Lancashire County Council

Lancashire's Hydration Strategic Plan 2025

Working together with

Blackburn with Darwen Borough Council

Title	
Version number	3.0
Document author(s) name and role title	Jemma Dunbar & Sarah Whelan Senior IPC Nurses
Document owner name and role title	
Document approver name and role title	

Date of creation		Review cycle	
Last review		**Next review date**	

Version	Date	Section/Reference	Amendment
1.0	27/03/25	Entire Document	Creation
2.0	28/03/25	All	Formatting & Graphics
3.0	01/07/25	Foreword	Addition of Foreword and minor changes

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Foreword

By Matt Olley - Consultant in Public Health

Lancashire County Council is the 4th largest local authority in the UK and in addition, provides an Infection Prevention and Control (IPC) contractual service to Blackburn with Darwen Borough Council.

One priority for the IPC Team is 'Prevent and Promote' – this is directly linked to the policy paper Confronting antimicrobial resistance 2024 to 2029. The paper details the ambitions and actions for the next 5 years committing to the 20-year vision for antimicrobial resistance (AMR) published in 2019. The paper details 9 strategic outcomes under 4 key themes. The IPC Team are keen to support the paper and view this Hydration Strategic Plan as a key contributor to Theme 1 – Reducing the need for, and unintentional exposure to, antimicrobials.

Hydration is the cornerstone of health and well-being and plays a key role in nearly every bodily function. This plan sets out a vision to promote hydration to care homes in the footprint of Lancashire and Blackburn with Darwen as dehydration is a major public health concern to people aged 65 years and over.

Every quarter, the plan sets out targeted work with health and social care staff, residents of care homes and embedding early good hydration habits by delivering educational hydration sessions with children in primary schools. This is in addition to promoting hydration at external stakeholder events.

As you read through this Hydration Strategic Plan, you will see the value of the IPC Team and how by targeted pro-active work focussed on hydration particularly with older adults, it can have a host of benefits including the avoidance of antibiotics and potentially alleviating the necessity of a hospital stay.

Thank you for taking the time to read this foreword and I hope you continue to stay hydrated and healthy.

Matt Olley MSc, FFPH

Public Health Consultant – Health Improvement & Health Protection

Lancashire County Council

Introduction

A vision for Lancashire

Lancashire's Infection Prevention & Control (IPC) team is integral to the council's public health offer of prevention to improve the health and wellbeing of its residents.

This strategic plan intends to highlight how infection rates can be reduced by adopting good health behaviours to improve health and wellbeing of residents.

Good hydration enables homeostasis and this strategy looks at how the promotion of good hydration in Lancashire can be prioritised.

There are 749 social care providers across the Lancashire-13 footprint, 454 of which are registered care and/or nursing homes with the Care Quality Commission (CQC), and 2023 data showed that the 65 and over age group saw the highest annual growth rate for the area (1.7% compared to 0.9% of the 0-15s group (age group with the second highest growth rate)).

In the next 5 years the amount of people living in care/nursing homes in Lancashire is predicted to increase by 17% (10,303 in 2023 to 112,077 in 2030), and 12% in Blackburn with Darwen (659 in 2023 to 736 in 2030). Studies, like the DRIE study (Hooper et al, 2016) have shown that older people (>65) living in a care setting are more at risk of becoming dehydrated.

Dehydration is associated with increased mortality and disability in this age group, causing an increase in confusion and falls, and making hospital admissions due to dehydration more likely (Hooper et al, 2016). In Lancashire, it is predicted that by 2030 there will be a 21% increase in hospital admissions caused by falls in people aged 65 and over, and in Blackburn with Darwen an increase of 16.5% is predicted.

Due to the large number of social care settings in the lancashire-13 footprint, there are high numbers of residents who epitomise this high-risk group, and it is imperative that staff are educated and trained to understand the importance of hydration and the associated infection risks of dehydration.

Social care providers have the obligation to ensure that the hydration needs of their service users are met and that they are embedded in guidance and regulations. CQC inspects these standards in accordance with regulation 12 and 14 of the Health and Social Care Act (2008). Regulation 14 assesses if provisions for adequate nutrition and hydration are in place, and regulation 12 looks at the procedures in place to prevent people from receiving unsafe care and treatment. Both regulations are underpinned by staff knowledge, competence, skills, and experience to reduce risks of malnutrition and dehydration.

A quick deep dive into the 89 (19.6%) care/nursing homes that have a CQC rating of requires improvement (RI) or inadequate (I) in the Lancashire-13 area, highlighted that 20 had concerns raised about the quality of hydration care, either under regulation 12 or 14 (22%).

The above statistics show that there is a need to intervene with older people when dehydration is suspected, and this strategic plan presents an overview of how we will improve knowledge and awareness around hydration in health and social care.

Alongside developing training and resources, we will raise awareness of key public health issues, through various community and social networks to educate the wider public on good hydration. Delivering hydration sessions to primary school aged children will ensure that hydration knowledge is embedded at a young age. Listening, engaging and collaborating with partners, communities and service users is important for achieving our objectives.

Priorities

1. Lancashire 2050

The strategic plan links directly to the 'Health and Wellbeing' priority and the following themes:

1. To improve quality of life and reduce health inequalities
2. To provide better opportunities to stay healthier for longer

2. National AMR Plan

Links with 2 of the 6 AMR 5-year national action plan's 'Confronting antimicrobial resistance 2024 to 2029 workstreams:

1. Infection prevention and control
2. Urinary tract infections

3. ABC of IPC[1]

Avoid infections by delivering bespoke hydration and UTI training

Break the chain of infection by demonstrating best practice and educating on the associated infections

Care given is best practice by highlighting current guidance and regulations and when to escalate concerns[1]

4. Priorities of IPC[1]

- Prevent and Promote
- Respond and Reduce
- Develop and Expand

[1] See appendix one for SWOT analysis (strengths, weaknesses, opportunities, threats)

Strategic Objectives

In line with Lancashire's Public Health Strategy 2024-2030, the key objective will be to **prevent** through**:**

Supporting positive behaviour change to improve health

Early detection and management of risk factors of ill health and disability

Preventing, reducing or delaying the need and demand for avoidable admissions to health and social care

Reducing antibiotic resistance (AMR)

Evidence Base

The evidence base for the strategy is gathered from both national and local quantitative data, and from local qualitative data[2].

