Improving Gut Health, Hydration, and Constipation Prevention in Elderly Long-Term Care Residents

Mendi Adeline Mbuan, DNP, FNP Student

Doctor of Nursing Practice Scholarly Project

Nebraska Methodist College

Faculty Advisor:

Dr. Devon Wilhelm-McMullen, DNP, FNP-C

July 2026

NEBRASKA METHODIST COLLEGE
The Josie Harper Campus

ACKNOWLEDGEMENTS

- I would like to express sincere appreciation to:
- Almighty God for His grace and guidance
- N. M. C. Administration & Faculty Members for their mentorship and support
- Faculty and Co-author Dr. Devon Wilhelm-McMullen for her invaluable guidance
- R.C. Medical Lodge Administration, Staff, and interdisciplinary team for support. Residents and their families for their participation
- My husband Sulesco Mbuan, My Four Kids, Mom Mefah Ndichafah Chritiana, My Siblings-especially Sis. Daphne Joyner, Other Family and Friends, for their unwavering encouragement, prayers and support.

PROBLEM

Background : Constipation and dehydration remain common but preventable complications among older adults residing in long-term care facilities.

Problem

- Contributing factors include reduced thirst, limited mobility, cognitive impairment, polypharmacy, and low fiber intake.
- Practice gaps included inconsistent hydration monitoring, bowel documentation, and preventive care.
- These gaps increased discomfort, complications, UTI, falls and avoidable hospital transfers.

PURPOSE

- Improve hydration among elderly LTC residents.
- Promote gut health and bowel regularity.
- Reduce constipation and reliance on PRN laxatives.
- Improve staff knowledge and adherence to evidence-based hydration and bowel-care practices.
- Support sustainable integration of preventive care into routine LTC practice.

AVAILABLE KNOWLEDGE

- Current evidence supports structured, multidisciplinary interventions to improve hydration and bowel health among older adults. Research demonstrates that:
- Aging increases vulnerability to dehydration and constipation.
- Hydration, fiber, mobility, and routine bowel monitoring support gastrointestinal health.
- Staff education and standardized documentation improve adherence to preventive care.
- Current evidence supports multicomponent interventions to be more effective than isolated strategies in preventing constipation and improving resident outcomes in LTC settings.

RATIONALE

Lewin's Change Theory provided the framework for implementing sustainable practice change.

- **Unfreezing** : Identified practice gaps and prepared staff for change.
- **Changing** : Implemented education, hydration logs, bowel monitoring, and fiber-supportive strategies.
- **Refreezing** : Integrated new practices into routine workflow and documentation.

Why it fit: The model supported staff engagement, structured implementation, and sustainability.

METHODS

Context

- Suburban LTC facility in North Texas with residents total between 100-120
- 15 eligible residents participated in a Six-week quality improvement project

Intervention

- Staff education
- Daily hydration logs
- Bristol Stool Form Scale (BSFS)
- Hydration prompts & fiber-supportive strategies

Study of the Intervention

- Pre-/post-intervention design
- Weekly monitoring of resident outcomes
- Pre-/post-staff knowledge surveys

DATA ANALYSIS

Measures

- Hydration intake & hydration goal (%)
- Weekly bowel movements
- Days since last bowel movement
- PRN laxative use
- Staff knowledge

Analysis

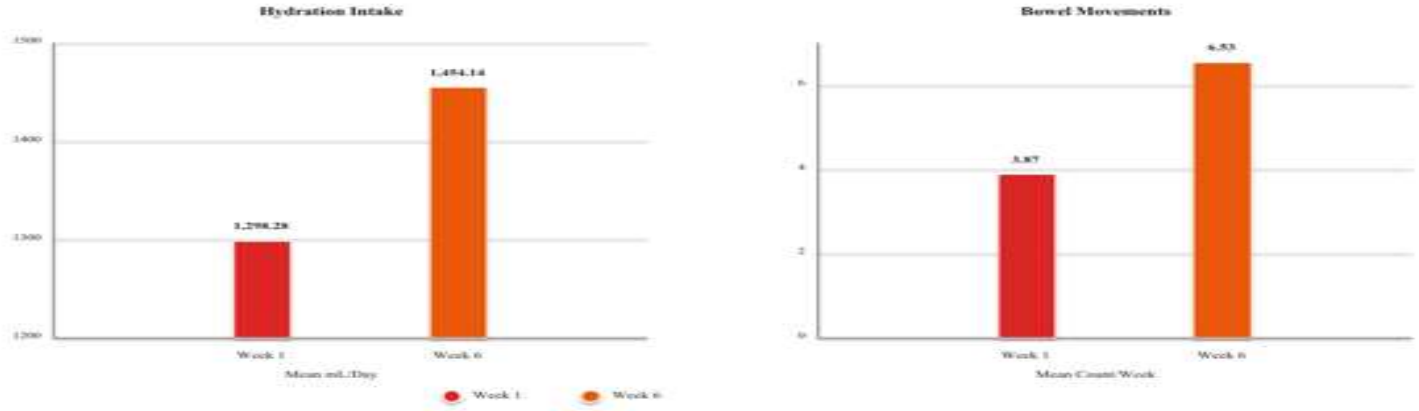
- Descriptive statistics
- Paired-samples *t*-tests
- Statistical sign

RESULTS

- The intervention produced significant improvements in resident hydration and bowel outcomes:
- **Hydration intake** increased from **1,298 to 1,454 mL/day** ($p < .001$).
- **Hydration goal achievement** improved from **86.6% to 97.0%** ($p < .001$).
- **Weekly bowel movements** increased from **3.87 to 6.53** ($p < .001$).
- **Days since last bowel movement** decreased significantly.
- **Staff knowledge and hydration/bowel monitoring practices** improved following the intervention

Figure 3

Pre/Post Comparison of Key Outcomes (Week 1 vs. Week 6)



Note. Values represent pre- and post-intervention mean outcomes across 15 residents.

DISCUSSION

- **Interpretation**
- The intervention significantly improved hydration and bowel regularity among LTC residents.
- Findings are consistent with current evidence supporting structured hydration, bowel monitoring, staff education, and non-pharmacological constipation prevention.
- Standardized documentation and interdisciplinary collaboration enhanced implementation and sustainability.
- Despite staffing and workflow challenges, the intervention was feasible and easily integrated into routine LTC practice.

CONCLUSIONS

- The evidence-based intervention improved hydration, bowel regularity, and staff knowledge.
- Standardized hydration and bowel-care practices can be successfully integrated into routine LTC nursing care.
- Leadership support, staff education, and continuous monitoring are essential for sustaining practice change.
- Similar interventions may improve resident outcomes and reduce preventable complications across other LTC facilities.

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