Hydration: Promoting Fluid Intake and Preventing Dehydration

Quick Link:

- Quick Reference Guide for Early Detection and Prevention of Dehydration in older adults

Site Applicability

All VCH Residential Care Sites

Practice Level

Basic skills for the following professions (within their respective scope of practice):

- RN, RPN, LPN
- Dietitian (RD)
- OT
- PT
- SW
- Recreation Therapist

Basic skills for RCA, Rehab assistants

Policy Statement

- To provide all residents with adequate hydration.
- Fresh drinking water and fluids will be available for all residents throughout the day
- Each agency is to develop a hydration plan to ensure each resident receives adequate hydration consistent with their goals of care

Need to Know

- All residents will have their fluid intake assessed by the interdisciplinary team on admission and when there is a change in behaviour or condition, using the *Fluid Intake Sheet* – Appendix B
- A resident's fluid intake will be reviewed when there is a change in behaviour, when an infection is suspected or in the last phases of their lives
- The *Fluid Intake Sheet* will be completed for 3 days when less than 25% of food or fluid provided is consumed and when there are signs of dehydration e.g. change in behaviour, dry mouth
- The hydration program will be known by residents, staff, family and visitors
- The *Audit of Environmental Supports of Hydration Program* will be completed every 6 months – Appendix D
- All fluids are included. "caffeine containing beverages do NOT negatively affect hydration status and in fact they increase fluid options and improves their quality of life" (Grandjeans & Campbell, 2007, p. 25.)

Water is essential for life. Dehydration occurs when the body contains insufficient amount of water and electrolytes to carry out the normal functions. "Dehydration is considered a sentinel event and in the US is monitored as a quality indicator of care in residential facilities ", (Grandjean & Campbell, 2004, p,. 24). Water plays an important role in physiological and biochemical functions. (Buyckx, 2007). Water constitutes 50% or less of body weight in older adults, which is less than younger persons, thus reducing the margin of safety for any fluid loss. Approximately, 80% of hydration requirements come from fluid intake and 20% from fluid

within foods. Adverse effects on cognitive function can be noted when there is only a 2% reduction in hydration. In addition drinking water helps keep the body flushed of waste products and decreases the risk of infection, dry skin, constipation and other common ailments.

Special measures should be taken for older adults to ensure a minimum fluid intake of 1500 mL daily is achieved. (Eliopoulos, 2005). The cells of the frail older adults can hold fluid for a shorter period of time thus the resident should receive small amounts of fluids consistently throughout the day. Some factors that may affect an older person's ability to maintain their daily hydration include: decreased sense of thirst, fear of incontinence, lack of accessible fluids, malaise, altered mood or cognition, GI distress, social environment and cultural factors.

Equipment and Supplies - options

- Water stations
- Signage to indicate location of water
- Disposable cups that can be easily held
- Microwave
- Refrigerator
- Adaptive equipment to promote independent access to fluids; e.g. wheelchair with a cup holder, elongated straw
- Cups available in each room
- Symbol or logo which is a quick, highly identifiable, visible, alert to indicate this person is at risk for dehydration and requires promotion of fluid intake. Examples include: WOW (Wonders of Water), Wise up on water (glass of water) (Forrster, 2005); Drop to Drink (drop of water) and / or many others but to be consistent within the facility.

Practice Guideline

A. Assessment

History:

- Chronic conditions; congestive heart failure, chronic renal disease, malnutrition
- Dementia, depression or other mental health illnesses
- Repeated infections such as Urinary Tract Infections
- Medication review
- Chronic dehydration or malnutrition
- Fluid and / or nutritional intake
- Admission weight and weight loss history
- Preferred fluids and when they are consumed throughout the day

Observation:

- Dry mucous membranes, cracked lips, furrowed tongue, decreased salivation
- Difficulty speaking
- Skin colour, temperature, sensation
- Decrease in skin wound healing, new skin breakdown areas
- Weakness, fatique
- Change in mental status – dizziness
- Change in behaviours
- Rapid weight loss

- Rapid pulse
- Decrease in orthostatic blood pressure
- Decreased urine output
- Constipation
- Mouth for odour, debris and cleanliness
- Ability to feed self
- Swallowing abilities
- Urine colour (dark yellow)
- Recent fever, delirium, vomiting. These symptoms will trigger MDS CAP on Dehydration on Fluid Maintenance