Quantitative data

- UTI care home data from provider assessment and market management solution (PAMMS) toolkit
- National and local *E. coli* data from UK Health Security Agency's (UKHSA) Data Capture System (DCS)
- Local falls data from PAMMS and national and local data from Projecting Older People Population Information (POPPI)

Qualitative data

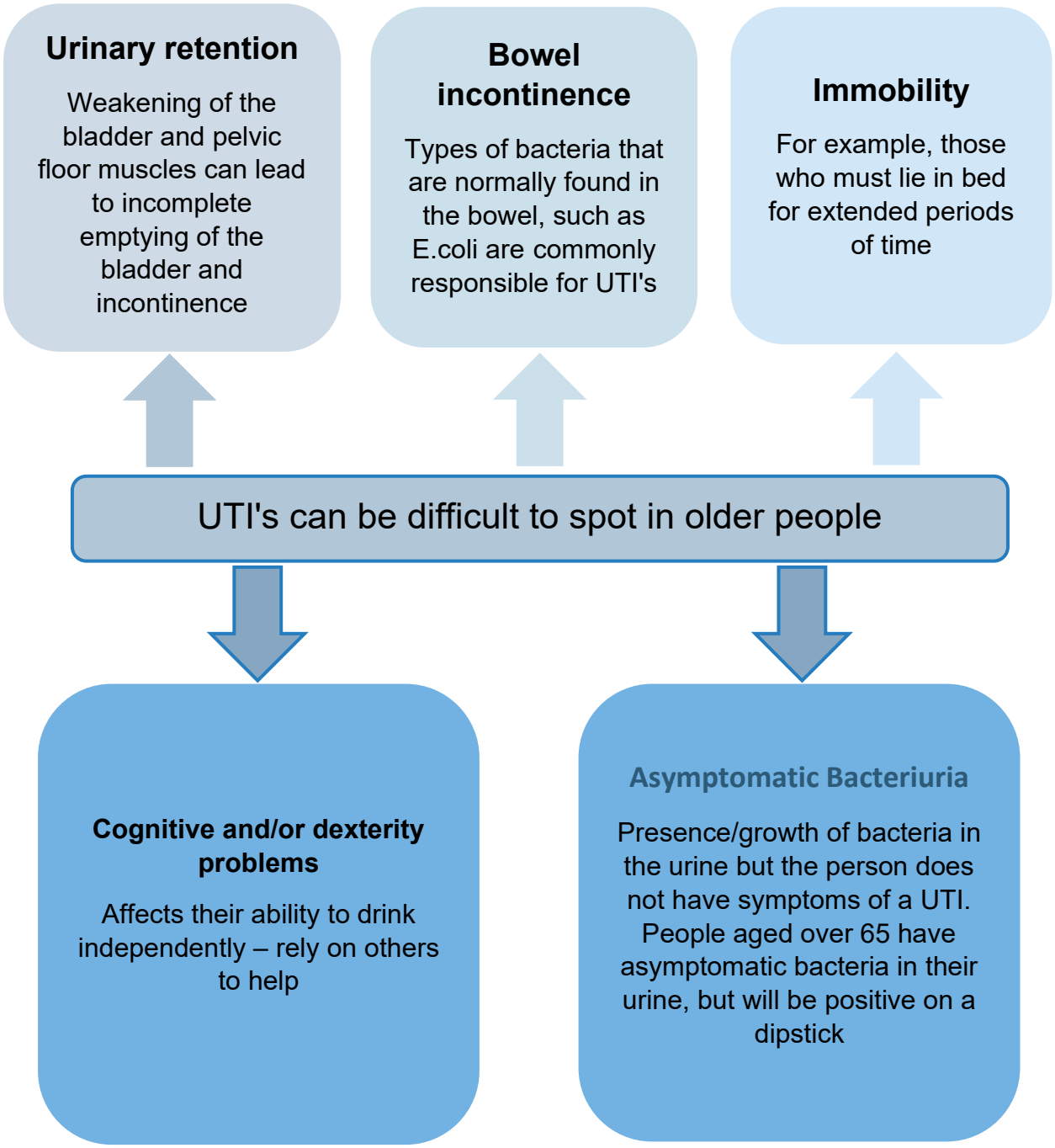
- Feedback and information from employee engagement activities
- Surveys
- Review existing data
- Identify any knowledge gaps by collecting data and feedback
- Combine and analyse existing and new data to identify trends, gaps and opportunities

[2] See Appendix A for Lancashire *E. coli* data

Evidence Base: Urinary Tract Infections (UTI)

A UTI is caused by bacteria entering the urinary tract via the urethra – the tube that allows the passage of urine from the bladder to outside the body.

