

Best Evidence Statement (BESt)

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Topic and/or question as originally asked Among pediatric nurses engaged in the patient discharge process does the use of a formal education plan versus an informal education plan improve the patient/family satisfaction, safety, and timely discharge?

Clinical Question

P (population/problem)	Pediatric nurses engaged in discharge process.
I (intervention)	Formal Education plan.
C (comparison)	Informal education plan.
O (outcome)	Improve patient/family satisfaction, safety, and timely discharge.

Target Population: Pediatric nurses engaged in patient discharge.

Definition of:

Informal Education Plan: The unstructured, unscheduled, random bedside opportunity for education, used to teach patients and caregivers the patient's needs.

Formal Education Plan: Structured, scheduled education, with tool or check off, at bedside or other location used to teach patients and caregivers the patient's needs.

Recommendation(s) (See Table of Recommendation Strength following references)

1. It is recommended that, a formal education plan be utilized with caregivers to learn the care required for their child. (*Gibson 1992 [2a], Gregor 2001 [2b], Habich 2006 [5], London 2004 [5], Moller 2005 [2a], Parker 2002 [2b], Marten 1998 [2b], Theis 1995 [1a], Weiss 2008 [4a]*).
 - Methods to support a formal educational plan:
Written tool/ checklist to guide education plan
 1. Effective learning activities and instructional media (*Theis1995[1a]*)
 - a. Demonstration
 - b. Independent study as an adjunct to demonstration.
 - c. Audio tapes and computer-assisted instruction
 - d. Written educational materials to support demonstration.
2. It is recommended that informal education is needed to reinforce formal education at the bedside (*Habich 2006 [5], Gregor 2001 [2b], London 2004 [5], Theis 1995 [1a]*).

Relevant CCHMC policies/procedures

I-219 Child/Adolescent and Family Education 8-7-2008

V-205 Patient/Family Education 4-1-2006

V-206 Discharge Planning 3-26-2009

IP-B04 Patient and Family Education 9-7-2007

Discussion/summary of evidence

There is good evidence that a formal education plan can improve retention of learning and decrease infections (*Gibson 1992 [2a], Moller 2005 [2a]*).

There is no evidence regarding measured patient/family satisfaction or timeliness of discharge in relation to discharge education plans. There is a study that addresses parent perception of discharge readiness in which the predictor is the delivery of discharge teaching (*Weiss 2008[4a]*).

Methods to support formal education included in structured learning are: multi-media methods of education, oral & written instruction, demonstration, and reinforcement (*Gibson 1992 [2a], Moller 2005 [2a], Parker 2002 [2b], Gregor 2001 [2b], Marten 1998 [2b], Theis 1995 [1a]*).

Informal education is still needed to reinforce the formal education at the bedside (*Habich 2006 [5], Gregor 2001 [2b], London 2004 [5], Theis 1995 [1a]*).

Health Benefits, Side Effects and Risks

With formal education, health risks are decreased, such as central venous catheter related infections, and knowledge deficit regarding infant feeding. (*Gibson 1992 [2a], Moller 2005 [2a]*).

References/citations

- Gibson, L. (1995). Practice applications of research. Patient education: Effects of two teaching methods upon parental retention of infant feeding practices. *Pediatric Nursing, 21*(1), 78-80. [2a]
- Gregor, F. M. (2001). Nurses' informal teaching practices: Their nature and impact on the production of patient care. *International Journal of Nursing Studies, 38*(4), 461-470. [2b]
- Habich, M. (2006). Establishing a standard for pediatric inpatient diabetes education. *Pediatric Nursing, 32*(2), 113. Level [5]
- London, F. (2004). How to prepare families for discharge in the limited time available. *Pediatric Nursing, 30*(3; 3), 212-227. [5]
- Martens, K. H. (1998). An ethnographic study of the process of medication discharge education (MDE). *Journal of Advanced Nursing, 27*(2; 2), 341-348. [2b]
- Møller, T., Borregaard, N., Tvede, M., & Adamsen, L. (2005). Patient education -- a strategy for prevention of infections caused by permanent central venous catheters in patients with haematological malignancies: A randomized clinical trial. *Journal of Hospital Infection, 61*(4), 330-341. [2a]
- Parker, E. D. (2002). Integrating patient teaching into bedside patient care: A participant-observation study of hospital nurses. *Patient Education & Counseling, 48*(2), 107-113. [2b]

