



Hydration and Older People in the UK: Addressing the Problem, Understanding the Solutions

Dr Lisa Wilson

On behalf of the Parliamentary Hydration Forum

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ILC–UK

11 Tufton Street

Westminster

SW1P 3QB

Tel. +44 (0)207 340 0440

www.ilcuk.org.uk

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About the Author - Dr Lisa Wilson is a freelance consultant who has been working with the ILC-UK since January 2008. A PhD and Registered Public Health Nutritionist, she specialises in issues of health and ageing particularly nutrition and hydration in older people.

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Baroness Greengross of Notting Hill – Chair

Anglian Water, UK

Peter Barnett

British Water Cooler Association

Kinvara Carey – Natural Hydration Council

Naomi Campbell – Cornwall NHS

Sue Cawthray – National Association of Care Catering/ Harrogate Neighbours

Dr Rekha Elaswarapu

Martin Green – English Community Care Association

Steve Godwin – Danone

Sue Hawkins – Dorset County Council

Jane Holdsworth – European Hydration Institute

Dr Lee Hooper – University of East Anglia

Jo Jacobius – Axiom Communications for British Bottled Water Producers

Caroline Lecko – Patient Safety Lead, NHS England

Mark Moran – Hydrate for Health

Dr Jackie Morris – Consultant Geriatrician

Sarah O’Callaghan – Health Education Wessex

Amy Osbourne – Cornwall NHS

Troy Smith – Oranka Juices

Deborah Sturdy

Requirements and recommendations

- An agreed and standardised definition of dehydration in older people is essential.
- Diagnostic tools are required to enable the assessment of hydration status across all care settings.
- More research is needed to better understand the impact of dehydration on health and recovery from illness.
- Research is needed to understand the 'cost' impact of dehydration across care settings and subsequent resource use.
- Older people must be supported to better understand the importance of good hydration.
- Work is required to raise public awareness of the importance of good hydration in all age groups, but particularly older people and vulnerable groups.
- Hydration policies in Hospitals and Care Homes should be mandatory with practices in place to monitor/evaluate these to ensure they are being carried out effectively.
- Good hydration practice must become a part of regulated and inspected care issues.
- Training and qualifications must be developed and made available to support all staff at all levels of health and social care to meet the requirements of hydration policy and practice.
- The clear evidence for good practice which exists through the care and support of older people (e.g. care homes and home care) should be recognised, supported and developed to ensure this high level of care is universal.
- Opportunities to spread good practice are needed to ensure successful interventions can be shared and developed in other areas.

Introduction

Dehydration is an unnecessary and potentially dangerous state for those experiencing it. In the 21st Century in the developed world it seems implausible that people should suffer from poor hydration, yet this is often the case in the UK today.

Dehydration can have a severe impact on health and well-being, leading to functional and long term health problems, particularly in older people, but as yet this is rarely reflected in the development of nutrition and health policy. Hydration remains an area of health and social care policy which continues to be overlooked, often due to the mistaken assumption that it is included as a part overall nutritional care. Whilst it is true that the two issues are inextricably linked, hydration needs to be considered as a key public health issue in its own right, which requires separate attention and guidance.

There are no exact figures on the hydration status of the general UK population. This is partly due to a lack of a universal measurement tool and that dehydration has lacked focus or information as a public health issue. The main difficulty in assessing hydration status is that a lot of people don't realise they are dehydrated, as they have become so used to feeling below their best. Common symptoms of dehydration such as feeling tired, constipated, nauseous or headaches are often attributed to other factors.

In simple terms a lack of adequate fluid intake results in dehydration; leading to functional and long term health problems, particularly in older people. Research has shown that cognitive and physical issues start to rise with a loss of water in the body as little as 1% (Mentes et al). It is a preventable state, often resulting from a lack of awareness and training, which can lead to significant patient safety concerns and a lack of support for more vulnerable groups including older people.

The Hydration Forum is working to raise the profile of this key issue particularly in older people who are at greater risk. This Action plan outlines the key factors resulting in dehydration for older people (particularly vulnerable older people) and highlights the need for urgent reform in both regulation and policy with regard to this issue. It considers five main areas of hydration policy and practice: raising awareness, good practice, screening, workforce training and research to better understand the current situation and the gaps in ensuring good hydration across all care settings.

The report also presents the challenges and solutions to drinking and hydration issues for older people whether living independently, in care homes or during hospital stays. There are many effective projects aiming to address hydration issues in the UK. The effectiveness of small, inexpensive interventions in addressing hydration issues and their associated health risks has been proven and some of those case studies are presented here. The Forum urges organisations to support our aim of developing appropriate policy and actions to tackle this key health area.

Defining dehydration

Dehydration can be simply defined as *'the loss of water or body fluids from an individual'* (WHO, 2002). The state of dehydration results from a reduction of the amount of water in the body, which can be influenced by a number of factors including excessive sweating, blood loss, diarrhoea, fluid accumulation, inadequate fluid intake and fever. The first indicator for dehydration in most people is

the sensation of thirst, triggered by the thirst centre of the brain, causing people to drink more fluids. If water loss is greater than water intake then dehydration becomes more severe.

The causes of dehydration fall into the following groups:

- Illness related factors, e.g. vomiting, diarrhoea, surgery;
- Factors not directly related to disease, e.g. life style factors;
- Factors associated with ageing i.e. loss of thirst sensation;
- Discomfort in the mouth (due to illness, dentition or ulcers) stopping people drinking;
- Factors caused by medical interventions including the use of certain medications and a lack of appreciation of the challenges of the hydration issues;
- Social factors including social isolation, self-neglect and lack of support;
- Factors associated with care needs, e.g. impairments, disabilities, lack of personnel to recognise signs, lack of fluid provision or encouragement to drink;
- Lack of understanding by older people of the effect of drinking regularly on continence (e.g. concerns re incontinence if increase amount they drink).

