, isn't it? That a lot of people probably enjoy... Well, it's my recollection of a really good time – having a drink and something to eat. (Manager 1)

Some activities within a care home were about drinks, rather than drinking being a part of the activity. The *'Taster and Tester sessions'* in one home ensured that residents could taste a range of drinks. For example, in the modern drinks taster session bubble-gum, apple and elderflower, and mint sparkle were offered to residents:

I might buy different flavoured pop and just try it, it could be different foods and just different liquids. Well different to what they would normally get here. Just, like I say, I buy some type of flavoured pop like bubble gum flavour..... a lot of them really enjoyed the tasting. (Activities Coordinator 1)

In some care homes residents were supported to go on an outing for a drink, such as a trip to the local coffee house or pub, or to the beach for an ice-cream. In contrast to going out, themed drink, events were held. *Shandy Saturday* occurred most Saturdays in one care home. Initially the beers were provided by the care home and now relatives bring drinks to share:

We try and do the *Shandy Saturday*, most Saturdays. We've got families now who bring in the beer, about three or four cans in, but that's enough to make shandies for whoever wants one. (Activities Coordinator 1)

Creating a 'drinking conducive environment'

The concept of providing a Shandy session within a care home was taken one stage further in one care home. A '*Gentleman's Club*' resulted from the refurbishment of a lounge and equipment such a snooker table, cards table and dominoes were provided:

In this fitted room they have a game of snooker – because they've got, like, a snooker room down at the bottom. So we'll take the men down there and we'll have a game of snooker within the... Or a game of darts or whatever. And then we'll sit down with them and, like, have a Shandy or a cuppa, whatever they prefer. (Care Assistant 16)

In other homes there were examples of dining rooms that had been transformed into an area where a dining experience could occur. These environments were relaxing and provided many cues for drinking and eating:

One lady is not drinking much... If we sit her at the dining table, she tends to drink more by herself. Whereas if she's sitting in her chair or in bed, you've got to do the mouth care a lot because she doesn't really take a drink there. (Care Assistant 5)

The idea of ensuring that rooms are drink-friendly was also important in resident's rooms. One manager reported that she had recently purchased different coloured glasses for resident rooms in acknowledgement that residents would be unable to drink in their rooms if they did not have a glass. These changes to rooms provided prompts to residents to drink in the absence of staff intervention, thus using the environment as an intervention in its own right.

DISCUSSION

The findings highlight that care home staff work constantly to offer fluids to residents throughout each day. This is time-consuming, important work. There was however, a lack of consensus about how much fluid residents should consume each day. If care home staff do

not know what the recommended daily fluid target should be, it is likely that this will influence fluid intake.

The regular offer of drinks is important, however, on its own a simple offer does not overcome the challenging hydration habits that residents present – will not drink enough fluid; will not drink, forget to drink, forget how to drink, and cannot drink (Mentes, 2006). In addition to the regular provision of drinks, care home staff use a range of approaches to support and encourage residents to consume water and beverages. These practices include the therapeutic use of social interaction; verbal and non-verbal prompts to drink; giving fluids with routine practices and social activities; providing drinks as an activity, and creating a relaxed, drink-friendly atmosphere. The identification of these approaches adds to an undeveloped literature (Bunn et al., 2015) about practices that support frail older care home residents with complex health problems to drink sufficient fluid. It is noteworthy that no one care home in this study was implementing all of the identified hydration strategies at any point in time. The extent to which any strategy was implemented, and the combinations of strategies within a care home, also varied considerably.

For those residents who do not recognise that they need a drink due to diminished thirst sensation, and those forgetting to drink, verbal and non-verbal prompts were considered important. Three previous studies also highlighted the importance of prompting older residents to drink which reduced the frequency of episodes of dehydration (Spangler, Risley & Bilyew, 1984; Simmons, Alessi & Schnelle, 2001; Robinson & Rosher, 2002). In Simmons, Alessi and Schnelle's (2001) study 81% of participants showed small increases in their average daily fluid intake in response to additional verbal prompts.