Data:

Lab results may assist in determining the nutritional and hydration status of the person but will be ordered on an individual basis:

- Complete Blood Work, CBC (screens for anemia & deficiencies)
- Electrolytes
- Serum Albumin

Identify those at High Risk for Dehydration:

- Person with five or more chronic diseases
- Taking medications that may adversely affect fluid intake
- Persons with a recent weight loss > 5% of body weight in 1 month
- Inability to feed self
- Pain levels that will decrease the desire to drink fluids
- State of depression which may decrease wish to obtain fluids
- Cognitive loss so does not recognize need to drink fluids
- Dysphagic; having difficulty swallowing
- Unable to mobilize self and access fluids on own
- MDS CAP will be triggered by change in Functional Status/Cognition/and Mental Health & Social Life as well as Insufficient Fluids

B. Interventions

Individual Resident:

Promotion of maintenance of individual's hydration status:

- Monitor and stabilize chronic diseases
- Review medication profile for health benefits with physician & pharmacist
- Clearly identify if resident is able to feed self or requires assistance
- If assistance is required to feed then appropriate persons are available e.g. to set up tray, family/volunteer to cue and encourage, facility staff to guide utensils or to feed.
- Mouth care provided in AM, PM and if indicated before meals
- Clearly identify dysphagic residents and follow dysphagic protocols:
    - For a resident on thickened fluid diet, consider further dysphagia assessment to develop an individualized care plan to support provision of supplementary thin fluids

  - To minimize risk for aspiration pneumonia ensure thorough mouth care is given prior to offering water.
- Manage pain at a tolerable level so resident is comfortable while eating
- Proper seating is provided so resident is in correct eating and drinking position e.g. in a sitting position with feet on a solid surface, chin parallel to the floor.
- Staff are able to sit to offer food and fluids and are at eye level to the resident thus promoting correct position for swallowing
- Fluids to be offered in an easily held, sturdy, cup throughout the day, before, during and after meals; before or after toileting; while giving medications, during family visits, recreational activities, before settling for a nap or bed and during the night if the person wakens
- Water is the first fluid of choice, then fruit and vegetable juices, milk, soft drinks or gelatin, coffee and tea.
- Identify fluids preferred by the resident, the temperature they prefer, and how they like them presented and build these facts into their daily schedule
- Volunteers and care providers should check with the professional staff or unit system which says which residents can have what type of fluids before giving fluids
- When there is concern for a resident's hydration status have all care providers and visitors record the consumed amounts on a Fluid Intake
- Sheet for 3 days and develop an individualized Care Plan
- Person with volume overload disorders: heart failure, cirrhosis, nephrotic syndrome, will require a conservative fluid replacement plan which will be individually determined by the interdisciplinary care team
- Review the resident care goals when in the last phase of their lives

Facility Hydration Program:

- The facility is to develop strategies to promote fluid intake in all its residents.
- Residents identified as high risk will be identified by a special logo used for this program. The logo can be used in signage that can be placed on doors, ADLs, as well as stickers to be placed on other documents to alert staff.
- When there is a period of prolonged heat please refer to CPD: Heat Stress: Planning For and Preventing in Residents Care for additional recommendations

Availability of fresh water and other fluids

- Review the unit physical lay out and ensure there are water sources available either in the room or within visual range of the room doorway
- Provide fresh water in common areas either from a "water cooler" or water placed in a closed container, preferable with a "spout" for ease of pouring water into a container. This is also easier for those in a wheelchair to access fluids.
- Water left in containers, common areas, hallways, bedside, must be changed regularly (approximately every 6 hours) so it is fresh tasting and cool. It may have a drop of lemon or lime juice to enhance its flavour.
- Some units may have a roving water cart which circulates through the unit at certain times throughout the day. This may be provided by informed volunteers or staff who are aware of which residents are able to drink thin fluids
- During the warm weather other options should be provided such as frozen juice bars to promote increased fluid. (See CPD: Heat Stress: Planning For and Preventing in Residents Care)

Provision for Preferred Temperature and Texture

- There is to be a microwave or kettle available on the unit to be able to offer warm beverages to those who wish it.
- A fridge should be available where residents may keep their personal beverages.
- Preferred beverages should be offered when socializing; group activities, teatime chats, pub nights, hockey night as some examples
- Offer fluid-dense foods e.g. Gelatin, shakes, sherbets, watermelon, berries
- Cups should be in each room. The cup should be sturdy enough for the elderly who have a frail grip to hold
- Elongated straws may assist some residents to access fluids better