An individual may be exposed to one or more of these particularly if they are older, have underlying health issues or lack the care and support they need. It is important to clarify that dehydration as expressed in this report involves inadequate intake of fluid as opposed to dehydration due to hypovolaemia (loss of fluid from the body through blood loss). Indeed, one of the challenges in identifying and treating dehydration is the lack of a simple standardised clinical definition for dehydration (as not all symptoms will be apparent in all people) and a clear idea of what good hydration practice should involve.

Understanding the problem - Hydration and Older People

Older people are considered to be at particular risk of dehydration. This is in part due to the physiological process of ageing which affect several key factors necessary for maintaining good hydration.

The number and variety of causes of dehydration can lead to difficulties with diagnosis, particularly if it is further complicated by the presence of disease, malnutrition or ill health. A number of symptoms have been found to be commonly associated with dehydration (see box below), but the challenge for physicians is that not every person will exhibit these symptoms and in many individuals dehydration can prove asymptomatic, leading to difficulties with treating for dehydration.

Symptoms of Dehydration

Mild

- **Skin and membranes of nose and eyes become dry**
- **Confused and sluggish**
- **Light headed/faint when standing**

Severe

- **Urine is dark**
- **Low blood pressure can be life threatening**
- **Blood and urine can help diagnose and determine the severity of electrolyte levels**

Research has found that there is a general reduction in thirst sensation with age, meaning that many people are unaware that they may need to drink more fluids. Medication can prevent absorption of water into the body or in the case of diuretics act to remove excess water compounding the problem. For those with dementia, one of the symptoms of cognitive impairment is a reduction in an individuals' ability to recognise that they are thirsty; putting this group at a significantly higher risk of dehydration. Related to this is that those older people who are dependent on others for their care, whether living in a care home or independently, rely entirely on others to remember to offer and provide access to fluids regularly.

Dehydration is one of the most common indicators of moving someone from a nursing home to hospital. A quarter of all nursing home patients that are admitted to hospital are dehydrated (Schols et al, 2008). However the problem is widespread and evidence suggests that the assumption that older people with higher levels of independence and regular access to fluids are less likely to experience dehydration is incorrect (Wotton, 2008).

Adequate fluid consumption in older adults has been found to be associated with fewer falls, lower rates of constipation and lower rates of laxative use, as well as better rehabilitative outcomes in orthopaedic patients (Robinson & Rosher, 2002, Wotton et al, 2008). Case study research by Anglian Water in UK care homes during 2008 identified similar positive outcomes resulting from increasing training and opportunities for drinking among older residents.

In understanding hydration and ensuring appropriate care it is important to note that approximately 20% of water in the average diet comes from food. The remaining 80% can come from drinks of all types including plain water. Good hydration practice is therefore about ensuring that people have an adequate fluid intake from their diet as a whole. Some individuals may benefit more from a variety of sources and much of encouraging drinking is about providing choice and catering for preference. In addition it is important to note that the needs of those in acute or complex care may differ greatly from care homes or those living in their own homes. The good practice presented in this report highlights the range of tools and resources available to meet a range of needs and support older people to drink well.

Ensuring Good Hydration Care for all

Good hydration is not just about providing drinks for older people. Whilst access to fluids is the crux of the matter, it is at once this simple and more complex overall. The Hydration Forum have identified five areas of focus where further work is required to better understand the problem of hydration as well as potential solutions based on care settings and individual need. These are:

1. Screening
2. Research
3. Raising Awareness
4. Workforce Training
5. Good practice

These areas are outlined below and include an analysis by the forum of the current situation, what is missing, what barriers to change exist and what needs to be done to ensure hydration becomes a priority as a part of overall health care.

Screening

Despite evidence to demonstrate the impact of dehydration on older people and the range of symptoms which are suggestive of a dehydrated state (NICE, 2013) assessing hydration status even in a clinical setting remains one of the greatest challenges in managing dehydration. As yet no one method has been found to be both universally effective and applicable across all settings or age groups. The main obstacle in screening and diagnosis is that there are no individual signs or questions to identify dehydration. Although in the case of older people there are some more specific diagnostic indicators, these do not universally present themselves in all cases.

The challenge in measuring hydration therefore is finding a method which has the least burden on older people and the least time and financial impact on any staff involved, whilst still providing a good indication of hydration status.

The reference (or gold) standard measurement for hydration is serum osmolality, assessed using blood samples. This is the physiological measure that an individual's body will set their own hydration status by, thereby triggering the thirst response or other physiological manifestations of dehydration. However this method is both invasive and laboratory reliant and it is impractical to consider that care homes particularly would have the training, facilities or time to conduct this type of measure. In addition for many older people having blood taken is an invasive and painful process.

Other methods available include complex technical methods such as bioelectrical impedance analysis (measuring water in the body using electric currents); urine osmolality and urine specific gravity (measuring mass of urine compared to pure water) and more commonly used observational methods such as urine colour, clinical observation and monitoring of fluid input/output. However urinary measures can be unhelpful or misleading due to the effect of medication or where renal function is poor, which is often the case in older people. In addition observational methods can be subjective, relying on the physician or carer to judge hydration status.

Many of the more precise methods (e.g. BIA, urine specific gravity) require specialist equipment and training or have a commercially related cost which precludes their practical application in a care home or community setting. Any tool used must be simple, quick, economical and practical to apply, as well as being usable by staff and requiring only minimal training, due to the time and training pressures already experienced by staff across all care settings.

Monitoring intake is a more cost effective method of measuring hydration status, but is at best an indicator and cannot be used as a screening method. Whilst the mechanism is simple, and could be carried out by older people themselves, it can be inaccurate as medication can affect urine colour. In addition, it is a time consuming measure for staff and so in most cases is used for short period of time for those at particular risk or who are already unwell. Its use is not widespread and would require greater staff time and numbers to accommodate this in most care homes.