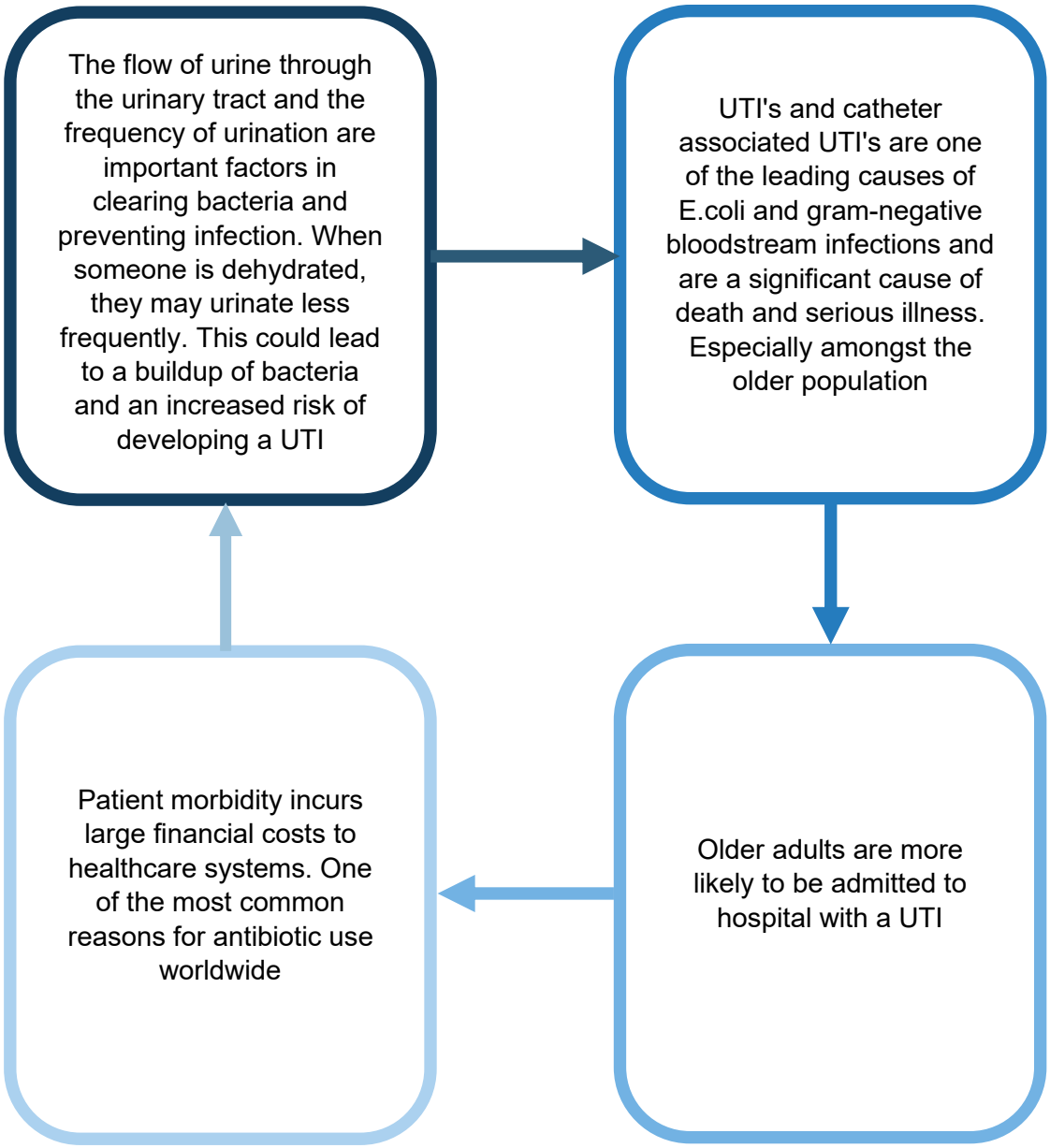
The bacteria can then move upwards through the urinary tract, infecting the bladder and sometimes the ureters and kidneys.



Evidence Base: Impact of E. coli

According to the National Kidney Foundation, 80-90% of urinary tract infections (UTI) are caused by the bacteria *Escherichia coli* (E. coli) and if untreated can lead to life threatening blood stream infections (BSI).

Three-quarters of all E. coli BSI`s occur in community settings e.g., care homes.Targeting these setting with training/promotion good IPC practices, optimum hydration, continence care and recognition of UTI symptoms will result in a reduction of UTIs and will have a significant impact in reducing bloodstream infections (Harrogate and District NHS Foundation Trust, 2021).



Ageing & Hydration

It can be difficult to recognise dehydration in older adults, therefore understanding the reasons for reduced fluid intake is vital. Some of the reasons for poor intake include:

Social Factors

Worrying about incontinence

Fear of falling when going to the toilet

Physical Factors

Difficulties swallowing

Reduced thirst sensation

Reduced muscle mass therefore less storage of fluids in body

Reliance of others to fetch drinks

Medical Factors

Diuretics

Dementia

Diarrhoea and vomiting

Low mood

Fluid restriction

Care providers responsibilities

Training for staff and users

Involve visitors to make hydration sociable

Risk assessments

Timely referrals

Accessibility (Hydration Stations)

Antimicrobial Resistance (AMR)

The strategic plan supports the national action plan Confronting Antimicrobial Resistance 2024-2029 by promoting effective and consistent IPC measures to reduce infection and therefore antibiotic prescribing. Delivering training sessions to staff will educate staff about the current UTI guidance and reinforce when urine dipsticks are appropriate and when they are not recommended.

Preventing UTI is especially important in older care home residents as nationally it accounts for one third of admissions to hospital:

- Data from 2023/24 showed that there were over 19000 attendances from care home residents to A&E with UTI symptoms across Lancashire and South Cumbria.
- Of those, 8647 were inpatient emergency admissions at a cost of over £39 million to the NHS.
- With this training it is anticipated that UTI's are diagnosed promptly, following NICE guidance, to reduce A&E admissions.

This can lead to antibiotics being prescribed unnecessarily, which lessens their effectiveness, contributing to antimicrobial resistance:

- Nationally, up to 50% nursing home population and 90% of patients with long term catheters have a positive dipstick with NO UTI present, due to asymptomatic bacteriuria – educating staff on the 'to dip or not to dip' initiative for those aged over 65, living in a care home or who have a catheter in-situ.
- 43% of care home residents are prescribed antibiotics annually for UTI's.

