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Adherence to Clean Intermittent Catheterization Treatment in Pediatric Patients: A Comprehensive Review of Literature

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PATIENT CARE ISSUE

Background & Significance:

- ✦ Clean Intermittent Catheterization (CIC) was first introduced by Lapedes et al. in 1972 and has revolutionized management of voiding dysfunction through decreasing urological complications (10).
- ✦ CIC is an invasive procedure where a clean catheter is introduced into the bladder in order to empty it. The procedure can be done by the patient or caregiver and is usually performed 4-5 times a day.
- ✦ “The World Health Organization defines adherence as the extent of which a person’s behavior corresponds with agreed recommendations from a health care professional” (10).
- ✦ Non-adherence to CIC causes many urological complications, including UTIs, epididymitis, and decreasing renal function (2,3).

EVIDENCE-BASED PRACTICE QUESTION

Question: What barriers prevent adherence to CIC in pediatric patients?

- P-** Population is pediatric patients who utilize CIC
I- Intervention is to promote adherence to CIC
C- Comparison of interventions reveals: that barriers should be acknowledged and appropriate interventions should be preformed by nurses
O- Outcome desired is adherence to CIC

REGISTERED NURSE INTERVIEW

Pediatric charge nurse at The Children’s Medical Center of Dayton discussed:

- ✦ Self-catheterization encouraged in children of appropriate age and developmental stage
- ✦ Discharge teaching papers given to patients and caregivers
- ✦ Good hygiene encouraged with CIC
- ✦ Instructional DVDs available