The vital component in developing hydration policy and practice is in training staff of the importance and signs of possible dehydration as well as ensuring older people are aware of the risks. However in care settings, indirect methods such as monitoring intake, clinical diagnosis or urine colour remain good indicators giving a quick basic overview of likely hydration status.

There is much work to be done in developing a systematic screening method for hydration of the type that have been developed for nutrition. More specifically the common types of dehydration in older people and their causes need to be addressed. For water-loss dehydration (resulting from poor drinking) there is a clear reference standard in older people – serum osmolality. As this is a blood measure it does not have widespread practical use outside of hospitals, but has potential to be adapted for use by GPs.

Establishing a good screening test for dehydration in older people is paramount and several forum members are currently engaged in this research and development. Early work is being undertaken by several Forum members to identify key definitions and screening methods. In conjunction, members and partners are researching the use of screening for indicators of hydration such as sodium, potassium, urea and glucose, testing diagnostic techniques and working on self-assessment drink intake tools

In the interim, simple observational methods of monitoring input/output, assessing dehydration based on simple clinical diagnosis such as dry mouth, skin elasticity or low urine output and encouraging regular drinks where possible remain the most effective options and should be part of regular practice across all care settings. In addition, work to raise awareness of dehydration risk in older people would be beneficial to those living independently and help prevent dehydration related conditions.

Research

It is already apparent from the discussion on screening options that the five areas under discussion are inextricably linked. The role of research must be considered as an area which with adequate funding could effectively support the development of hydration guidance, regulation and support through providing the evidence base on which definitions and assessment tools will sit.

Recent pilot research by the European Hydration Institute further demonstrates the challenges of dehydration in hospital settings. The Hydration and Outcome in Older People (HOOP) study looked

at hydration levels among people >65 admitted to hospital for a medical emergency. The aim was to assess only hydration status and clinical outcomes on admission, after 48 hours in hospital and again at three months after discharge. The study found that of the 103 people assessed, 40% of those admitted to hospital were already dehydrated and this figure had increased to 53% of those followed up after 48 hours. Dehydration was associated with an increased length of stay and was associated with increased risk of mortality four months after admission for patients who were dehydrated on admission.

More research is needed, but the findings of this pilot study point to severe health consequences and increased costs associated with dehydration in the hospital settings.

A care homes case study research by Anglian Water during 2008 (Anglian Water, 2009) identified positive outcomes resulting from increasing training and opportunities for drinking among older residents. The study aimed to identify the most effective methods of encouraging older people in care homes to drink more water and involved a two stage process over 18 months including a seven week trial with a group of residents. An increase in the availability and visibility of water as well as regular reminders from staff was found to be key in increasing intake. An increase in water intake in the participating homes led to a 50% decrease in falls, a more than 50% decrease in laxative prescriptions and a decrease in GP call outs. The study also highlighted some of the barriers to good hydration among residents including fear of increasing trips to the toilet and that hydration is not a specific training topic among staff. Overall residents reported feeling better, having more energy during the day, sleeping through the night, feeling less dizzy and steadier on their feet as well as a noticeable easing of bladder problems.

On considering the current research in the field of hydration it became apparent that there are several key areas new work must focus on. Gaps in the evidence base remain leading to a number of unanswered questions for both policy makers and practitioners:

- What health problems does dehydration cause?
- Can any health problems be solved by improving drinking or eating food with a high water content?
- How can hydration status best be measured?
- What interventions improve drinking in older people and hospital patients?

Despite observational and clinical research a lack of empirical evidence makes raising hydration as a key health area problematic within the medical community.

A further key research question involves establishing how much fluid should older people drink daily to minimise health problems? Broad guidelines exist of 8 glasses a day, but these are based on data from middle aged adults; older people are physiologically different and require appropriate guidelines. To develop these it is necessary to look at the relationships between the amount drunk and serum osmolality in older people as well as the relationships between amount drunk and health outcomes in older people. There are data sets that can be analysed for this, but the work requires funding which is currently lacking in this field of health. One key area of work is in establishing how much should be drunk as there is a parallel danger of over-hydration; a health problem in its own right and significant concern with regard to patient safety.

Whilst for the majority of adults fluid comes from drinking, fluids in food have a key role in maintaining hydration status, as such research needs to characterise how much fluid older people take, what, when and how (including fluid from foods).

By better understanding how patterns of intake differ in those who are drinking enough, and those who are not, it may help us understand how to support older people (in the community and institutions) to drink well.

Raising awareness

The third area of focus for hydration is that of raising awareness of the issue itself across a wide range of stakeholders and care settings. Ideally all those working with and for older people as well as older people themselves and their family or carers, should understand the importance of good hydration and the need to drink fluids regularly to maintain good health. In reality interest in hydration is patchy at best with a lack of appreciation of the impact of inadequate hydration on morbidity and the associated financial implications.

Raising awareness has a role to play in ensuring hydration rises up the political and social agenda and gains prominence in terms of health care. There is already significant work going on in this area from major organisations involved in health and social care and food provision in care settings.

The National Association of Care Catering has long been a leader in raising awareness among the care catering industry. They have produced nutrition standards, which include hydration and support care providers by providing advice and guidance on meal provision and good practice¹

NHS England, the National Association of Care Catering and Hospital Caterers Association have all previously worked in this area holding awareness events and weeks as well as providing training opportunities and ideas for improving practices. In 2014 they joined together for a Nutrition and Hydration week aiming to highlight the importance of hydration in ensuring good health and to reinforce and focus energy, activity and engagement on nutrition and hydration as an important part of quality care, patient experience and safety improvement in health and social care settings.

Holding a week-long series of events and activities supports the combined call to action from the organisations. This in turn support and enables individuals, teams and organisations to get involved in something that provides an opportunity to showcase their practices or to make changes to the services they provide.

