

The AHSN Network



Improvement

IMPLEMENTATION TOOLKIT

Good Hydration!

Implementing and sustaining structured drinks rounds
in care homes to increase hydration and reduce UTIs

bit.ly/good-hydration

Oxford

Patient
Safety
Collaborative

Part of Oxford AHSN

Working together to build a culture of
continuous learning and improvement

About this toolkit

Overview

Good Hydration! is a quality improvement initiative designed by care homes for care homes to reduce urinary tract infections (UTIs) through structured drinks rounds, keeping residents healthy and happy. This approach is delivering sustained improvements and uptake is spreading.

This toolkit has been designed as a practical aid to successful implementation in your area. Although it began in care homes, the Good Hydration! initiative is simple and can be adapted for any care setting including the home.

It can be used by teams e.g. Clinical Commissioning Groups and local authorities, or responsible individuals such as ward managers or care home managers.

Supporting resources are available [here](#).

It is one of a series of toolkits produced by the Oxford Patient Safety Collaborative.

About Oxford PSC

The Oxford Patient Safety Collaborative (PSC) is one of 15 regional bodies which form the national Patient Safety Collaborative overseen by NHS Improvement. The Oxford PSC aims to build a culture of safety, continuous learning and improvement to achieve a continual reduction in harm, so that patients and the public in the Oxford AHSN region and beyond can be confident that care is safer now than ever before.

www.patientsafetyoxford.org

Acknowledgements

This toolkit is based on the Good Hydration! initiative initially run in care homes in collaboration with East Berkshire Clinical Commissioning Group.

We would like to thank the care homes who worked with us to develop this initiative to improve outcomes for residents.

The Good Hydration! videos were funded by Health Education England.



CONTENTS

Summary	2
The Challenge	3
Impact	4
Implementation	5
Getting started	7
Project resources	12

Summary

Good Hydration! is a multi-award winning initiative which has been adopted in care homes in the Thames Valley region and beyond. It is a quality improvement initiative designed by care homes for care homes to reduce urinary tract infections [UTIs]. UTIs are closely associated with dehydration. The initiative is built on structured drinks rounds, ensuring residents are offered a drink at set times at least seven times a day. This approach is delivering sustained improvements and uptake is spreading. Achievements in the pilot care homes include:

- UTI hospital admissions reduced by 36% in pilot care homes
- UTIs requiring antibiotics reduced by 58%
- One residential home was UTI-free for 243 consecutive days!
- The gap between UTIs increased from an average 9 days in the baseline period to 80 days in the intervention and sustainability phase

Good Hydration! won the HSJ Patient Safety Quality Improvement Initiative of the Year 2018.

The judges said: “The panel were unanimous in their decision that this apparently simple initiative has such a positive impact on patient outcome and is an impressive example of how a simple idea could have a huge impact beyond what the team hoped to initially achieve.”

Good Hydration! also won the NICE Shared Learning Award 2018 and three PrescQIPP awards in 2017 – Patient Safety, Best Interface and overall Gold award for best innovation.



The Challenge

Urinary tract infection [UTI] was the condition with the highest rate of emergency admissions to hospital in 2012/13 [1]. Dehydration is closely linked to UTIs and has been highlighted as a common cause of admission to hospital in nursing home residents [2]. There is evidence that many older residents living in care homes do not have enough to drink.

Promoting good hydration and nutrition in older adults leads to increased wellbeing and improved quality of life [3]. Older adults often forget to drink [4] and over half of nursing home residents do not have a safe swallowing mechanism making them very susceptible to decreased fluid intake [5]. These factors increase the risk of dehydration and urinary tract infections in older adults, which can in turn lead to confusion, falls, acute kidney injury and hospital admission [6].

High turnover, under-staffing and a lack of appropriate skills can also increase the risk of dehydration in care home residents [7, 8].

The Good Hydration! pilot established that when a UTI was suspected in residents, care home staff relied on urine colour, smell and dipstick testing. This could lead to an increase in inappropriate prescribing of antibiotics for asymptomatic bacteriuria or dehydration.



