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I-hydrate training intervention for staff working in a care home setting: an observational study

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## Abstract

### Background

Dehydration is a complex and well-recognised problem for older people residing in care homes. Within the social care sector support staff provide the majority of direct care for residents, and yet receive minimal training.

### Objectives

To design, deliver and evaluate a hydration specific training session for care home staff to develop their knowledge and skills in supporting the hydration of care home residents.

### Design

An observational study comprising a pre-test post-test survey of staff knowledge following a training intervention.

### Participants and Settings

Training of care home staff took place in two care homes in North West London.

### Methods

An interactive training session was developed and delivered, with content informed by observations of hydration care within the two homes and evaluated using CIRO model. Participant self-evaluation forms were used to collect data after the session regarding satisfaction and usefulness of the session, and pre and post levels of self-reported knowledge across six facets of hydration care. Training facilitators captured qualitative data in the form of field notes. Observations of hydration care explored the impact of training on practice.

### Results

Eighteen training sessions were delivered. A total of 161 participant evaluation forms were returned. There was a significant increase in self-reported knowledge across all six facets of hydration care ( $p = 0.000$ ). The majority of participants found the training enjoyable and useful, and expressed an expected change in their practice. Participants enjoyed the interactive components of the training. A lack of reflective practice skills meant participants were unable to reflect realistically about the hydration care provided in the home.

### Conclusion

Providing focused training on hydration in the care home environment benefits from being interactive and experiential. Although such training can be effective in increasing staff knowledge, inclusion of skills in reflective practice is required if this knowledge is to be translated into practice.

### Introduction

Within the health and social care sector ensuring individuals receive sufficient fluids to stay hydrated is a fundamental care need and recognised safety issue. The Care Quality Commission (CQC) regulations specify food and fluids must be provided, along with the support needed to consume them (CQC, 2017). Older people residing in care homes are thought to be more at risk of dehydration as organisational factors may inhibit both food and fluid provision and intake (Copeman, 2000). Support staff in this sector, such as healthcare assistants, provide the majority of direct care and yet, are often minimally trained. As a result it has been recommended that staff training should be provided to improve hydration and nutrition care for care home residents (Copeman, 2000; Cowan et al., 2004a; Reimer and Keller, 2009).

### Background

The recommended daily minimum fluid intake required for maintaining health is 1500ml (Ferry, 2005). A previous study found hydration care for frail older people in two care homes found that the majority of residents had poor daily fluid intake with few consuming the recommended daily minimum (Wilson et al., 2018). Contributing to low intake was a lack of structured drinking opportunities, limited choice of fluids and underutilisation of fluid rich foods to support hydration. In addition, staff did not offer residents enough drinks across the day and residents who needed assistance to drink were not always helped. There is evidence that residents in care homes are more likely to be dehydrated when admitted to hospital than those admitted from the community (Wolff et al., 2015). Dehydration in older people is associated with a range of adverse outcomes including an increased risk of urinary tract infection, falls, stroke and hospital admission (Mentes, 2006).

The healthcare assistant (HCA) title covers a range of roles in health and social care settings both within the National Health Service (NHS) and private sector (Health Education England, 2015). The nursing home sector relies on HCA to carry out the majority of direct care with residents, they are therefore a key group to educate (Thornley, 2000, Baldwin et al., 2003). In addition, care home nurses may feel isolated from the profession as a whole and struggle to identify gaps in their knowledge (Smythe et al., 2017). It is recognised that both nurses and support staff in the care sector would benefit from training in nutrition and hydration (Cowan et al., 2004b).

Training itself aims not only to benefit staff through increased knowledge and confidence but also to increase the quality of life of care home residents through improved care (Nolan et al., 2008). It allows the rationale behind components of care delivery to be explored, along with staff perceptions and attitudes (Nolan et al., 2008). However, training care home staff can be challenging due to high workloads and low attendance (Tryssenaar and Gray, 2004). Therefore, designing training to suit the specific needs of this group is key.