The recently launched AKI NHS England Renal Registry campaign has also played an important role in showing dehydration to be a major contributing factor to the disease. On a regional scale NHS Leeds have also had success in raising awareness among older people specifically with a more localised awareness raising week and both Cornwall NHS Trust² and Dorset County Council³ continue to be leaders in innovative good practice and awareness raising.

¹ www.thenacc.org

² <http://www.nisw.co.uk/innovation-showcase/the-cornwall-hydration-project/the-cornwall-hydration-project.aspx>

³ <https://www.dorsetforyou.com/nutritional-care-strategy>

However, to be truly effective, awareness raising must impact directly on older people whether through greater consideration of policy and practice by care providers or a greater understanding for older people themselves of what good hydration means for their health and wellbeing.

Workforce Training

One key aspect of the development of good hydration practice is recognition of the role of good hydration in the health of older people, primarily by those who care for and support them. As such, workforce training is a fundamental requirement in addressing dehydration risk. It is important to acknowledge the part all those who come into contact with older people have to play, but in terms of health and social care professionals training can support the development of good hydration policy and practice. Education is needed to all levels of care provision from senior clinicians in hospitals and care homes to family members and carers. In addition co-ordination and commitment is needed from all stakeholders including the Department of Health and NHS England, Care Commissioners, GPs, nurses, care staff and regulators for all care settings to facilitate improvement in hydration awareness, develop guidelines and education and importantly include hydration issues in quality assessments.

A review of the main training documents for key health and social care workers demonstrates the variety in both content and requirements that currently exist with regard to hydration.

The National Institute of Health and Clinical Excellence (NICE) covers nutrition support in adults in its Clinical Guideline 32 (2006), but this relates more specifically to tube feeding or supported feeding and although there is reference to oral hydration in particular related to people requiring 'thickened fluids' due to swallowing problems, hydration itself is not covered. Guidance also exists from the Nursing and Midwifery Council whose guidance on the care of older people (2009) highlighted hydration. Unfortunately while several similar guidelines exist across health care training and guidance the mention of hydration tends to be vague at best.

In association with the National Patient Safety Agency (now a part of NHS England) the Royal College of Nursing produced guidance and usable recommendations on hydration including the 'Hydration Best Practice Toolkit for Hospitals' (2007) and 'Safe Staffing for Older People' (2012) reports which emphasise the need for adequate staffing to support eating and drinking, one of the main barriers to good hydration in hospitals, particularly for older people. Building on this the 2012 Department of Health paper 'Compassion in Practice: Nursing Midwifery and Care Staff outlines the '6C's care, compassion, competence, communication, courage and commitment; areas of focus for the nursing profession as a part of their strategy to overcome basic care issues.

Adult social care regulation and guidance has increasingly acknowledged the importance of nutrition and hydration for older people. The Social Care Institute for Excellence guide on Dignity in Care (2009) highlighted the importance of good hydration for maintaining good health and quality of life among older people, emphasising the importance of recognising habits, preferences and choices of older people within the dignity in care agenda. More recently the Care Quality Commission guidelines on personalised care, treatment and support have set out regulations for service providers regarding meeting nutrition needs. However, these regulations, whilst including hydration do not consider dehydration risk as a separate issue and lack detail.

Further training support for Health Care Assistants & Adult Social Care Support Workers includes the 2013 guidance on Skills for Health and Skills for Care which launched the Code of Conduct and National Minimum Training Standards for Healthcare Support Workers who report to nurses or midwives and Adult Social Care Workers in England. This paper specifically states that staff should 'Understand the importance of good nutrition and hydration in maintaining health and wellbeing' and 'Recognise signs and symptoms of poor nutrition and hydration' as well as 'Know how to promote adequate nutrition and hydration'. The nutrition and fluid module is currently under review and is intended to form a part of mandatory training on completion.

The question remains how to achieve sustainable best practice every day in every care setting and how to improve communication and sharing of information? Even widely recognised tools such as the 'red jug' and tray systems advocated in hospitals to identify patients at risk of dehydration or poor nutrition has yet to be fully evaluated. Indeed there is no national policy on its use and there is considerable variation in practice and efficacy.

The challenge for those working with older people is that although this guidance exists it is limited and patchy in its application. It does not universally cover all those working with older people and whilst statements such as that made in the Skills for Health document are a huge step forward, actual on the job training relies on local commitment and investment. There is a role for Public Health to become further engaged in this issue given its remit on health and well-being in England and regional presence.

Good Practice

Despite difficulties in accurately assessing hydration status there is much that can be done to ensure adequate access to fluids for older people. There are many examples of good practice, across all care settings, where individuals and organisations are working to ensure good hydration practice is routine, accessible and appropriate. Examples of such good practice undertaken by members of the Hydration Forum and their partners are presented below. These examples demonstrate the breadth of work being undertaken as well as the simple ideas which have transformed the well-being of older and vulnerable people through awareness raising, access to fluids and policy or routine practice.

Evidence and good practice from the Hydration Forum

The Hydration Forum believes that intervention on hydration does not need to be costly or complex. Indeed, many examples of good practice are simple and have proven effective. Some examples of these innovative approaches used and developed by Forum members are presented below.

Anglian Water

Case study research by Anglian Water in UK care homes during 2008 (Anglian Water, 2009) identified positive outcomes resulting from increasing training and opportunities for drinking among

older residents. The study aimed to identify the most effective methods of encouraging older people in care homes to drink more water and involved a two stage process over 18 months including a seven week trial with a group of residents. An increase in the availability and visibility of water as well as regular reminders from staff was found to be key in increasing intake. An increase in water intake in the participating homes led to a 50% decrease in falls, a more than 50% decrease in laxative prescriptions and a decrease in GP call outs. The change in practice also highlighted some of the barriers to good hydration among residents including fear of increasing trips to the toilet and that hydration is not a specific training topic among staff. Overall residents reported feeling better, having more energy during the day, sleeping through the night, feeling less dizzy and steadier on their feet as well as a noticeable easing of bladder problems.