REFERENCES

1. NHS England. *Emergency Admissions for Ambulatory Care Sensitive Conditions*. 2014. <https://www.england.nhs.uk/wp-content/uploads/2014/03/red-acsc-em-admissions-2.pdf> (accessed 24 October 2018).
2. Schols JM, De Groot CP, Van Der Cammen TJ, et al. Preventing and treating dehydration in the elderly during periods of illness and warm weather. *J Nutr Health Aging* 2009;2:150-7. doi: 10.1007/s12603-009-0023-z
3. Courtney M, O'Reilly M, Edwards H, et al. The relationship between clinical outcomes and quality of life for residents of aged care facilities. *Aust J Adv Nurs* 2009;26:49-57. <https://pdfs.semanticscholar.org/9609/599b3b6f2b2099740a2b9b4289466777d-dc0.pdf> (accessed 24 October 2018).
4. Hooper L, Bunn D. Detecting dehydration in older people: useful tests. *Nurs Times* 2015;111:12-16 <https://www.nursingtimes.net/roles/older-people-nurses/detecting-dehydration-in-older-people-useful-tests/5089358.article> (accessed 24 October 2018).
5. Campbell N. Innovations to support hydration care across health and social care. *Br J Community Nurs* 2016;21:24-29. doi: 10.12968/bjcn
6. Bunn D, Jimoh F, Wilsher SH, Hooper L. Increasing fluid intake and reducing dehydration risk in older people living in long-term care: a systematic review. *J Am Med Dir Assoc*. 2015;16:101-113. doi: 10.1016
7. Shipman D, Hooten J. Public policy. Are nursing homes adequately staffed? The silent epidemic of malnutrition and dehydration in nursing home residents. *J Gerontol Nurs* 2007;33:15-18.
8. Care Quality Commission. *Dignity and nutrition for older people: review of compliance*. CQC, London 2011. <https://www.cqc.org.uk/publications/themed-inspection/dignity-and-nutrition-older-people> (accessed 24 October 2018).

Impact

What is the evidence that this approach reduces UTIs in care homes?

The first 18 months of the Good Hydration! initiative involved 150 residents in four care homes. There was a 36% reduction of UTIs requiring hospital admission and a 58% reduction of UTIs requiring antibiotic treatment.

The number of days between UTIs requiring antibiotic treatment was also measured. During the baseline period, the average time between UTIs was nine days. As the interventions were put in place, the average time between UTIs increased to 80 days.

Similar positive results were then achieved in five more care homes involving a further 215 residents.

A paper on the Good Hydration! initiative has been accepted for publication in the BMJ Open Quality online journal.



Feedback

“I like all the choice and I’ll carry on having the cold drinks in the winter too.”

Care home resident

“The training has given us understanding of why it’s important to ensure that residents have enough fluids – it’s looking at the whole system, not just a drink.”

Care Home Staff Member

“It is going great here. We’ve gone from a UTI every three days to some months when we have none at all.”

Julie Bignal, Care Home Manager

“We’ve demonstrated that introducing structured drinks rounds and educating care staff around the importance of good hydration improves patient outcomes and significantly reduces risk of urinary tract infections. That’s really good news for residents who are less likely to spend time in hospital or take additional medication as a result.”

Sundus Jawad, Lead medicines optimisation care homes pharmacist

Implementation

The two main interventions within the Good Hydration! initiative are:

1. Staff training on the importance of hydration and signs and symptoms suggesting a UTI in line with national guidance
2. Introduction of structured drinks rounds which ensure that residents are offered a drink at least seven times a day at set times. These drinks rounds should have a wide range of hot and cold beverages on brightly coloured trolleys with a variety of cups to give residents choice and add to the appeal of the drinks.

Staff training

We recognise that different areas and teams will have their own training methods and structures. For the pilot in East Berkshire the training was delivered by a patient safety manager and care home prescribing support pharmacist in two-hour sessions. These were run jointly for all care homes taking part. Key members attended and received a certificate of attendance. The emphasis of these sessions was on:

- Anatomy and physiology of the urinary system
- Signs of dehydration and how to improve hydration
- Signs and symptoms of a UTI in line with national guidance
- The effect of some medicines on water balance and the kidneys
- How to implement a structured drinks round.

Training resources can be found [here](#). Click on 'Project Resources' at the foot of the page.

These training sessions have now been developed into a series of six short animated videos. A quiz has been added to test knowledge at the end. Once a pass mark has been achieved on the quiz, a certificate can be downloaded. This may be a way to reach all staff with only key personnel taking part in face-to-face training.

