



# Healthy Hydration

## Evidence-Based Best Practices

### Initial Screening and Care Planning for Hydration: Key Elements

- Complete an initial screening by a nurse for the presence or potential for dehydration on admission.
- Use of a structure screening tool is not required. Screening tools are available (see example on the [QMP website](#)), but no consistent, validated tool exists for use in older adults.[3][15]
- Include the following in the initial screening [1][3][5][9][11][12][14]:
  - ▶ Signs and symptoms of dehydration such as:
    - ◇ Dryness of the skin, hands, armpits, eyes, oral mucosa
    - ◇ Cracked lips
    - ◇ Loss of skin elasticity (poor turgor)
    - ◇ Longitudinal tongue furrows
    - ◇ Difficulty swallowing
    - ◇ Sunken eyes
    - ◇ Pressure injuries
    - ◇ Sleepy or tired
    - ◇ Thirsty
    - ◇ Decreased, concentrated (dark), or absent urine output
    - ◇ Muscle weakness/cramps
    - ◇ Headache
    - ◇ Dizzy or lightheaded
    - ◇ ADL Decline
    - ◇ Change in mental status/increased confusion/agitation
    - ◇ Delirium
    - ◇ Constipation
    - ◇ Postural/orthostatic hypotension
    - ◇ Recent rapid weight loss (3-5 pounds in short time)
    - ◇ Tachycardia (fast heart rate)
    - ◇ Increased concentration of serum sodium and osmolality in the blood
    - ◇ Coma or death
  - ▶ Risk factors such as [1][4][8][9][11][12][13]:

- ◇ Age 85+
  - ◇ Gender: Female
  - ◇ Dependence in activities of daily living (ADLs)
  - ◇ Semi-dependent with eating and drinking (e.g. needs prompting or assist; hand dexterity problems)
  - ◇ Refuses to drink or decreased thirst perception
  - ◇ Impaired cognition/dementia/Alzheimer's Disease
  - ◇ Communication problems
  - ◇ Mental illness
  - ◇ Intellectually or developmentally disabled
  - ◇ Four or more chronic conditions (e.g. stroke, diabetes, renal disease)
  - ◇ Uncontrolled diabetes
  - ◇ Decreased renal function
  - ◇ Four or more medications (e.g. diuretics, laxatives, antipsychotics)
  - ◇ Swallowing difficulty
  - ◇ Use of thickened liquids or therapeutic diets
  - ◇ Enteral nutrition/hydration and/or IV fluids
  - ◇ Infection/fever/vomiting/diarrhea/UTI
  - ◇ Purposeful restriction of fluid intake
  - ◇ Inadequate food or fluid intake
  - ◇ Depression and loneliness
  - ◇ Terminal illness
  - ◇ Lack of family or social support
  - ◇ Environment: Hot weather
  - ◇ Restraints or other environmental factors that may hinder access to fluids
- Develop an initial care plan within 48 hours of admission to address any dehydration, or risks identified in the initial screening/assessment.
  - Include the following in the initial care plan [11][18][19]:
    - ▶ Initial goals based on admission orders
    - ▶ Physician orders
    - ▶ Dietary orders
    - ▶ Food and beverage preferences (if identified)

### **Comprehensive Assessment: Key Elements**

- Complete a comprehensive assessment that includes hydration status on [18]:
  - ▶ Admission (within 14 days)

- ▶ Quarterly
- ▶ Significant Change in Condition (within 14 days)
- Completed assessments should follow federal and state regulations, and long-term care community policies and procedures.
- Include the following to demonstrate the active process of assessing the person’s hydration status:
  - ▶ Health history which may include [2][3][9][10]:
    - ◇ Pertinent diagnoses such as heart failure, diabetes, kidney disease, pulmonary disease, stroke, UTI or pressure injuries
    - ◇ Pertinent conditions such as bariatric surgery, cognitive impairment (dementia/Alzheimer’s Disease), mental illness or intellectually and/or developmentally disabled (IDD)
    - ◇ Past history of dehydration, overhydration, repeated infection, fatigue
    - ◇ Pertinent medications or herbal supplements such as diuretics, laxatives
  - ▶ Physical assessment which may include [2][3][9][10]:
    - ◇ Vital signs
    - ◇ Height and weight; BMI (Body Mass Index) calculated from height and weight with following formula: weight in kg. divided by height in m<sup>2</sup>
    - ◇ Head to toe assessment including the oral cavity, mucous membranes, and skin
    - ◇ Signs/symptoms of dehydration
  - ▶ Laboratory and swallow tests [3][9][10][20]
    - ◇ See lab values in Signs, Symptoms, and Risk Factors for Dehydration in LTC on the [QMP Healthy Hydration](#) web page
    - ◇ Review any recommendations
  - ▶ Functional assessment which may include [2][3][9][10]:
    - ◇ ADLs (ability to drink or care for self)
    - ◇ Presence of depression or cognitive impairment
    - ◇ Consider ability to understand the risks and benefits of food and beverage choices
    - ◇ Consider special needs for those on hospice or palliative care that may have unavoidable dehydration
  - ▶ Personal hydration habits which may include [3][9][10][20]:
    - ◇ Beverage and food preferences
    - ◇ Usual intake
    - ◇ Adequacy of intake including oral (including thickened liquids), enteral (feeding tube), or intravenous (IV)