The most significant aspect of the Anglian Water case study is the potential benefits to residents and staff associated with an increase in fluid intake. Whilst this intervention focused on water intake it is important to highlight that water can be ingested in many forms to relieve hydration and the focus should be on increasing fluid intake.

Current government guidance on drinking enough to stay hydrated reflects this by recommending people aim for 6 to 8 glasses of fluid each day. Fruit juices, tea, coffee (the effect of caffeine is negligible), milky drinks and water can all be offered and enjoyed. Encouraging people to drink more must also be about their interest in doing so, the underlying factors preventing them from drinking and their preference and choice of drinks.

A number of initiatives exist which are aimed specifically at providing appropriate mechanisms to enable people to drink, ranging from specific products and methods of fluid provision to simply providing a more appealing option.

Hydrate for Health

A simple, yet effective solution to dehydration in hospitals, or those with limited mobility, is the Hydrant, produced by Hydrate for Health. This simple specialised bottle comes with a one piece, cap/handle/clip which attaches securely to beds, chairs, wheelchairs among others giving the user instant access to fluids so they can drink at any time without assistance. The innovative design has been recognised as a successful method of ensuring adequate hydration and won a Queens Award for Enterprise and Innovation in 2013.

Feedback from patients and carers outlines how this cup has transformed hydration care with users reporting that they found it easy to use and drank more as a result of regular access to fluids. Staff reported that it was easy to set up, use, refill and monitor patients' intake using this tool.

Testimony from one Multiple Sclerosis sufferer provides an example of the impact a simple piece of equipment can have. 'I would like to tell you of its remarkable effect on my wife's hydration. The MS specialist nurse came for a review visit and with her had a Hydrant for my wife to try out. We clip it to the side of her bed and fill it with soft drinks. She has never drunk so much, since having the Hydrant and as a consequence, has cut down dramatically on UTI's'.

Recent research into the effectiveness of the Hydrant in care homes has found it has an impact on hydration status and overall well-being. During a two month period in 2014, 57 users across 8 care homes were provided with hydrants and asked to provide feedback. Users in 5 of the eight homes saw at least some improvement and in many cases the improvement was measurable. In these

cases, regular use of the Hydrant led to an 80% reduction in falls, UTI and drug needs and a 50% reduction in cellulitis among residents of the care home where the study was conducted. The only change in their behaviour or lifestyle during the study time was the use of the hydrant, demonstrating the impact of proper hydration on overall health and well-being.

Oranka Juices

Anecdotal evidence from Oranka Juices demonstrates that providing a more enjoyable environment and using flavours to encourage drinking can also be effective in improving fluid uptake in care homes. Drinks are provided via a chilled dispenser in active areas with fruit displays presenting the flavours available. The juices have added nutrients including Vitamin C taking the opportunity of hydration to provide other health benefits and intensified flavours cater for those with diminished taste sensation which can occur with age.

The testimony below is from a care home manager on completing a trial of juice as an alternative to residents in the home.

'I know that Urinary Tract Infections (UTIs) have reduced since we have had the drinks machines installed. I have a meeting everyday with my heads of department... before the drinks machine went in the staff nurses would report to me at least 2 or 3 UTIs per week, now I would say I only hear about UTIs about once per week. I thought we would have more UTIs because of the hot weather, but because the machines are so handy to get a cold drink for the residents the staff are giving them more to drink. Also the residents really like the taste of the juice as its very sweet.

An example from a staff nurse about the drinks, she was helping a resident have her lunch when it was very hot, she gave the resident five glasses of juice just at lunch time, she normally found it hard to get this lady to drink but she likes the taste of the juice.

...obviously I have a budget to work to, but if residents are getting less infections it should outweigh the cost and that's my argument to keep the machines here...'

Cornwall Hydration Project

In terms of developing good practice across clinical settings (hospitals and care homes) Cornwall is among the most progressive regions in recognising the importance of good hydration and working to produce procedures and tools to provide and support good practice. This is in part due to the provision of a specific role to develop this work and focus solely on hydration issues for older people. As a part of this on-going work for the Cornwall hydration project, the project lead has developed an assessment tool to identify the level of support needed for an older person when eating and drinking as there is currently no validated assessment tool available to frontline staff. This takes the form of the 'Oral fluid and food Intake Support Score' (OFFIS).

OFFIS is a simple 'risk assessment tool' that aims to reduce the risk of poor nutrition and dehydration by systematically identifying the level of support needed to assist and encourage a person to eat and drink. It measures the identified 'level of support' needed at the patient's bed or chair side to support eating and drinking (scored separately).

The OFFIS score works by combining the two fundamental factors that critically influence how much support a patient needs to drink and eat; namely:

- Physical assistance needed to lift food or drink safely to the mouth;
- Encouragement needed to eat and drink.

The tool has been designed to be used or interpreted by any person in any health or social care setting e.g. patient / service user; family member; carer; domestic staff; health care assistant, RGN, multi-disciplinary team, executive board and commissioners.

The aims of the score are to:

- Identify patients who are at risk of developing poor oral food and fluid intake if they are not given the appropriate level of support to eat and drink,
- Enable any care provider to assess and identify the level of support needed to eat and drink,
- Enable an organisation to identify the total number of patients within their organisation who need support to eat and drink,
- Enable an organisation to prioritise basic care needs and staffing levels,
- Support the delivery of best practice as outlined by the Care Quality Commission Outcome 5: Meeting nutritional needs (2010),
- Support the organisation to provide 'harm free care',
- Support audit for assessing quality of care,
- Provide essential data to support future research in oral nutrition and hydration care.

In addition to the assessment tool and in collaboration with frontline staff, Cornwall Hydration Project have worked with Cornwall University to develop early prototypes which can be used to assess how much an individual has drunk. A mug has been given an inverted scale glazed into the internal aspect of the mug so staff can see at a glance how much has been consumed. As an alternative and for other types of cup/glass a bespoke 'dipstick' has been designed to be used when the dirty vessel is collected. Staff and patients are delighted with both concepts and a larger scale trial is currently being planned. It is these simple interventions which have proven most effective as they take minimal addition time, but provide much more information on how much is actually drunk, highlighting those who may be at risk or dehydrated and signalling to staff where interventions may be required.