A positive dipstick is more likely to lead to treatment which may not be appropriate. If asymptomatic bacteriuria is treated, there is no benefit to the resident and it could lead to harm:

- Increased risk of difficult to treat secondary infections such as Clostridioides difficile (C. diff).
- Increased risk of resistant urine infections – ESBL E.coli.
- Side effects of antibiotic medications.

  Negative effects on other medication the patient takes

Knowledge gaps: qualitative data

A survey was sent to social care providers in Lancashire and Blackburn with Darwen footprint to understand what the gaps in knowledge were in social care settings.

The survey results[3] highlighted a need for further staff training around UTI management and recognising dehydration. Of the 61 responses, 41 stated the training available to staff was accessed online.

The survey identified that there was a shortage of hydration activities and education for service users and that there was a high proportion of settings who were not offering the recommended daily minimum of 6 drink opportunities.

With these findings, the IPC team developed a delivery plan called ‘Hydration Heroes’ to educate service users about good hydration and how much fluid is required daily for optimum health.

Hydration Heroes was piloted to service users in day centres and promoted at public events such as Preston’s Disability Pride (picture below) in 2023.

[3] See Appendix C for survey data

Hydration Heroes Project

In 2021 NHS England, NHS Improvement, and the Antimicrobial Resistance (AMR) Programme committed to funding a series of hydration pilots to support the development of a knowledge base as to which hydration interventions could reduce urinary tract infections (UTIs).

This programme supported the UK's 5-year action plan 'Tackling antimicrobial resistance 2019–2024', with the overall aim of reducing healthcare associated gram-negative blood stream infections (HA-GNBSI).

Local data at the time showed that within Lancashire and South Cumbria Integrated Care System (ICS) the numbers of infections of E-Coli were higher than the national average. Escherichia coli (E. coli) is the causative agent for most of these Gram-negative infections.

It was recognised that over 50% of GNBSIs occurred outside the hospital setting, so a plan was needed to reach people who may be vulnerable but who were not in full time care. It was suggested that to reach this goal, interventions were needed to improve hydration in elderly patients in the community, care homes, healthcare settings and the community.

Funding was obtained from the contain outbreak management fund (COMF) and used to order 500 water bottles that would have an indication of how much to drink each day. We created an educational session which included a quiz around hydration followed by a PowerPoint presentation. All participants received a water bottle and information leaflet.

This then became 'Hydration heroes', a pilot aimed at day centres for the elderly and learning disabilities, commencing in October 2022. People who attend day centres are often cared for at home by family and informal carers and the messages conveyed in the pilot needed to be relevant for the carers at home as well as the service users and day centre staff.

The Hydration Heroes content has since been adapted for key-stage 2 aged children as research shows that they copy drinking habits from their peers, making school education sessions an ideal opportunity to embed healthy hydration habits from an early age. This work supports the UK Government's new AMR 5 year national action plan, ‘Confronting antimicrobial resistance 2024 to 2029’, which builds on the achievements and lessons from the first national action plan. Sessions commenced in schools in January 2025.

Prevention

Dehydration is a major public health concern in people aged over 65 years. The reference to the cause of dehydration throughout this plan is due to low beverage intake.

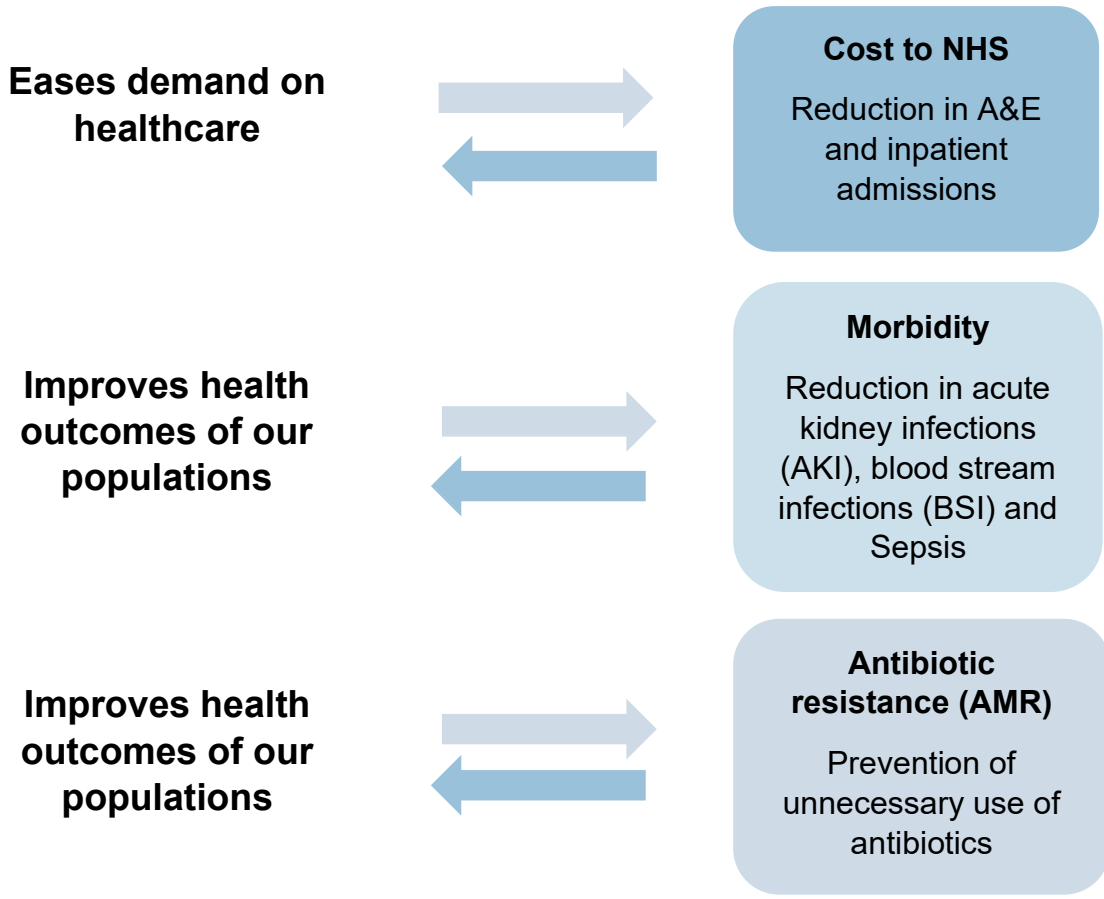
In older age, there are physiological causes that affect the low uptake of beverages, including a decrease in thirst sensation and urine concentration by the kidney and a reduction in body water stores. Further obstacles hindering good hydration in older age, are the frequent use of diuretics, laxatives and polypharmacy, dexterity and cognitive difficulties and a voluntary reduction in beverage uptake due to dysphagia or fear of incontinence.