- ▶ Registered Dietitian’s (RD) nutritional assessment including fluid needs. [3][9][10][21]
  - ◇ Minimum fluid for elderly  $\geq$  1500 ml per day or may be calculated by weight:
    - 25-30 ml fluid/kg body weight
    - 1000 mL fluid for first 10 kg actual body weight
    - +50 mL/kg for next 10 kg actual body weight
    - +15 mL/kg for each additional kg over 20 kg
  - ◇ If underweight, minimum of 1500 ml per day (instead of calculated by weight)
  - ◇ If on an air fluid bed for pressure injuries, may need extra 10-15 ml/kg
  - ◇ If dehydrated, provide 35 ml/kg until rehydrated

### Care Planning: Key Elements

- Develop a comprehensive care plan with the IDT for actual or potential dehydration within [18]:
  - ▶ 21 days after admission (7 days after the comprehensive assessment)
  - ▶ Quarterly
  - ▶ Significant change in condition
- Care plan revision may require a modification in the expected goals, frequency of assessments, physician notification, labs, or other interventions.
- Care plans should follow federal and state regulations, and the long-term care community’s policies and procedures.
- Include the following to demonstrate the active process of care planning for problems or needs related to hydration status [3][9][10][22]:
  - ▶ Problem or need identified through the assessment process
  - ▶ SMART goal = specific, measurable, achievable, relevant, and time-bound
  - ▶ Person-centered interventions
    - ◇ Reflect the person’s needs and preferences
    - ◇ Addresses hydration strategies
    - ◇ Education regarding healthy hydration and interventions to mitigate
    - ◇ Frequency of hydration assessments
    - ◇ When to notify the physician
    - ◇ Examples: 1) Provide at least two 8 oz preferred beverages with meals such as iced tea, fruit punch or coffee; 2) Use verbal prompts to cue Mr. Bolton to drink fluids throughout the day.

- All older persons should be considered to be at risk of low-intake dehydration and have a care plan that encourages or provides adequate amounts of fluids.[20]

### **Outcomes: Key Elements**

- Person-centered interventions identified in the care plan are implemented on a consistent basis
- Effectiveness of those interventions is monitored and evaluated
- Outcomes consistent with evidence-based best practice include the following:
  - ▶ Screening and initial care planning for dehydration or the potential for dehydration was completed within 48 hours of admission
  - ▶ Comprehensive assessment for hydration status was completed within 14 days of admission, quarterly, or with a significant change in condition
  - ▶ Person-centered interventions have been care planned and implemented based on the assessment and identified risk factors
  - ▶ The person's response to the interventions has been monitored.
  - ▶ Interventions are periodically re-evaluated for effectiveness, timing and frequency based on the person's needs
- Not all dehydration is preventable. Maintaining or withholding fluids at the end of life should be based on the etiology of illness, use of medications, presence of delirium and the person's preferences.[3]

### **End-of-Life Care Considerations**

Dehydration may be unavoidable during end-of-life. Withholding versus maintaining fluids when someone is dying is a controversial issue.[3]

- Proponents suggest that dehydration in terminally ill persons is not painful and lessens other complications and uncomfortable symptoms, such as increased respiratory secretions, nausea, and edema.
- Some suggest that dehydration acts as a natural anesthetic and lessens pain at the end of life.
- Opponents argue that associated symptoms of dehydration, such as acute confusion or delirium and dry mouth are stressful and reduce the quality of life for those dying.

- Some literature suggests that artificial hydration prolongs the dying process and the suffering; while other research suggests that artificial hydration does not prolong life.

The person's expressed desire for their care should be the primary guide in decision making. It is recommended that education and discussions with families and residents begin early so that proper person-centered care is planned and provided.

### **Interdisciplinary Team (IDT) Process**

Person-centered interventions require a team approach. The following structural and process elements are important for success in preventing dehydration:

- Clear policies with parameters about hydration management
- Developing interventions related to risk factors
- Referrals to RD when fluid needs are in question
- Develop and identify ideas to improve hydration
- Providing educational materials and in-service training on healthy hydration and/or the risk of dehydration for LTC community staff, families, and those residing in the LTC community
- Using available resources such as those provided on the QMP website, professional journals and other reputable online sites with new study findings and guidance on better ways to promote healthy hydration and manage dehydration

**For reference citations see: [References for Healthy Hydration on the QMP Healthy Hydration web page.](#)**