Improving hydration in care homes case study - Great Yarmouth

A specialist dementia care home has found that having specific hydration policies and practices has had a positive effect on the health and well-being of its residents. This home is unique in that it aims to provide security and routine for those with severe dementia, reintroducing the rituals of normal life. Residents get up in the morning, have a bath, come downstairs for breakfast (unless acutely ill), have their own chairs in the lounge they prefer (with or without TV and music), eat meals in the dining room, have tea and coffee in the lounges, go to bed in the evening. The carer ratio is one to three residents; carers do not do domestic tasks, but spend their days with the residents. For the resident of this home ensuring good hydration can be challenging due to the effects of their dementia; namely that most no longer feel thirsty or remember that they need to drink. As a result

the home uses a range of strategies across the home overall as well as individual care plans strategies to ensure adequate hydration.

General strategies include encouraging residents to consume 700 - 800mls of fluid in the form of drinks with a further 200 - 300mls added onto cereals by the end of breakfast. Drinks are then continually offered during the morning, at lunch, at afternoon tea, at the evening meal and during the evening, but even though drinks often drop off during the evening hydration is assured by the early fluid boost.

In addition, lounges have cold water and a tray of tea for all visitors, so that visitors share drinking and get additional drinks for residents. On admission staff ensure they are familiar with each person's favourite drinks and exactly how they like them. Equally staff ensure that the resident has a drink in their favourite cup. For example, one resident always asks for a green drink (orange squash in a green beaker). Finally, Urinary Tract Infections and bowel movements are monitored for, and dealt with early. The nurse manager is completing a nurse prescribing course to ensure quick effective treatment is commenced within this frail elderly group of residents.

In addition, the home fosters strategies based on individual need including having soup, jelly, ice cream, custard and yogurt available for those who may not feel like drinking so much – so that fluid intakes are always supported. Cups and saucers, mugs, straws and spouts are available to support drinking as needed (which may vary from day to day). Additional strategies are added for those with colds and coughs, shortness of breath, or on medication which might affect hydration status e.g. diuretics

Many positive effects of this hydration policy have been noted including:

- Residents are much calmer, and aggression reduced;
- Staff can spend time interacting with residents rather than dealing with stress and calming residents down, improving quality of life;
- Medications to modify behaviour can be reduced and used only occasionally;
- All medications are utilised well in the body so doses generally are lower;
- Hydrated residents eat well and have good appetites because they are more alert and able to enjoy the experience of food and drinks. This is not only great for nutrition but also for supporting social interaction and is a way of engaging them in reminiscence whether about years gone by or about the local chip shop they used before admission. Weight either remains steady or is increased;
- Extra fluids ensure medication is working properly so safeguarding their physical health, especially Anti-Hypertensive drugs and Antidepressants;
- Less problems with constipation and need for laxative or similar treatment;
- More controlled and successful urination as hydration helps to maintain the urinary sensation which can be lost in dementia;
- Plenty of fluids ensure the person sleeps well as being thirsty can cause restlessness, disrupted sleep pattern and bad dreams. If someone doesn't sleep well at night, they will sleep during the day, miss out on vital fluids and the cycle continues.

The HYDRATE in care homes project

The HYDRATE in care homes project was launched in April this year for residential and nursing homes in the NE Hants and Farnham CCG locality. In 2013 a small project in 4 care homes focusing on hydration over a six month period showed significant reductions in the incidence of falls, urinary tract infections and hospital admissions. Acknowledging the potential financial savings this represented, the CCG developed a locality wide project.

The project has been rolled out gradually across the locality (31 care homes), lasting 12 months and including each home signing up to a Hydrate Charter. The first locality has been treated as the pilot, evaluated by Surrey University, School of Health Sciences. Whilst the aims of the project should already be embedded into routine care it was agreed that the sign up process would help focus the work.

Aims:

- Improve hydration awareness among staff and residents;
- Encourage optimal hydration by meeting the hydration needs of all residents;
- Ensure access to clean drinking water and hot drinks 24 hours a day;
- Reassure residents that prompt assistance with all toileting needs will be provided.

Each home nominated a member of staff to become a hydration champion who attended free small group interactive training sessions with the project manager who is a community dietitian. The training focused on practical issues with discussion of difficult scenarios and simple 2 point action plans for each champion. The requirements for individualised drinking regimes was emphasised and the skills the care home staff already possessed were acknowledged. In addition a bespoke resource pack was provided to take back to the home with hydration promotional material including tee-shirts and posters showing the project logo. The pack included such information as top tips on hydration for staff and managers separately, details of the Social Care in Excellence recommendations, advice on drinking behaviour and a checklist to help update hydration policies.

All the homes had follow up visits from the project manager with the champion and care home manager to ensure that the champion had support to implement the action plans and training. The project provides a platform for educational activities to spread good practice among the care homes as well as offering opportunities for networking and discussion among care home staff.

Outcomes being assessed include incidence of falls, urinary tract infections and admissions among the residents. Whilst still ongoing, early additional outcomes of the project have been identified; half the homes so far have either updated or developed a hydration policy with the aim that all will achieve this over the year.

Evaluation has found that *'The role of a hydration champion is a fast, practical and inexpensive first step towards improving hydration in a care home. There is potential for profound and long lasting effects.'*

The results of the evaluation suggest that the project has succeeded in raising awareness and understanding of hydration issues through the appointment of care home hydration champions. The challenge is whether over the year, this will produce long term behavioural change among staff and residents leading to measurable outcomes that represent the improvements in the residents'

hydration status and their consequent well-being. By continuing to provide support and following the evaluation recommendations it is hoped this will prove successful.