It is well documented that low-intake dehydration is common in older adults and often a chronic condition. It is easily preventable, yet dehydration related urinary tract infections are frequently seen in older people living in institutional care settings such as care/nursing homes. The adverse health outcomes associated with dehydration, lead to unplanned hospital admissions, longer recovery times and increased mortality, at a high cost to the NHS.

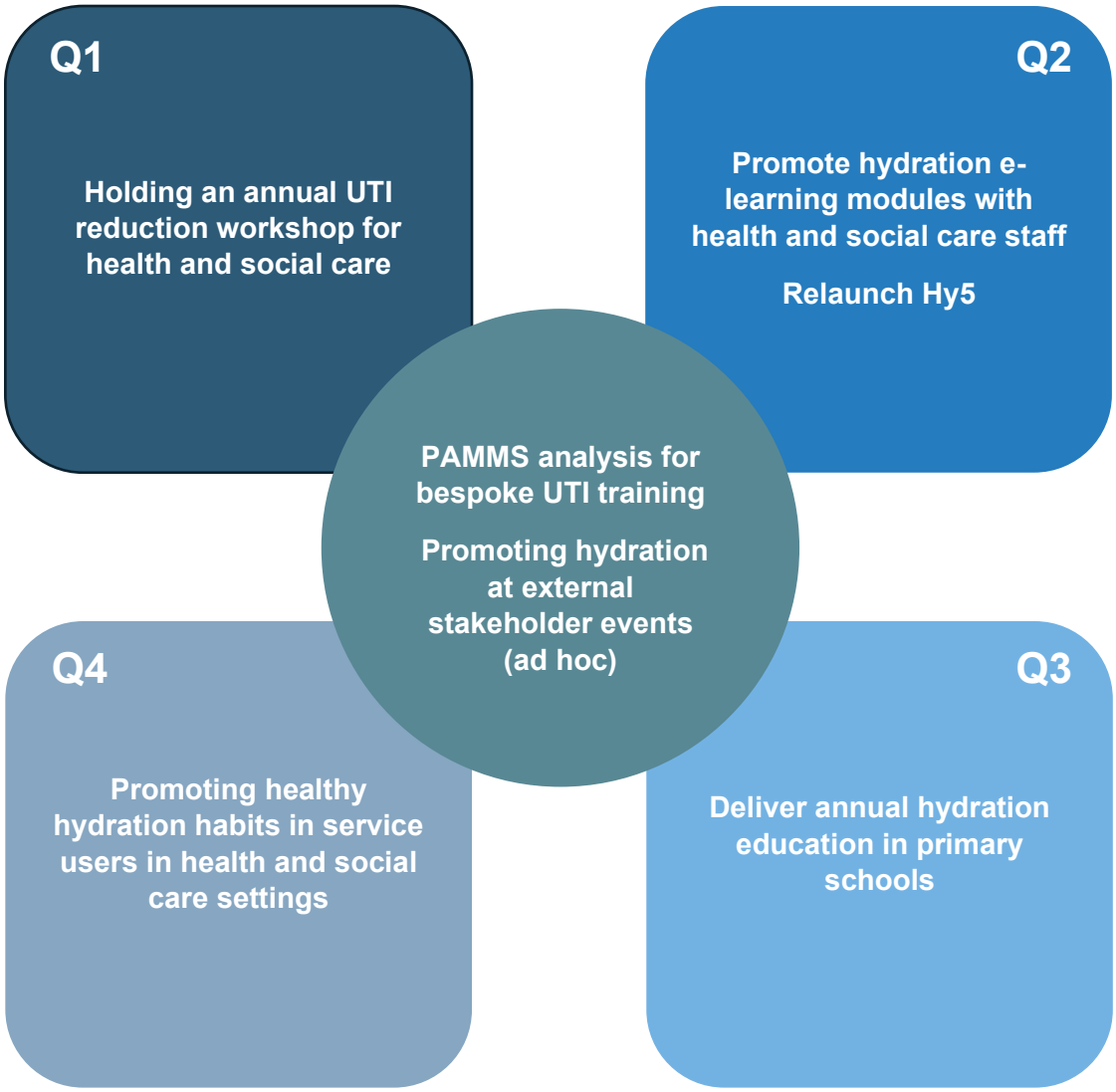
Inadequate staff knowledge on how dehydration can impact the overall health and infection risk of older people is a main factor for dehydration related morbidity. As there are no standardised or national assessment tools for assessing dehydration in older people, prevention is challenging. NICE and ESPEN recommend that to enable service users to have optimum hydration, staff need to be educated on prevention, identification and treatment.