Administering Fluids within Daily schedule

- Individual fluid intake should include: 75% delivered at meals and 25% delivered during non-meal times
- All staffs should encourage residents to drink at least 120 - 180 mL before they begin any type of care or treatment. Examples include before AM, PM care, dressing change, exercises or therapeutic activity, before settling
- Those administering medications should stay with a resident while encouraging them to drink 120 mL to 250 mL glass of fluids after medication administration
- Encourage fluids to be consumed that accompany meal tray
- Provide liquids between meals
- Using the Keeping S.A.F.E. Questions ask the resident before leaving the room if they would like anything else including water. – Appendix C
- All drinking items should be within reach for that resident

Recognition of those at High Risk for Dehydration

- Each facility is to have a written plan as to how they will identify and inform all team members when someone has been identified as requiring the minimum fluid intake or encouraged to drink more than their usual for a medical concern
- This identification should be a recognized symbol such as a glass of water, a drop of water, WOW (wonders of water) and is to be used as a reminder to all staffs to offer and encourage the resident to drink fluids. Some may develop stickers that can be easily placed in pertinent locations.
- The logo can be placed beside the persons name in the shift report, on the ADL, care plan and other team communication tools.
- When a person is identified as high risk they should have a Fluid Intake Sheet completed for three days and discussed by the team.

Evaluation of Resident's Hydration Status

- All resident's hydration status is to be assessed and evaluated on admission using the Fluid Intake Sheet and at least quarterly via RAI assessment
- Any one identified as being dehydrated will have their care goals and hydration status reviewed at least weekly including review of the Observation Record, weight and observation of signs of dehydration.
- If they are no longer at high risk or appropriate for intensive monitoring, then the alert logos stickers should be removed from all documentation and the Care Plan is to be updated

Expected Client/Family Outcomes

- Families and supports will be informed of the importance of fluid intake for their resident.
- They will be asked what fluids the resident prefers, temperatures and when they like to receive them
- The family will be encouraged to provide preferred beverages if able and to have a sharing time while encouraging the resident to drink.
- The family may be advised as to how to complete the Fluid Intake Sheet.
- The family will be encouraged to express any concerns they have to a professional team member

Patient/Client/Resident Education

- All residents and supports are to receive information on the importance of promoting fluid intake and symptoms of dehydration.
- Brochure is available – Appendix F

Evaluation

- When initiating this Guideline a Fluid Intake Sheet should be completed on all residents thought to be at high risk for fluid intake – Appendix B
- Review fluid Intake sheets for all new admissions to ensure a plan has been developed to meet their fluid needs
- A Clinical Practice Guideline Audit will be completed on at least 10% of the residents on the unit at least twice a year – Appendix E
- A Clinical Practice Guideline Audit of the physical placements of fluids, types and quality of fluids on the unit will be completed at least twice a year- Appendix E
- Record if there a decrease in the number of Urinary Tract Infections and persons with constipation

Documentation

- All residents identified as High Risk for Dehydration will have a Hydration Program logo beside their name in key documents
- A Fluid Record sheet will be completed for new admissions and when a person has a medical concern
- Preferred type of fluids , temperature and when the resident likes to have these fluids will be indicated on the ADL, e.g. bedtime,
- The Resident's Care Plan will reflect hydration interventions and evaluation dates.
- A Clinical Practice Guideline Audit of the physical placements of fluids, types and quality of fluids on the unit will be completed every 6 months

Related Documents

- Heat Stress: Planning for and preventing in Residential Care
- Continence: Promotion and Maintenance Residential Care:
  - Appendix C: Voiding Record
  - Appendix I: Assessment & Management of Urinary Tract Infection
- Agitation & Excessive Behaviour:
  - Appendix D: Identification of Behaviours and Guidelines for Interventions
  - Appendix E: Behaviour Pattern Record
  - Appendix G: Sleep pattern Record
- Bowel Functioning
  - Appendix E: Fluid Record Sheet
- Hydration Audit Tool – sample – page 48. Found in Davison, Karen and Dominik, Barbara Editors. Audits and More (see references)