Conclusions

As the examples of good practice presented in this report testify, there is already significant good practice in Hydration, but it often depends on local buy-in and individual innovators. Much of this good practice is transferable and with support through policy and the development of more explicit standards small changes could be transformative and hydration could become a priority. Clinically severe dehydration, as identified by biochemical assessment, can and should still be treated by intravenous intervention, but for the most part people simply need better access to drinks and more support with drinking. The availability of fluids is a basic need and drinks should be offered automatically across all care settings. Indeed this is often where dehydration difficulties begin. Access is sometimes seen as providing a drinks machine or a water jug not ensuring the person can get the drink into their bodies.

In hospitals the publication of the Francis report in 2013 proved that ensuring people drink enough is still not a priority in many care situations leading to indignity, dehydration and ill health. In healthcare settings CQC outcome 5 (meeting nutrition needs) states that food and drink should meet people's individual dietary needs.

Tools exist to support drinking where necessary, but often time and commitment is all that is needed. However, staff require support to allow them the time to prioritise hydration and help those who need to drink. A lack of staff and dedicated time to each individual due to funding restrictions can lead to the assumption that providing some type of drink at some point during the day is all that is necessary when for many this is inadequate

By better understanding dehydration and its impact on health and well-being we can develop an appropriate definition of dehydration and of good hydration practice. From this we can begin developing appropriate individual or group policies on hydration in hospitals, care homes and domiciliary care, older people can be assured that their hydration needs will be met. Specialist care can then provide additional support where necessary and with work to increase public awareness older people can be supported to manage their hydration effectively.

Next Steps – A Call to Action

The Hydration forum seeks to continue its work with partners and stakeholders to raise awareness of this vital issue. To achieve this aim we need support from older people, their families and carers, as well as from health and social care professionals working with older people and the organisations that represent them.

There is much to be done. A lack of awareness, training and effective policy has contributed to a high number of people dehydrated on admission to and whilst in hospital. These are the people we can assess and so can surmise that the problem also exists elsewhere. We need to get policy right to ensure that hydration status is actively measured and monitored. The forum believes that this issue requires commitment from National Government.

There must be a mandatory requirement for this issue to be included at all levels of care and for all health and social care professionals to be well informed and involved in the process.

The basic issue of hydration must become and remain a priority as a part of dignity in care and form the basis on which good care for older people is established. The current system of sitting hydration policy within overall nutrition policy is not enough. In hospitals and care homes mandatory standards and separate hydration policies are necessary to ensure universal levels of care and that hydration is given the priority it deserves. In addition, regulation needs to ensure that having enough to drink is not an assumption made by staff, but a key part of ensuring and maintaining good care.

The forum believes by addressing the five areas highlighted in this report we can ensure hydration becomes a routine part of care. We are working on definitions and research to produce effective monitoring and assessment tools well as develop training opportunities. However, to be truly effective further investment and resources are necessary along with a policy commitment that education and training will form part of basic training for all care staff and those who work with older people. Hydration practice does not need to be complex, but it does need to exist and if we are to effectively tackle hydration issues in the long term we need to think about hydration now.

Bibliography/References

- Anglian Water (2009) 'Health on tap: good hydration in older people', Anglian Water Services Ltd.
- Campbell, N. (2011) 'Dehydration: why is it still a problem?' *Nursing Times*, Vol 107, No 22, pp 12-15.
- Campbell, N. (2013) 'OFFIS Score and Development of Prototype Tools', Cornwall Hydration Project
- Cass, E., Robbins, D & Richardson, A. (2006) 'Dignity in Care: Adults Services SCIE Guide 15', Social Care Institute for Excellence, London.
- Department of Health (2012) 'Compassion in Practice: Nursing Midwifery and Care Staff', <http://www.england.nhs.uk/wp-content/uploads/2012/12/compassion-in-practice.pdf>
- European Hydration Institute (2013) 'Good Practice Case Study presented to the European Commission as a part of the European innovation Partnership on Active and Healthy Ageing (Group A3).
- Hooper, L, (2014) 'Case study on hydration in care homes: Alexandra House, Great Yarmouth – a specialist dementia care home'.
- Hydrate for Health (2014) Hydrant User Survey
- Mentes, J. (2006) 'Oral hydration in older adults', *American Journal of Nutrition*, 106(6), pp 40-49
- Michie, S., Richardson, M., Johnston, M. et al. (2013) 'The behavioural change taxonomy (v1) of 93 hierarchically clustered techniques: building an international consensus for the reporting of behaviour change interventions'. *Annals of Behavioural Medicine*, 46: 81-95.
- National institute of Health and Clinical Excellence (NICE) (2013) Clinical Guidance CG169 'Acute Kidney Injury: Prevention, detection and management of acute kidney injury up to the point of renal replacement', NICE, London

National Institute for Health and Clinical Excellence (NICE). (2006) Clinical guidance 32 'Nutrition Support in Adults', NICE: London

Nursing and Midwifery Council (2009) - published Guidance for the care of older people – highlighting importance of nutrition and hydration

Oranka Juices Limited, Customer Testimony (2013)

Robinson, S.B. & Rosher. R.B. (2002) 'Can a beverage cart help improve hydration?', *Geriatric Nursing*, 23, pp 208-11

Royal College of Nursing, National Patient Safety Agency (2007) *Water for Health: Hydration Best Practice Toolkit for Hospitals and Healthcare*. London: RCN/NPSA. tinyurl.com/water-for-health

Royal College of Nursing (2012) Safe Staffing for Older People' 2012 RCN

http://www.rcn.org.uk/__data/assets/pdf_file/0010/439399/Safe_staffing_for_older_people_V3.pdf

Schols, J.M.G.A., De Groot, C.P.G.M., Van der Cammen, T.J.M. & Olde Rikkert, M.G.M. (2008) 'Preventing and treating dehydration in the elderly during periods of illness and warm weather', *The Journal of Nutrition Health and Aging*, 13(2), pp 150-57.