Investing in prevention

Will improve health outcomes of the population in Lancashire but it will also reduce costs to the NHS and reduce unnecessary antibiotic use and thus a reduction in AMR



Achieving Objectives: Workstreams[4]



Evaluation

We will measure our outcomes and performance by:

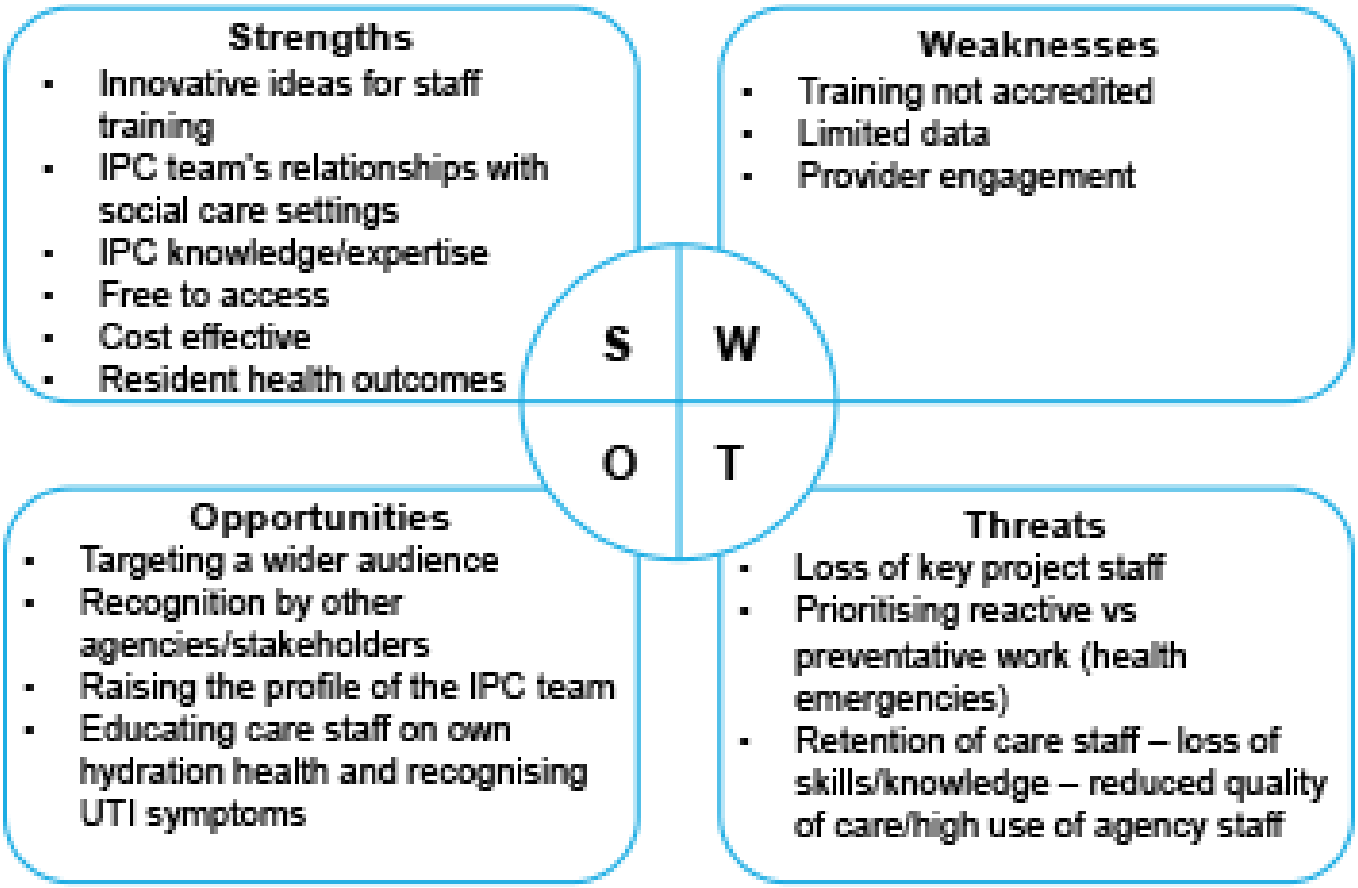
1. Reporting against agreed key measures
2. Benchmarking our outcomes against national AMR outcomes
3. Developing a delivery plan which will be reviewed quarterly
4. Monitoring the UTI rates of care homes through local data collection
5. Evaluating how the team is contributing to the wider public health strategy

The evaluation will allow us to analyse what works well and what needs further development. This will allow us to maximise time and resources to those focus areas.