The objectives of this study were to design, deliver and evaluate a training session for care home staff that developed their knowledge and skills in supporting the hydration of residents. The training programme will be described, staff evaluation of the session explored and implications discussed.

## Methods

The training session was developed and implemented as a part of a larger service improvement project in two care homes in North West London. The project was considered to meet the criteria of 'service evaluation', and approval from the Health Research Authority was not required. Ethical approval was obtained from the College of Nursing, Midwifery and Healthcare research ethics panel at the University of West London. Training content was designed to address specific areas of knowledge and practice which reflected the observed problems in providing hydration care in this environment (see Table 1). The training session lasted approximately two hours and was facilitated by two university staff from the project team. Each care home co-ordinated staff attendance, with training situated in-house. Sessions were open to all staff groups and grades; participants were required by the care home to take part in training and were not self-selecting.

The design and evaluation of the training session was informed by the CIRO model (Warr et al., 1970). This included evaluating current hydration care to inform training content (Context) and tailoring the session to work within the constraints of the care home environment (Input). Participants were asked to complete an evaluation form at the end of the session. This captured participant satisfaction (Reaction) and any changes hydration knowledge (Immediate Outcomes). Changes in self-rated knowledge pre and post training were scored on a Likert scale of 'none' (1) to 'excellent' (6) with responses analysed using Wilcoxon signed-rank test on Statistical Package for the Social Sciences (SPSS, version 24). The impact of the training on care delivery was assessed through the observation of hydration practice on the two units involved in the service improvement project (Intermediate Outcomes). Qualitative data in the form of field notes completed by training facilitators captured discussions with participants which arose during the sessions. In one care home a questionnaire was used to capture demographic data of staff responsible for delivering care.

## Results

Between March and September 2016, eighteen training sessions took place across two care homes. Group size ranged from 3 to 13 participants, with low numbers due to staff shortages on care units. A total of 161 completed evaluation forms, 57 from Home A and 104 from Home B, were received. Missing responses were not included in the analysis.

The majority of staff attending training were HCA (70.3%, 109/155), followed by Registered Nurses (14.2%, 22/155), catering or domestic staff (10.3%, 16/155), with activity co-ordinators, physiotherapists, occupational therapists and management constituting the remaining 5% (8/155). The majority of staff (98.1%, 158/161) reported that their understanding of the risk factors for dehydration had increased following training. In addition, 99.3% (158/159) of staff indicated an expected change in their practice. Following training there was a statistically significant change in self-rated knowledge for each facet of hydration knowledge (see Table 2). In each area the median knowledge score reported by attendees before training was good (4, min 1 – max 6), increasing after training to very good (5, min 3 – max 6). Across the facets of knowledge 21%-30% of staff already rated their baseline knowledge as either very good or excellent before training. This rose to 81%-89% of participants rating themselves as either very good or excellent following training. The majority of participants found the training enjoyable and useful (see Table 3). Supporting this, 160 of the 161 participants (99.4%) would recommend the training to their colleagues.

The parts of training that participants enjoyed the most were the fluid thickeners component (37.7%, 46/122), hydration quiz (13.9%, 17/122) and case study (3.3%, 4/122). Other participants (20.5%, 25/122) stated they enjoyed the whole session, with some appreciating the interactive nature of the session (14.8%, 18/122), or learning facts about hydration (9.8%, 12/122). Two participants suggested the training should be run frequently and another stated it should be provided to staff before they start work in a care home.

Field notes captured discussions which occurred during the training sessions. During the emotional mapping exercise some staff stated that they thought residents were provided with a wide variety of fluids, which met their personal preferences at each drinking opportunity. Some also thought that residents were offered drinks regularly throughout the day. Water was referred to by some participants as being the 'best' fluid to provide residents, while drinks such as coffee and alcohol were perceived to be detrimental to residents' health.