Skills for Health and Skills for Care (2013) 'Code of Conduct and National Minimum Training Standards for Healthcare Support Workers and Adult Social Care Workers in England'.

<http://www.skillsforhealth.org.uk/about-us/news/code-of-conduct-and-national-minimum-training-standards-for-healthcare-support-workers/>

Thomas, D.R., Cote, T.R., Lawhorne, L., Levenson, S.A., Rubenstein, L.Z., Smith, D.A., Stefanacci, R.G., Tangalos, E.G., Morley, J.E; Dehydration Council. (2008) 'Understanding clinical dehydration and its treatment'. *Journal American Medical Directors Association* Jun; 9(5):292-301. doi: 10.1016/j.jamda.2008.03.006.

Wotton, K., Crannitch, K. & Munt, R (2008) 'Prevalence, risk factors and strategies to prevent dehydration in older adults', *Contemporary Nurse*, 31(1), pp 44-56.

Glossary of Terms

Dehydration – A state in which a person or their body loses or lacks water.

Good Hydration – A state in which adequate hydration is attained through food and fluid consumption to prevent dehydration and ill health.

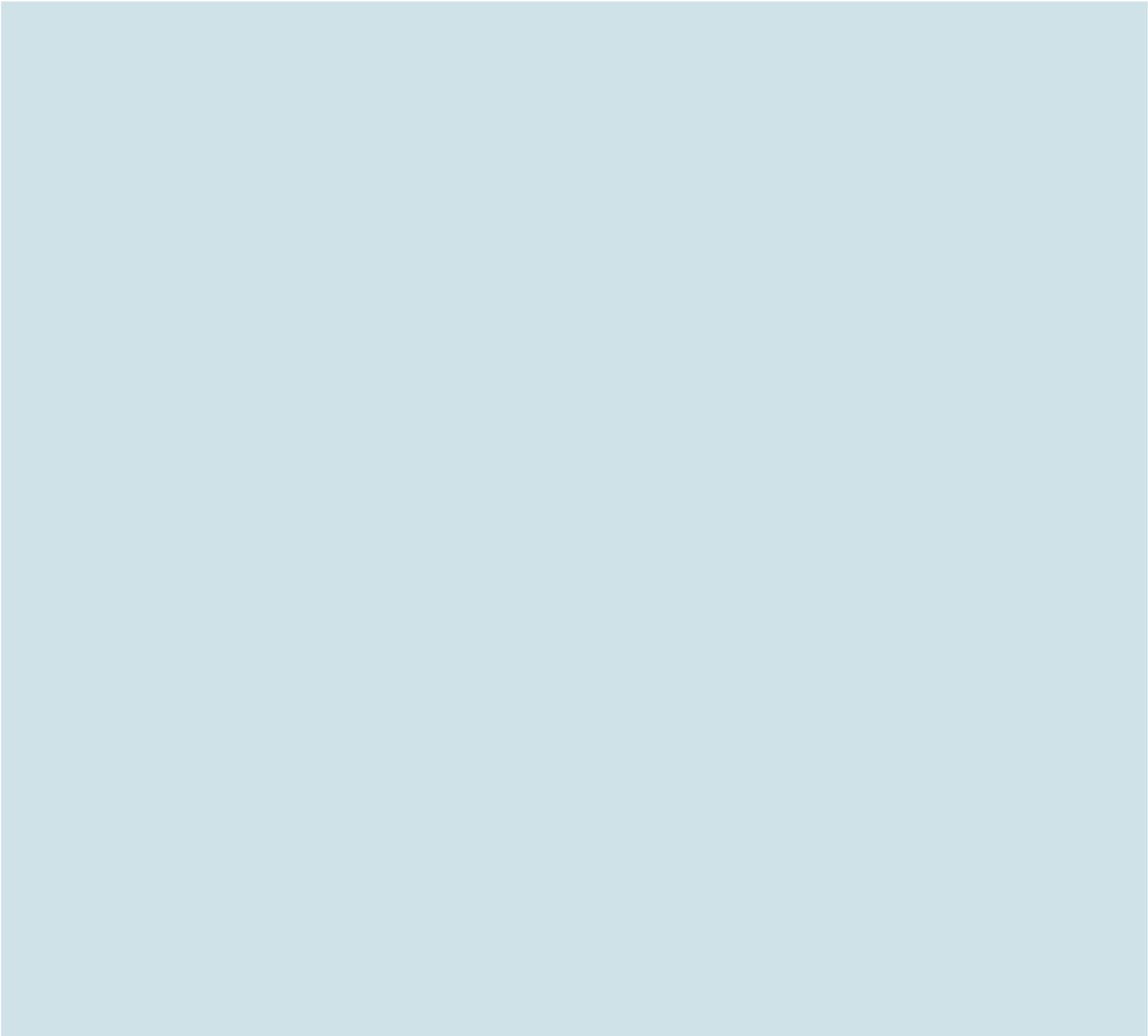
Good Hydration Practice – A policy or recorded practice which takes place in a care setting to ensure adequate hydration for good health among those in care.

Hypovolaemia – A decreased volume of circulating blood in the body; often due to blood or fluid loss.

About the Hydration Forum

The Hydration Forum was established in January 2009 by Baroness Greengross to address the issues of dehydration among older people following pilot research by the Royal Institute of Public Health and Anglia Water which indicated that good hydration in care homes could lead to a reduction in falls and laxative prescriptions and improve quality of life for older residents.

The forum was established to consider the issues around good hydration for older people and highlight the need for training and regulation across care settings to ensure water and fluids are frequently offered. The forum is comprised of academics, health and social care professionals, care organisations, physicians, trade associations and industry bodies.



ILC-UK
11 Tufton Street
London
SW1P 3QB
Tel : +44 (0) 20 7340 0440
www.ilcuk.org.uk