The videos can be viewed on YouTube [here](#).



Structured drinks rounds

A structured drinks round takes place seven times each day at set times, led by a dedicated member of staff who is allocated the role at the beginning of each shift. The structured drinks rounds can occur either in a dedicated drinks area or via a drinks trolley. A structure drinks round should:

- take place at least seven times a day at set times
- be undertaken by a dedicated member of staff allocated at the beginning of the shift
- be attractive – make it bright and colourful and theme it for festivals or occasions
- have a selection of different coloured cups and glasses giving residents lots of choice
- have a selection of drinks – different teas, squashes, fruit juice, flavoured water, nourishing milkshake drinks, coffee, hot chocolate etc.
- offer warm and cool drinks at the same time (in the winter the squash can be served warm)
- review care plans with residents who are unable to communicate, to ensure they get their preferred drink and cup at each round
- refer to care plans when needed to identify which residents are at higher risk of dehydration and which need more support with drinking.

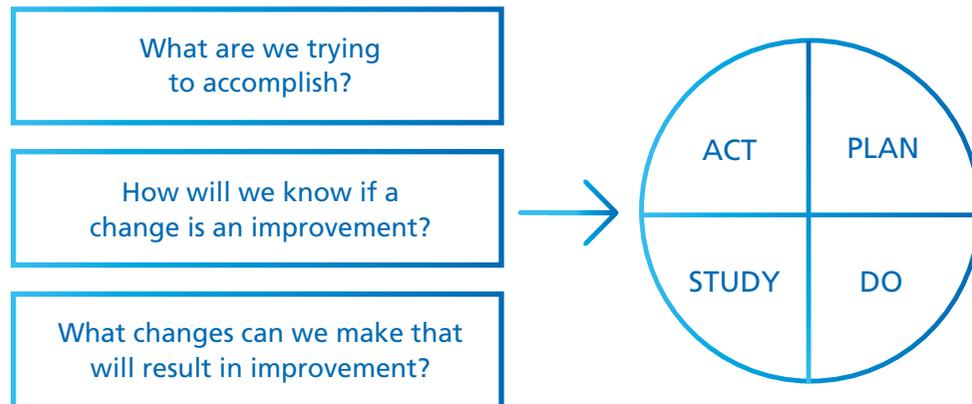


Getting started

In order to implement and sustain the Good Hydration! initiative in your area we recommend that you measure outcomes to demonstrate the improvement achieved from the interventions. This in turn keeps staff motivated to continue, not to mention the benefit for those in your care. A recommended and simple-to-use framework to measure quality improvement is the Institute for Healthcare Improvement (IHI) Model for Improvement. This ensures you ask three simple questions and then test the intervention locally.

You can find out more about the model for improvement in this [video](#).

Model for improvement



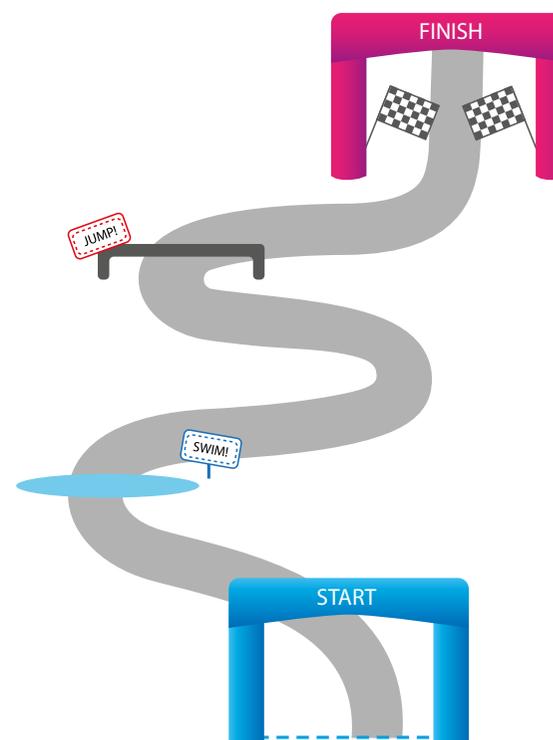
Measuring your improvement

Setting aims and measuring outcomes – it is important to set an aim or aims (outcome measure) for any initiative. The process measures are what you choose to put in place (interventions) to reach the outcome measure. By measuring baseline and monthly data, any improvement identified can be noted. Or, if there is no improvement, processes can be amended accordingly. It is important to listen to all staff ideas throughout the initiative.