Observation of hydration care on the service improvement project units after training had commenced indicated limited implementation of desired changes in practice (Wilson et al., 2018). The fact that not all staff in each care unit attended training was considered a key factor impeding change. Training messages were subsequently reinforced with focused 15 minute on-unit 'huddle' training to enable the delivery of key information from training to the entire unit team on shift. This was supplemented with summary posters displayed on the units.

A total of 63 (25%) of 250 care staff responded to the staff demographics questionnaire; 13 Registered Nurses and 50 HCA. 41 respondents (80%) had worked in a caring role for up to 5 years. Of the 50 HCA, 29 (64%) stated their highest qualification level as NVQ, Care Certificate or GCSE. Another 10 (22%) of HCA had a higher qualification at degree or masters level. A similar proportion of nurses (77%, 10/13) and carers (70%, 33/47) reported English as their second language. The majority of staff (46/59, 78%) indicated that they were interested in completing further qualifications in the area of health and social care.

### Discussion

This study involved the design and delivery of a hydration specific training session to care home staff, the content of which was informed by observations of hydration care. The results highlighted several key themes, notably the importance of using an experiential learning approach in this setting; the role of 'unconscious incompetence' in knowledge uptake and practice change in this workforce; and its relationship to skills in reflective practice. Leadership and positive role modelling throughout the organisation, was also seen as crucial for a culture of change to be facilitated, and improvements in hydration care to be achieved.

#### Taking an experiential learning approach

Adopting an approach that generates both motivation and interest during education and training is vital (Tryssenaar and Gray, 2004). This could involve activities such as role play, games, problem solving and discussion (Nolan et al., 2008). Nurses themselves have identified that training should be relevant to the real-world, interactive and allow discussion with others in their field (Smythe et al., 2017). The interactive components of this training were positively evaluated, in particular the fluid thickeners section. Most staff had not tasted thickened fluids before and doing so may have helped them to understand, and ultimately

empathise, with this aspect of the resident experience. This demonstrates the importance of providing experiential modes of training (Hill, 2017), not commonly applied in the care home environment, when attempting to enhance learning and promote change in competence and practice.

#### Learning in relation to staff mix

The staff demographics questionnaire found that the care home staff who responded were a multicultural workforce who tended to have English as a second language (ESL). A group of people, some with ESL, are likely to employ a variety of learning strategies which may be culturally specific (Choi, 2005). Taking this into account when designing training for groups with ESL would be important in order to engage all participants. This could involve creating situations in which those attending training work in pairs or small groups, this can support critical thinking and engagement, as well as the sharing of personal experiences and developing camaraderie (Terry et al., 2013; Lum et al., 2015).

#### Unconscious incompetence

The results highlighted a discrepancy between participants self-rated knowledge pre-training when compared to their observed ability in practice. This incongruity indicates that care home staff may not necessarily be able to recognise their own learning needs. This is in keeping with the theory proffered by Kruger and Dunning (1999) which states that incompetent individuals lack the metacognitive skills required for accurate self-assessment. They suggest that the knowledge that underpins one's ability to produce correct judgement is the same knowledge that underpins the ability to recognise correct judgement. Where individuals are unaware of their lack of competence, equally this can lead to 'imperfect self-assessments', believing themselves to be 'above average' in their performance, which is not the case (Bosley and Dale, 2008). Making attendance to training compulsory captures a wide group of staff, regardless of their assumed level of knowledge; helping to promote an equitable knowledge base across the workforce.

#### A need for reflection

It is argued that 'unlearning' needs to occur in order for new learning to take place, particularly in the healthcare environment (Rushmer and Davies, 2004). Key to 'unlearning' is the process of reflecting on existing knowledge and practice. For example, whilst the emotional mapping activity enabled participants to reflect upon their own hydration needs and preferences, they struggled to transfer these reflections to the experiences of the residents they cared for. Participants discussed their attitudes and pre-existing beliefs about fluids and fluid provision. These were often views reinforced in societal discourse such as recommending water over other fluids. Eliciting these beliefs was important so as to dispel those which were unfounded or incorrect, as they were likely to influence the care they provided to residents.