[4] Appendix D for annual workstreams

Appendix A

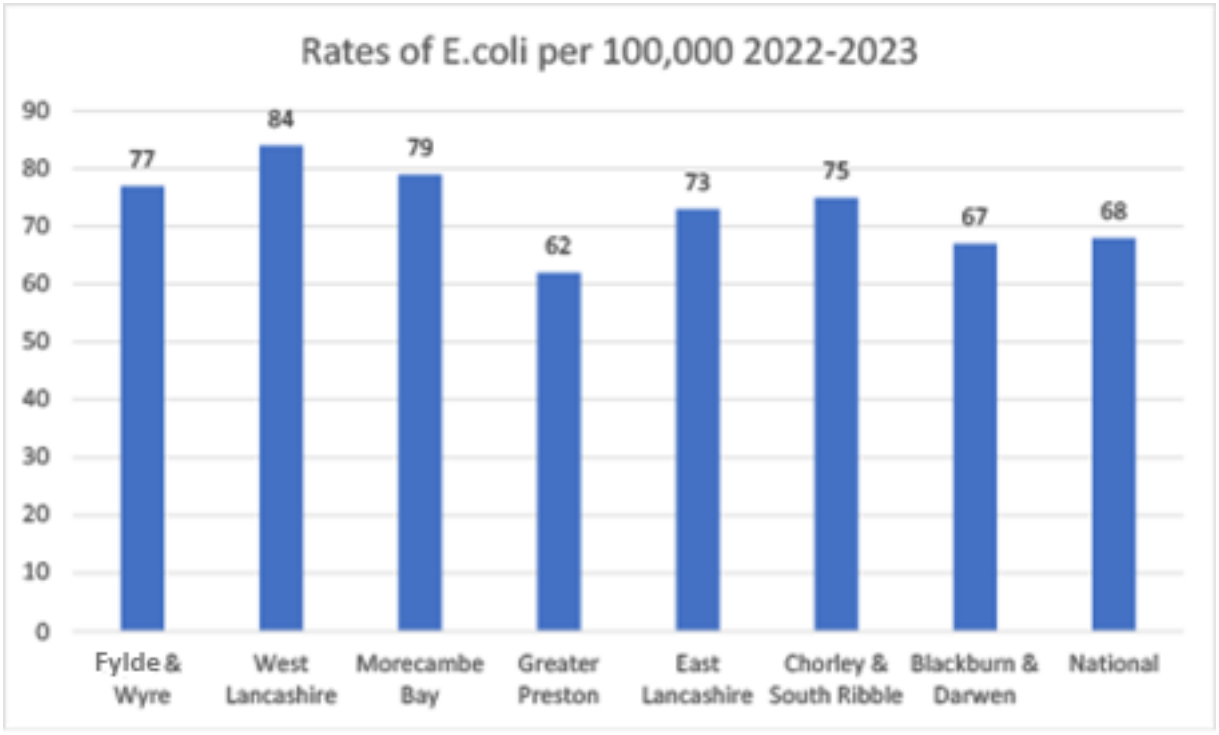
Swot Analysis

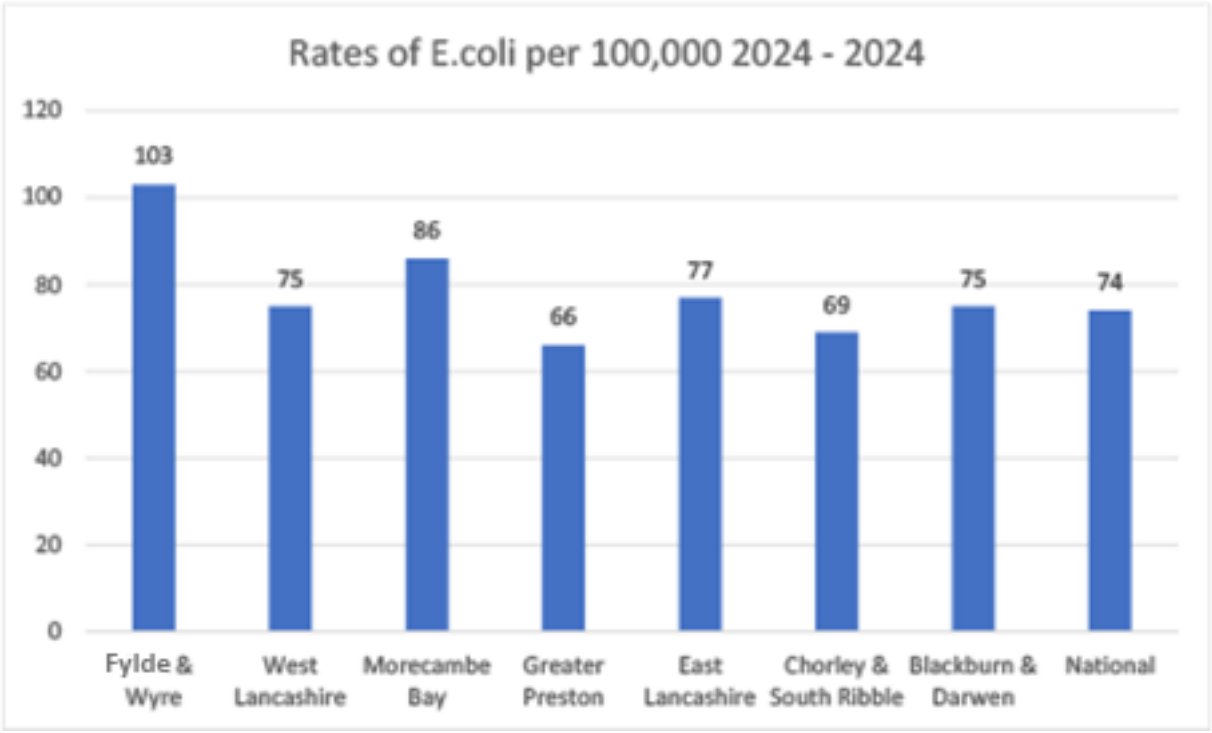


Appendix B

E. Coli: Lancashire Overview

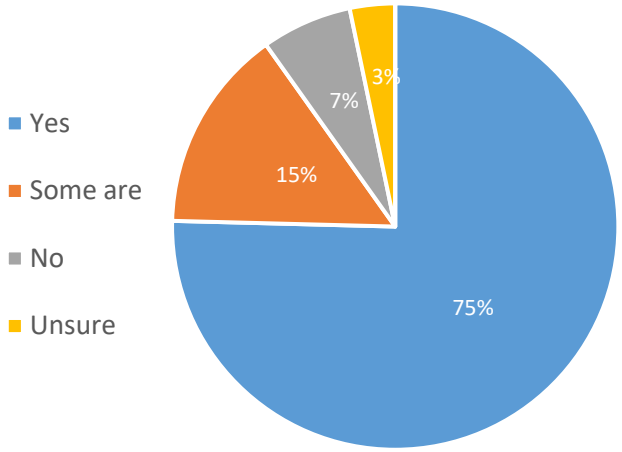
The rate of infections of E.coli, were high in 2022 and 2023 with 71% of ICB's (Integrated Care Boards) in Lancashire reporting rates higher than the national average.