Outcome measures – it is important to know that the intervention is having a positive impact on residents/patients e.g. number of UTIs requiring hospital admission, number of UTIs requiring antibiotics should decrease or number of days between UTIs should increase.

Process measures – these are the measures introduced to meet the overall aim. In this initiative, the key process measures are the introduction of the seven structured drinks rounds and the training for staff.

Baseline data – each area should collect two months of baseline data to get a basic understanding of their current rate of the issue being reviewed e.g. number of UTIs requiring antibiotics. Data can then be measured daily/weekly/monthly against the baseline to note any improvement or not. For UTIs requiring admission to hospital a longer baseline period may be required.



Safety Cross

A simple way to collect data is to use a safety cross. A safety cross is a visual tool containing 31 boxes used to collect data. Each box represents a day in a calendar month. A nominated 'Local leader' (See Leadership section on page 11) should be responsible for completing this daily. For this initiative a red sticker indicates if a resident had a UTI requiring admission to hospital, an orange sticker indicates a resident requiring an antibiotic prescription for a UTI and a green sticker was an incident-free day. A sticker should be placed on the date the UTI occurred and if multiple residents have a UTI on the same day, multiple stickers would be used, one per resident.

No UTIs	
UTI with antibiotics but remained in the residential/nursing home	
UTI and admitted to hospital	

A Word template safety cross can be found [here](#).

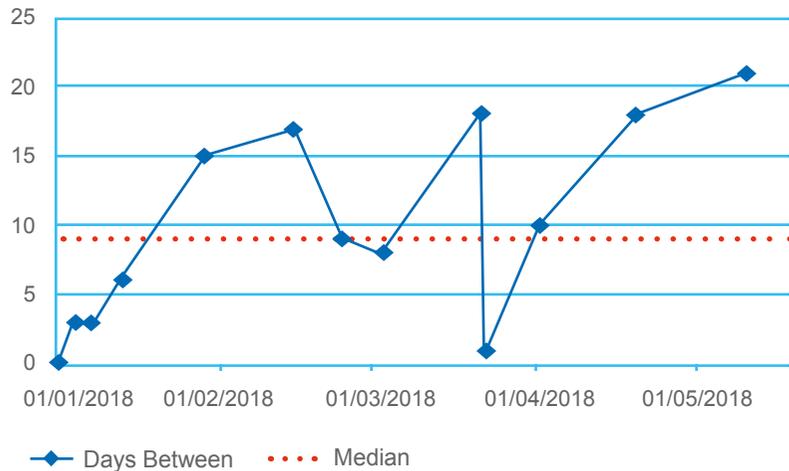
Urinary Infection Safety Cross

1		2			
3		4			
5		6			
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25		26			
27		28			
29	30	31			

Run Chart

A run chart is a tool for improvement which demonstrates how your initiative is going. A run chart is simple to create by entering the date when the incident occurred into an Excel spreadsheet. It will automatically populate the days between incidents. Run charts allow you to see if improvement has been made, whether it is sustaining or a one off. Below is a run chart that indicates the days between UTIs requiring antibiotics. It shows clusters of UTIs in January 2018 but by May 2018 the number of days between UTIs is increasing.

Days Between UTIs Requiring Antibiotics



	Incident Date	Days Between	Comments
Start Date	01/01/2018	0	Start of baseline data
Incident 1	04/01/2018	3	Baseline data Average days between UTIs = 7
Incident 2	07/01/2018	3	
Incident 3	13/01/2018	6	
Incident 4	28/01/2018	15	
Incident 5	14/02/2018	17	
Incident 6	23/02/2018	9	
Incident 7	03/03/2018	8	Data post intervention Average days between UTIs = 13
Incident 8	21/03/2018	18	
Incident 9	22/03/2018	1	
Incident 10	01/04/2018	10	
Incident 11	19/04/2018	18	
Incident 12	10/05/2018	21	

A pre-programmed Excel spreadsheet template with a 'days between' run chart can be downloaded [here](#).

Leadership

Agree a team to steer the initiative to ensure it is implemented and sustained.