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Appendix A: DEFINITIONS

Hydration	State in which the body presently resides: among states of euhydration, hyperhydration, and dehydration. (L. E. Armstrong, (2007). Status: The Elusive Gold Standard. Journal of American College of Nutrition. 26.5 575S – 584S)
Dehydration	Process of uncompensated water loss via urine, swerat, feces, and respiratory vapor; this process reduces total body water below the average basal value. (L. E. Armstrong, (2007). Status: The Elusive Gold Standard. Journal of American College of Nutrition. 26.5 575S – 584S)
Sentinel	"A sentinel event is an unexpected occurrence involving death or serious physical or psychological injury, or the risk thereof. Joint Commission on the Accreditation of Healthcare Organizations [JCAHO) http://medicalexecutivepost.com/2009/01/22/defining-medical-sentinel-events/January 9, 2009. Retrieved April 17, 2010

Appendix B: FLUID INTAKE SHEET

Resident Name: _____Room #: _____ Resident Name: _____Room #: _____

TYPE OF FLUIDS			TYPE OF FLUIDS		
Juice = 114 mL Milk = 120 mL Tetra = 235 mL Soup = 120mL/180mL Small Paper Cup = 120 mL Coffee/Tea = 180 mL Thickened Fluid = 230 mL Tube Feeding = 237 mL (1 can)		Write amount consumed by resident	Juice = 114 mL Milk = 120 mL Tetra = 235 mL Soup = 120mL/180mL Small Paper Cup = 120 mL Coffee/Tea = 180 mL Thickened Fluid = 230 mL Tube Feeding = 237 mL (1 can)		Write amount consumed by resident
DATE:	**DATE:**	**DATE:**	**DATE:**	**DATE:**	**DATE:**
D: 0700-1500	**D: 0700-1500**	**D: 0700-1500**	**D: 0700-1500**	**D: 0700-1500**	**D: 0700-1500**
E: 1500-2300	**E: 1500-2300**	**E: 1500-2300**	**E: 1500-2300**	**E: 1500-2300**	**E: 1500-2300**
N: 2300-0700	**N: 2300-0700**	**N: 2300-0700**	**N: 2300-0700**	**N: 2300-0700**	**N: 2300-0700**
TOTAL mL	**TOTAL mL**	**TOTAL mL**	**TOTAL mL**	**TOTAL mL**	**TOTAL mL**

Appendix C: Keeping SAFE Questions

Appendix D: Audit of Environment Supportive of Hydration Program

To be completed by the Interdisciplinary Team at least every 6 months.
(May & October)

Room Number	Fresh water is in Room or Bathroom which Resident can reach	Fresh water is in hall within visual range of room doorway & in public space	Microwave, kettle available	Clean refrigerator available to store resident's own beverages	Those at high risk for dehydration are Identified with water program Logo	Fluids are observed to be encouraged – during medication administration and in late afternoon