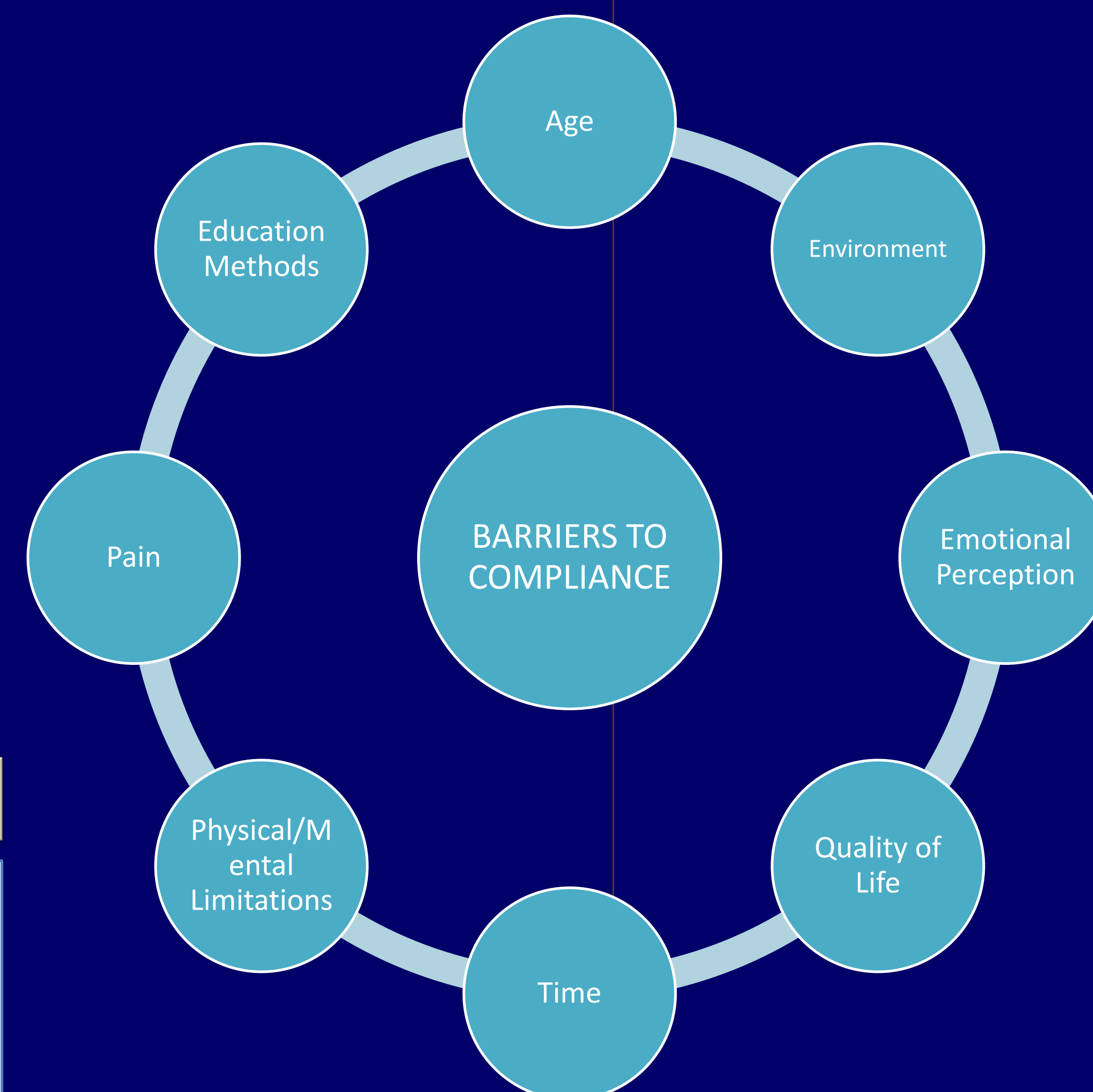
METHODS

- ✦ CINAHL and PubMed
- ✦ 83 articles total, 11 articles used
- ✦ Inclusion: CIC, quality of life for CIC patients, all ages
- ✦ Exclusion: technical aspects of CIC, not focused on patient experience
- ✦ Limits: published between 2007-2012, full-text articles, articles in English
- ✦ Keywords: urinary catheterization, clean intermittent catheterization, pediatric, adherence, and CIC

RESULTS

Our review suggests that there are many barriers to adherence to CIC. The nursing intervention that can have the most positive impact on CIC adherence is individualized education that addresses the named barriers.

SYNTHESIS OF EVIDENCE



- ✦ **Age:** decreased adherence with adolescence (3)
- ✦ **Environment:** decreased adherence with inadequate facilities and difficulty carrying equipment (9,11)
- ✦ **Emotional Perception:** decreased adherence with fear of UTI's, pain, and social stigma (7,9,10)
- ✦ **Quality of Life:** decreased adherence when CIC is perceived as diminishing quality of life (2,4)
- ✦ **Time:** decreased adherence with altered daily routines (9)
- ✦ **Physical/Mental Limitations:** decreased adherence with difficulty in mastering skills (6,10)
- ✦ **Pain:** decreased adherence with pain upon catheterization (11)
- ✦ **Education Methods:** decreased adherence with poor CIC education (1,5,6,8,10)

EVIDENCE-BASED PRACTICE RECOMMENDATIONS

In order to improve and maintain adherence to CIC in pediatric patients, the nurse should recognize and manage potential barriers to CIC according to each patient’s need. Individualized education should address all applicable barriers and include possible solutions. However, more research at the experimental level is necessary.

LIMITATIONS

There were few studies done for the pediatric population, so while aspects of the adult studies can be applied to our population, they should be applied conservatively.

REFERENCES

1. Cobussen-Boekhorst, H.J., et al. (2010). Teaching children clean intermittent self-catheterization (CISC) in a group setting. *Journal of Pediatric Urology*, 6(3), 288-293.
2. Girotti, M.E., et al. (2011). Determining the variables associated to clean intermittent self-catheterization adherence rate: one-year follow-up study. *International braz j urol : official journal of the Brazilian Society of Urology*, 37(6) 766-72.
3. Holmdahl, G., et al. (2007). Self-catheterization during adolescence. *Scandinavian Journal Of Urology And Nephrology*, 41(3), 214-217.
4. Kessler, T.M., Ryu, G., & Burkhard, F.C. (2009). Clean intermittent self-catheterization: a burden for the patient? *Neurourology and Urodynamics*, 28(1), 18-21.
5. Le Breton, F., et al. (2012). Therapeutic education and intermittent self-catheterization: recommendations for an educational program and a literature review. *Annals of physical and rehabilitation medicine*, 55(3), 201-212.
6. Logan, K., Shaw, C., Webber, I., Samuel, S., & Broome, L. (2008). Patients' experiences of learning clean intermittent self-catheterization: a qualitative study. *Journal of Advanced Nursing*, 62(1), 32-40. doi:10.1111/j.1365-2648.2007.04536.x
7. Neel, K. (2010). Feasibility and outcome of clean intermittent catheterization for children with sensate urethra. *Canadian Urological Association Journal*, 4(6), 403-405.
8. Neel, KF., et al. (2008). Acceptance and compliance of clean intermittent catheterization among Saudi patients. *Saudi Medical Journal*, 29(7), 1014-1017.
9. Shaw, C., Logan, K., Webber, I., Broome, L., & Samuel, S. (2008). Effect of clean intermittent self-catheterization on quality of life: a qualitative study. *Journal Of Advanced Nursing*, 61(6), 641-650. doi:10.1111/j.1365-2648.2007.04556.x
10. van Achterberg, T., Holleman, G., Cobussen-Boekhorst, H., Arts, R., & Heesakkers, J. (2008). Adherence to clean intermittent self-catheterization procedures: determinants explored. *Journal Of Clinical Nursing*, 17(3), 394-402.
11. Wilde, M. H., Brasch, J., & Yi, Z. (2011). A qualitative descriptive study of self-management issues in people with long-term intermittent urinary catheters. *Journal Of Advanced Nursing*, 67(6), 1254-1263. doi:10.1111/j.1365-2648.2010.05583.x