Initiative lead

The Initiative lead is the person responsible for implementing the initiative locally – this could be a member of the clinical commissioning group or local authority, a care home manager, ward manager etc. They are responsible for:

- gathering staff to share the vision and get input into the initiative
- agreeing the outcome measures (see page 8)
- arranging for staff training either via YouTube videos or face-to-face
- arranging the collection and analysis of all measurement data
- sharing results regularly with staff – and getting feedback from them on how it's going
- ensuring change in practice is sustained before ceasing measurement.

Local leaders

The local leader for the initiative is based within the care home or ward and is responsible for:

- allocation and support of drinks champions
- ensuring key communications at set times to feedback to staff the importance of hydration and whether improvement is noted
- listening to staff ideas
- informing staff, residents and relatives about Good Hydration! and keeping creativity going locally
- collecting outcome measures on the safety cross.

Hydration champions

Hydration champions ensure the smooth running of the initiative on a day-to-day basis and are responsible for:

- ensuring each shift that drinks are given out at the agreed times
- reminding staff of the importance of Good Hydration! and how to recognise signs of dehydration
- including residents/patients in all choices where appropriate
- ensuring drinks trolleys are decorated, bright and colourful – and regularly refreshed
- ensuring a wide choice of hot and cold drinks are available to residents/patients
- providing or facilitating support for residents/patients who need additional support with drinking.



Project resources

The Good Hydration! initiative has developed a set of project resources to assist with training, measurement and sustainability. They can be found [here](#).

Training materials

- Training plan
- Quiz
- Quiz with answers highlighted
- Case study
- Case study with answers highlighted
- Training certificate
- Evaluation form

Measuring outcome data

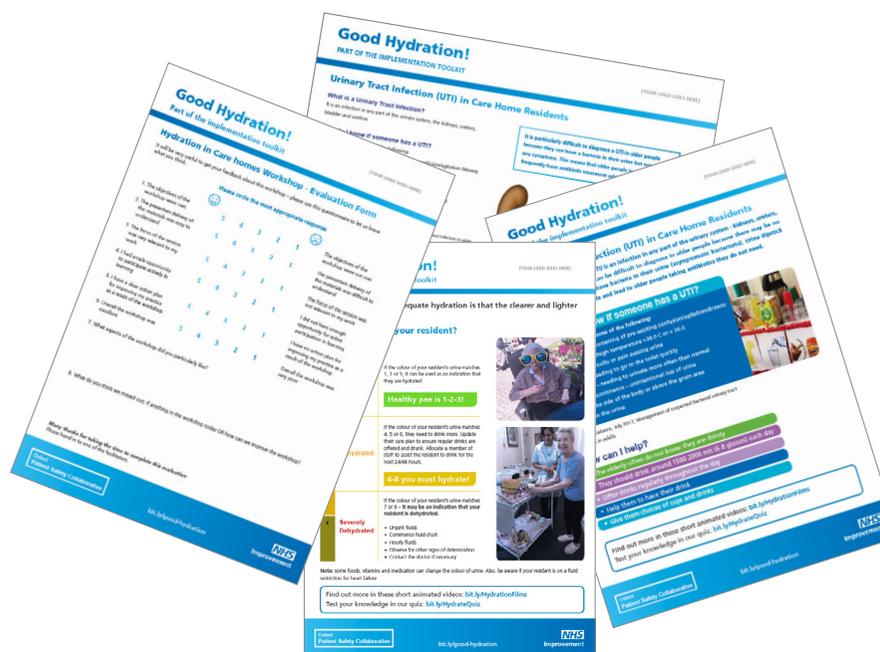
- Monthly drinks rounds chart
- Safety cross
- Days between UTIs spreadsheet
- Percentage of seven drinks rounds undertaken spreadsheet

Posters

- Hydration 1-8 staff care planning poster
- UTI general poster

Other Resources

- Food and fluids chart
- Good practice guidelines



IMPLEMENTATION TOOLKIT
Good Hydration!
bit.ly/good-hydration

Oxford

**Patient
Safety
Collaborative**

Part of Oxford AHSN

www.patientsafetyoxford.org

 @PS_Oxford

e: patientsafety@oxfordahsn.org

t: 01865 784969

**Working together to build a culture of
continuous learning and improvement**