Appendix E: Chart Audit for Hydration: Enhancement of Residents Hydration Status

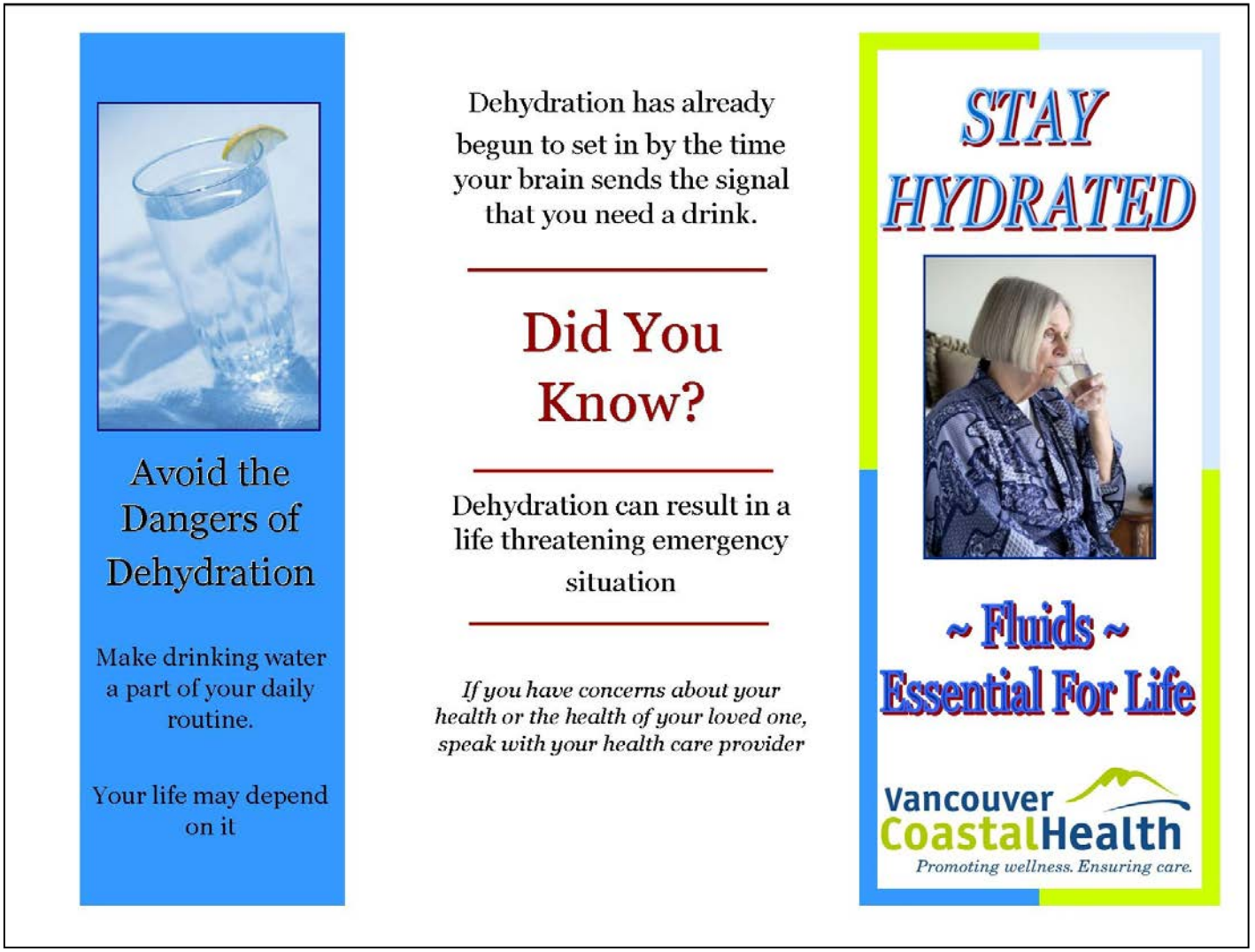
Site:	**Nursing Unit:**												
Signature of Evaluator:	**Reporting Period:**												
Number of charts: 10/unit	**Key: Met = M, Not met = N, Not Applicable = N/A**												
Health Record #											**% M**	**%N**	**% N/A**
Progress Record													
Summary of hydration status on admission, change of condition , before Care Conferences													
Signs of dehydration noted including oral cavity													
Factors contributing to dehydration are stated such as medical condition. medications													
Goal – amount of fluid per shift													
Amount on Fluid Intake Sheet summarized													
Rational for Interventions to increase fluid intake													
Note on identified barriers e.g. ability of person to sit, grasp cup, swallow													
Dietitian consulted													
Fluid Intake Sheet													
Completed for 3 – 5 days													
ADL Sheet													
Indicates when fluids are offered, if special cup holder to be used, temperature of fluid													
Care Plan													
Goal of Fluid Intake & Evaluation date													
Individualized Interventions													
Resident Education Pamphlet													
Educational material provided to resident and supports													
Total													

Total Compliance = **Total Number Met ( ) X 100** **= _____**

Total Number Met + Not Met ( )

Total Number Met + Not Met ( )

Appendix F: Brochure – page 1



Avoid the Dangers of Dehydration

Make drinking water a part of your daily routine.

Your life may depend on it

Dehydration has already begun to set in by the time your brain sends the signal that you need a drink.

Did You Know?

Dehydration can result in a life threatening emergency situation

If you have concerns about your health or the health of your loved one, speak with your health care provider

STAY HYDRATED

~ Fluids ~ Essential For Life

Vancouver CoastalHealth

Promoting wellness. Ensuring care.