Whilst Registered Nurses and Midwives are required by their professional code to reflect in, and on, practice (Nicol and Dosser, 2016; NMC, 2015), this is not the case for support staff who are less likely to have been exposed to this idea. In addition, if nurses have been qualified for some time, were trained in a non-UK setting, or have been working in social care for a long period they may not recognise the need for reflection or have developed the necessary skills to achieve it. This indicates a need to design induction and training sessions that integrate reflection on practice skills to help build a culture open to change where staff

can confidently, and with candour, identify gaps in their practice; and to 'unlearn'. This would need to be facilitated in such a way as to promote empathy, and a reflective team culture amongst staff and importantly, increase staff empowerment and improve resident outcomes (Page and Meerabeau, 2000; Yeatts et al., 2016).

#### Supporting training in practice

Although staff indicated increased knowledge and anticipated change in their practice following training, observations of hydration care suggested this did not reliably occur. This reflects previous research on the inadequacy of training alone to effect change (Nolan and Keady, 1996). As not all staff from each unit attended training at the same time, this could have made it difficult for participants to apply in practice what they had learnt. Tryssenaar and Gray (2004) implemented self-contained short training sessions during shift handover at a long term care facility. Training large numbers of staff at one time created a critical mass leading to a more immediate transference of training into practice. In line with this, the use of on-unit training 'huddles' for all staff on shift were introduced.

Support to implement change is also required from management and senior staff, with organisational values which reflect a willingness to improve; this kind of culture is best supported by staff at all levels who are empowered and motivated to enact change (Lopez, 2006). Support staff have been found to feel they lack the authority to implement change, often due to hierarchical structures within the workplace (Lindeman et al., 2003). Wilson (2018) suggest specific role modelling from senior staff and strong leadership on units is required in order for support staff to build confidence and promote behaviour change.

#### Training support staff

There are no minimum training requirements for HCA working in care homes, however the Care Certificate, introduced in 2015, is now required to be completed by new starters. The Care Certificate includes a 'fluids and nutrition' section which covers some of the signs and symptoms of malnutrition and dehydration. This certificate ensures new starters receive some training in this area, though this is not yet required of existing staff. It is recognised that although HCA ultimately provide care under the supervision of the Registered Nurse, much of this is performed alone without supervision or monitoring (Spilsbury and Meyer, 2005). Thus, it would be difficult for senior staff to gauge whether support staff are applying what is learned in training to their everyday practice.

The staff demographics questionnaire found a high proportion of respondents (47/60, 78%) stated that they would like to complete further qualifications in health and social care. Although care staff are often seen as a transient workforce it seems many may have the desire to further their career. If we are to cope with the expected increase in reliance on health and social care in the future this group should be invested in and given the opportunity to develop.

#### Limitations

There are some limitations to this study; taking place in two large care homes in London the observed care which informed the training may not resonate with smaller care homes or other geographical areas. However, we believe our findings reflect common issues found across the care sector. The staff demographics questionnaire was only completed by some staff in one of the care homes and therefore may not be generalizable. Evaluation of training

relied on subjective self-assessment, thus responses may not be an accurate reflection of actual knowledge. Due to only two units being involved in the service improvement project it was not possible to evaluate any resulting change in hydration practice across the organisation as a whole. Future research exploring organisational culture and leadership in regards to its influence in optimising practice following training would be of benefit.

### Conclusions

Dehydration in older people in care homes continues to be a significant issue. This study shows that providing hydration specific training based on observed care issues in this setting can be well received and effective in increasing staff knowledge. Training sessions need to be interactive and experiential, and include skills in reflective practice if any enhancement in knowledge is to be translated into practice. It may be possible to adapt training sessions into shorter components to deliver via on-unit huddles which would allow the efficient transfer of knowledge and practice goals. Leadership and role-modelling is vital to ensure a culture of change can be developed to facilitate an improvement in hydration care.

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