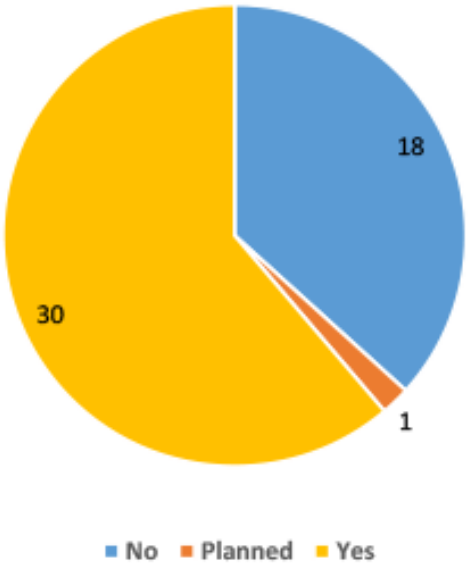


Appendix C

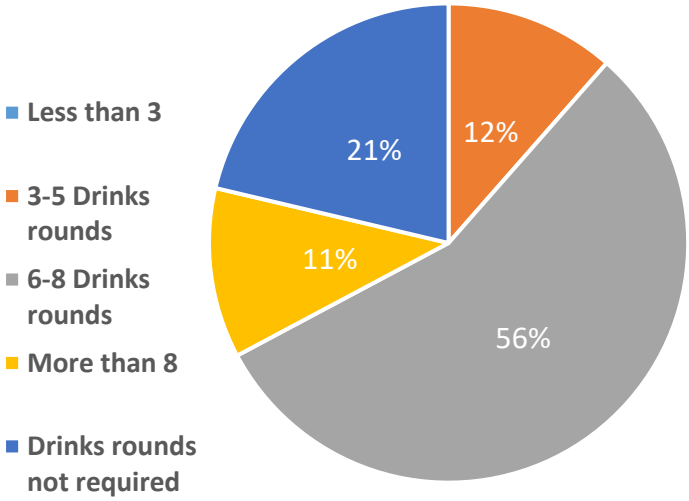
Are staff confident in recognising signs of dehydration?



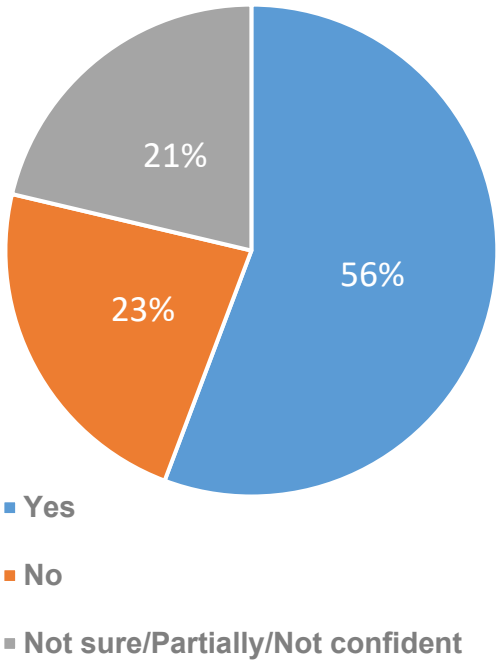
Are there activities available to educate/promote hydration in the setting?



How many times a day do drink rounds occur?



Are you or your staff aware of the 'To Dip or Not To Dip' initiative?



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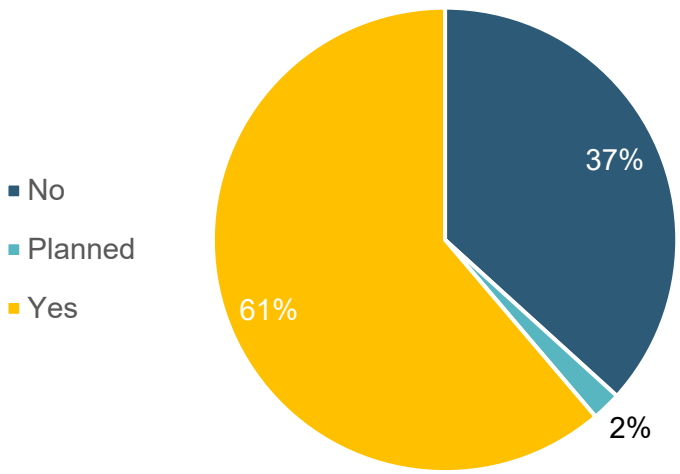

Appendix D

Achieving Objectives: Aligning training & resources

Through resident, public and school awareness sessions, the team will:

- Highlight the need for good hydration.
- Educate how to recognise and prevent low Intake dehydration.
- Promote self-care techniques to prevent a UTI (hand hygiene, personal care).
- Support informal care givers.

Through staff training, resources and IPC audits the team will:

- Educate staff on the key symptoms of infection and appropriate testing (to dip or not to dip initiative).
- Signpost to current guidance and policies to avoid inappropriate antimicrobial use.
- Promote best practice in infection control measures (hand hygiene, PPE, continence care).
- Enhance knowledge around hydration.
- Review current hydration practices and offer recommendations.
- Support to risk assess service users for low intake dehydration including how to report, escalate, refer and document accurately and in a timely manner.
- Promote staff to be aware of their own hydration habits.

Social Care	Wider Public	Early age
UTI sessions and workshops	Disability Pride event	Primary school, key stage 2 hydration sessions
Hydration e-learning module promotion	Blackburn with Darwen Carers Service Awareness Day	Primary school, Early stage & key stage 1
Quality Improvement Course - IPC Champions	Health Hub Day -learning disability nurses	
Audits and action plans		
Nutrition and Hydration Week		
Resident IPC awareness sessions		
Hydration Heroes – day centres		
Hy5 Campaign		