Appendix F: Brochure – page 2

People at High Risk for Dehydration:

- Women over the age of 85
- Five or more chronic diseases
- Taking medications that may adversely affect fluid intake
- Inability to feed self
- Pain levels that will decrease the desire drink fluids
- Depression - may decrease desire to drink
- Cognitive loss—inability to recognize need to drink fluids
- Difficulty swallowing and may not wish to take thickened fluids
- Unable to mobilize and access fluids on their own

Vancouver CoastalHealth

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BE SURE TO DRINK
6 GLASSES OF WATER DAILY

Signs & Symptoms of Dehydration:

- Dry mucous membranes, cracked lips, furrowed tongue, decreased salivation
- Changes in skin color, temperature, sensation
- New skin breakdown areas
- Weakness, fatigue
- Change in mental status – dizziness, confusion, delirium
- Rapid weight loss
- Rapid pulse
- Decrease in blood pressure
- Decreased urine output
- Constipation
- Recent fever, heat stress, vomiting

Appendix G: Quick Reference Guide

Early Detection and Prevention of Dehydration in older adults Quick Reference Guide

Clinical signs and symptoms for dehydration are often not present or difficult to detect in older adults.

This document aims to assist in assessment for early detection of dehydration and makes suggestions for implementing preventive measures when older adults are at increased risk of dehydration.

Always consider resident's goals of care when implementing interventions.

Assess for:

1. Precipitating Factors

a. All changes in resident's health status that result in a reduced fluid intake or increase fluid loss put residents at an increased risk for dehydration:
   i. Infection / Fever e.g. flu, UTI, pneumonia
   ii. Diarrhea
   iii. Vomiting
   iv. Excessive sweating
   v. Heat Exhaustion.

b. Other factors that can increase risk of dehydration include:
   i. Poorly controlled Diabetes mellitus
   ii. Diuretics
   iii. Enteral Feeding
   iv. Swallowing problems
   v. Previous history of dehydration
   vi. Cognitive impairment
   vii. Depression
   viii. Physiological / changes caused by aging: decreased thirst, loss of taste, loss of physical independence.

2. Signs and Symptoms in older adults

- ✓ Fatigue
- ✓ Dizziness (particularly on standing up)
- ✓ Increased falls
- ✓ Dark coloured urine with decreased volume especially at night
- ✓ Changes in cognitive status – drowsiness, delirium
- ✓ Worsening of swallowing difficulties

Prevention

Consult Most Responsible Provider (MRP) dietician, occupational therapy, physiotherapy and others as needed.

Interventions	Rationale
Determine resident's favourite beverages, how they like to take these and preferred temperature. Work with Sodexo / Central Food Services (Kitchen) / dietician to provide additional suitable beverages with meal trays e.g.water, juices.	Residents drink more when offered beverages they enjoy. Even an increase in tea will help maintain hydration. Using a preferred glass or cup improves perceived flavour and enjoyment. Bright coloured cups have been shown to increase fluid intake in residents with dementia.
Establish a good drinking routine: • Include beverages with all meals and snacks • Offer additional beverages between meals and snacks • Place beverages in close reach • Encourage visitors and family to assist with beverages • Use social cues – offer residents beverages at the same time • Aim for 1500mls / 8 cups in 24 hours (for residents with a fluid restriction, history of heart failure, renal / liver impairment consult MRP.	Establishing a routine as part of daily care has been shown to decrease dehydration. Drinking regularly and often is the best way to stay hydrated. Offering beverages to residents at the same time can prompt residents with dementia to remember when and how to drink.
Consider beverage alternatives e.g. jello, custard, yogurt, ice cream, soups	These can contribute to fluid intake when residents don't feel like drinking.
Assess and monitor urine output and colour when toileting or when changing incontinence pads.	Concentrated (dark colour and low volume) urine output is suggestive of dehydration. Older adults produce more urine at night: reduced urine out-put at night / dry or light incontinence pads in the morning could be a sign of dehydration.
Medication review by pharmacists /MRP.	Some medications increase risk of dehydration particularly when residents are experiencing diarrhea, vomiting or excessive sweating.
Enteral feeding: increase flush volumes before and after feeds and medications.	The dietician / MRP can calculate increasing requirements and make recommendations on frequency and volume.

What to do if resident is dehydrated, unable to take beverages orally and all preventive measures have been exhausted?

Consider:

1. Goals of care discussion with resident / substitute decision maker / family.
2. Hypodermoclysis [D-00-07-30041]