Many participants discussed how they treated hydration care as an aspect of social interaction, and attempted to create a relaxed and less clinical approach to this aspect of nursing care. Behavioural interventions, such as inviting friends and family to drink with

residents, were viewed by participants as a more positive way of assisting and supporting residents with their fluid intake. Some carers suggested that by sitting down with residents and having a drink with them was a much more successful strategy than '*standing over*' them, prompting intake. This approach is acknowledged in previous literature where it is argued that if drinking is perceived to be a pleasurable, social experience, rather than a clinical activity that focuses on fluid consumption, the risk of suboptimal hydration decreases (Clearly et al., 2008), Godfrey et al., 2012). Stroebele and De Castro (2004) suggest that the physical presence of someone with a resident can have a dramatic effect on how the resident responds to both eating and drinking. The effect is 'socially facilitative' and conducive to supporting hydration if the interaction is relaxed. The effect of socially facilitated hydration was most evident when drinks were offered as part of social activities in the study care homes. Themed drinks events, such as the Victorian afternoon tea and Shandy Saturdays were particularly popular with residents and their families as opportunities to be together and enjoy the occasion.

Robinson and Rosher (2002) reported that beverages with different tastes and temperatures was well received by older nursing home residents. Whilst water is adequate to meet bodily hydration requirements, most people drink a variety of beverages (Popkin et al., 2006). Knowing the preferences of residents is important to the delivery of person-centred care, however, as people age preferences can change. Similarly preferences can change with the progression of dementia. Residents with communication problems may have difficulty in expressing their changing preferences, and those with cognitive impairment may no longer remember the range of drinks that they prefer. The practice of '*drinks related activities*' includes drink taster and tester sessions. These provide interesting and enjoyable approaches for residents to try drinks and for staff to identify residents' current preferences. '*Retro drinks*' and '*modern drinks*' activities also promote social interaction when residents and staff discuss memories, thoughts and feelings associated with the drinks that they taste.

Knowing what hydration strategies work with individual residents requires staff to be highly competent in assessing and responding to the very specific needs of individual residents. Effective multiprofessional working between care home, community and primary care health professionals is also important to optimise the hydration status of residents with complex health and social care requirements (Cook et al., 2016). Although collaborative working and effective sharing of information and knowledge is essential to workforce competency, team members require a sound knowledge base of hydration practices in the first instance in order to competently contribute to the hydration care of residents.

Whilst the study findings further current understanding of practices to support residents to drink, the findings were derived from the views and experiences of staff working in care homes. The perspective of residents and their visitors regarding hydration was not explored nor were clinical measures of resident drinking behaviour undertaken. Investigating these aspects of hydration in care homes may shed further insight to the challenges experienced by residents and staff in achieving an adequate fluid intake. This does not diminish the contribution of the study presented in this paper. The limitations of this study highlights other gaps in knowledge and potential for research.

CONCLUSION

Older care home residents do need support and encouragement to drink adequate fluids everyday. This can be difficult to achieve with residents who have complex health and challenging drinking habits. In addition to the routine offer of drinks and beverages throughout the day, different approaches to hydration support should also be used as part of routine care in care homes.

RELEVANCE TO CLINICAL PRACTICE

Supporting and encouraging care home residents to drink is an essential component of care. Yet, there is evidence that older residents do not regularly consume adequate fluids to maintain optimum hydration. The findings from this study identify the range of hydration practices that can be implemented as part of routine care. Hydration practices include the use of social interaction to encourage residents to drink adequate volumes of fluid; verbal and non-verbal prompts to drink; giving fluids with routine practices and social activities; providing drinks-related activity, and creating a relaxed, drink-friendly atmosphere in the care home. Care home staff can fulfil an important role in assessing the hydration needs of individual residents and using multiple hydration practices to support and encourage residents to fulfil an essential human need.

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