



TITLE: Prevention of Dehydration in Geriatric Patients in Long-Term Care: Guidelines

DATE: 17 July 2014

RESEARCH QUESTION

What are the evidence-based guidelines regarding the prevention and identification of dehydration in geriatric patients in long-term care?

KEY FINDINGS

Four evidence-based guidelines were identified regarding the prevention or identification of dehydration in geriatric patients in long-term care.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (July 2014, Issue 7), University of York Centre for Reviews and Dissemination (CRD) databases, CINAHL, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, and guidelines. Where possible, retrieval was limited to the human population and English language documents. No date limits were applied. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by based evidence-based guidelines.

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Four evidence-based guidelines were identified regarding the prevention or identification of dehydration in geriatric patients in long-term care. No relevant health technology assessments or meta-analyses were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

Four evidence-based guidelines¹⁻⁴ were identified regarding the prevention or identification of dehydration in geriatric patients in long-term care.

The Hartford Institute for Geriatric Nursing produced guidelines that highlight the importance of identifying acute situations that may lead to dehydration such as episodes of vomiting, diarrhea, and fevers.¹ To assess the risk of dehydration, these guidelines recommend using the Dehydration Appraisal Checklist tool¹ along with identifying physical signs and symptoms, observing both fluid intake and output, and performing tests to assess the blood urea nitrogen/creatinine ratio (BUN/Cr).³ In addition, they recommend that the prevention of dehydration be achieved by maintaining fluid and electrolyte balance through the administration of a minimum of 1,500 to 2,500 mL/day of fluid from food or liquids to adults weighing from 50 to 80 kgs.²

The American Medical Directors Association guidelines on dehydration and fluid maintenance in the long-term care setting⁴ focus on several aspects related to the risk factors associated with the development of dehydration such as altered thirst, decreased cognitive function, increased fluid losses, and limitations in oral intake. These guidelines also list potential indicators of increased dehydration risk, the signs and symptoms requiring the need for clinical evaluation, and the requirement of performing laboratory tests (as a verification measure) as quickly as possible in those suspected of being dehydrated.⁴ Reasonable efforts should be made to prevent dehydration and should include strategies such as, but not limited to, emphasizing the importance of hydration, proper communication, discussing factors responsible for causing dehydration, the management of urinary incontinence, the use of juice carts or frozen juice bars, and swallowing exercises.⁴

REFERENCES SUMMARIZED

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Guidelines and Recommendations

1. Mentes JC. Managing oral hydration. In: Boltz M, Capezuti E, Fulmer T, Zwicker D, editors. Evidence-based geriatric nursing protocols for best practice [Internet]. 4th ed. New York (NY): Springer Publishing Company; 2012. p. 419-38.
http://consultgerirn.org/topics/hydration_management/want_to_know_more
See: Nursing Care Strategies, A. Risk identification, no. 2

Summary available from: <http://www.guideline.gov/content.aspx?id=43929>

2. Smith CM, Cotter V. Age-related changes in health. In: Boltz M, Capezuti E, Fulmer T, Zwicker D, editors. Evidence-based geriatric nursing protocols for best practice [Internet]. 4th ed. New York (NY): Springer Publishing Company; 2012. p. 23-47.
http://consultgerirn.org/topics/normal_aging_changes/want_to_know_more
See: Nursing Care Strategies

Summary available from: <http://www.guideline.gov/content.aspx?id=43916>

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http://consultgerirn.org/topics/delirium/want_to_know_more
See: Parameters of Assessment, A. Assess for risk factors, no. 6
Nursing Care Strategies, B. Eliminate or minimize risk factors, no. 3

Summary available from: <http://www.guideline.gov/content.aspx?id=43920>

4. American Medical Directors Association (AMDA). Dehydration and fluid maintenance in the long-term care setting. Columbia (MD): American Medical Directors Association (AMDA); 2009. 29 p.

Summary available from:

<http://www.guideline.gov/content.aspx?id=15590> [cited 2014 Jul 15]

See: Recognition: Step 1 (Tables 1 & 2), Step 2

Assessment: Steps 3-6

Monitoring and Prevention: Steps 9 and 10

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APPENDIX – FURTHER INFORMATION:

Systematic Reviews and Meta-analyses – Setting Not Specified

5. Hodgkinson B, Evans D, Wood J. Maintaining oral hydration in older adults: a systematic review. *Int J Nurs Pract.* 2003 Jun;9(3):S19-S28.
[PubMed: PM12801253](#)

Structured abstract available from:

<http://onlinelibrary.wiley.com/o/cochrane/cldare/articles/DARE-12001008249/frame.html>
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Non-Randomized Studies

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[PubMed: PM24521507](#)
7. Gaspar PM. Comparison of four standards for determining adequate water intake of nursing home residents. *Res Theory Nurs Pract.* 2011;25(1):11-22.
[PubMed: PM21469538](#)
8. Menten JC, Wang J. Measuring risk for dehydration in nursing home residents: evaluation of the Dehydration Risk Appraisal Checklist. *Research in Gerontological Nursing.* 2011 Apr;4(2):148-56.
[PubMed: PM20509595](#)
9. Holben DH, Hassell JT, Williams JL, Helle B. Fluid intake compared with established standards and symptoms of dehydration among elderly residents of a long-term-care facility. *J Am Diet Assoc.* 1999 Nov;99(11):1447-50.
[PubMed: PM10570686](#)

Clinical or Best Practice Guidelines – Methodology Uncertain

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<http://rgp.toronto.on.ca/torontobestpractice/Policyprocedurehydration.pdf>

Setting or Target Population Not Specified

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Summary available from:

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See: *Physical Assessments, no. 5*
Laboratory Tests
Risk Identification
Ongoing Management of Oral Intake
Evaluation

13. Garcia ME. Dehydration of the elderly in nursing homes. *Nutrition Noteworthy* [Internet]. 2001;4(1). <http://www.escholarship.org/uc/item/0c76r1mb>
 See: *Signs/Symptoms of Dehydration and the Treatment Thereof*
Guidelines for Nursing Homes

Review Articles

14. Menten JC. The complexities of hydration issues in the elderly. *Nutrition Today*. 2013 Jul;48(4):S10-S12.
15. Bratlund CV. Dehydration and dysphagia: challenges in the other adult. (Tutorial). *Journal of Medical Speech-Language Pathology*. 2010 Sep;18(3).
16. Mei A, Auerhahn C. Hypodermoclysis: maintaining hydration in the frail older adult. *Ann Long Term Care*. 2009 May;17(5):28-30.
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[PubMed: PM12520974](#)
18. Kamel HK, Thomas DR, Morley JE. National deficiencies in long-term care: part II. Management of protein energy malnutrition and dehydration. *Ann Long Term Care*. 1998 Jul;6(8):250-8.
19. Weinberg AD, Minaker KL. Dehydration. Evaluation and management in older adults. Council on Scientific Affairs, American Medical Association. *JAMA*. 1995 Nov 15;274(19):1552-6.
[PubMed: PM7474224](#)

Additional References

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See: Section on Hydration