Theis, S. L., & Johnson, J. H. (1995). Strategies for teaching patients: A meta-analysis. *Clinical Nurse Specialist: The Journal for Advanced Nursing Practice*, 9(2), 100. [1a]

Weiss, M., Johnson, N. L., Malin, S., Jerofke, T., Lang, C., & Sherburne, E. (2008). Readiness for discharge in parents of hospitalized children. *Journal of Pediatric Nursing*, 23(4), 282-295. [4a]

Note: Full tables of evidence grading system available in separate document:

- [Table of Evidence Levels of Individual Studies by Domain, Study Design, & Quality](#) (abbreviated table below)
- [Grading a Body of Evidence to Answer a Clinical Question](#)
- [Judging the Strength of a Recommendation](#) (abbreviated table below)

Table of Evidence Levels (see note above)

<i>Quality level</i>	<i>Definition</i>
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain
4a or 4b	Weak study design for domain
5	Other: General review, expert opinion, case report, consensus report, or guideline

†a = good quality study; b = lesser quality study

Table of Recommendation Strength (see note above)

<i>Strength</i>	<i>Definition</i>
“Strongly recommended”	There is consensus that benefits clearly outweigh risks and burdens (or visa-versa for negative recommendations).
“Recommended”	There is consensus that benefits are closely balanced with risks and burdens.
No recommendation made	There is lack of consensus to direct development of a recommendation.

Dimensions: In determining the strength of a recommendation, the development group makes a considered judgment in a consensus process that incorporates critically appraised evidence, clinical experience, and other dimensions as listed below.

1. Grade of the Body of Evidence (see note above)
2. Safety / Harm
3. Health benefit to patient (*direct benefit*)
4. Burden to patient of adherence to recommendation (*cost, hassle, discomfort, pain, motivation, ability to adhere, time*)
5. Cost-effectiveness to healthcare system (*balance of cost / savings of resources, staff time, and supplies based on published studies or onsite analysis*)
6. Directness (*the extent to which the body of evidence directly answers the clinical question [population/problem, intervention, comparison, outcome]*)
7. Impact on morbidity/mortality or quality of life

Supporting information

Introductory/background information

Cincinnati Children’s Hospital, as a regional center of care for many critically and chronically ill children, discharges children on a daily bases with multiple medical needs. Caregivers are then required to care for these needs at home or at a local hotel. Inconsistencies in patient/caregiver education were noted with the discharge of a complex medical patient, whose parents did not speak English. The discharge was delayed due to safety concerns stemming from lack of caregiver knowledge. The question was asked, if a formal

education plan was in place, would this create a more safe discharge, improved patient family satisfaction, and a more timely discharge to home.

Group/team members

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Search strategy

1. DATABASES

X OVID MEDLINE X Ebscohost CINAHL
X OVID EBM Reviews (Cochrane) X PubMed Clinical Queries
X other (specify)
Google scholar, Scopus, Listserv through NACHRI

2. SEARCH TERMS

Education plan, pediatric nurse, transition hospital to home, patient education, consistent education, nurse to patient education, structured education, discharge education, bedside education, and formal education.

Applicability issues (optional)

Outcomes can be measured in various ways. For instance, if a child goes home with a central access device, infections can be monitored (skin or blood stream) to improve safety. Readmissions due to caregiver misunderstanding should be counted. Timeliness of discharge with a formal education plan can be monitored.

Implementation tools need to be developed to ensure all caregivers know the plan. Formal education plans and tools (written hand outs, videos, and hands on education opportunities for caregivers) need to be developed. Informal bedside education should continue to be used to reinforce the formal education. Health care workers need to be given time and support to set up and carry out the formal education plan.

Barriers to application are time and resources for the development of tools, plans and measurement of outcomes. Other barriers include the cost of personnel responsible for creating the formal education plan, and accountability of teams responsible for implementing the plan (medical, nursing and family).

Copies of this Best Evidence Statement (BESt) are available online and may be distributed by any organization for the global purpose of improving child health outcomes. Website address: <http://www.cincinnatichildrens.org/svc/alpha/h/health-policy/ev-based/default.htm>

Examples of approved uses of the BESt include the following:

- copies may be provided to anyone involved in the organization's process for developing and implementing evidence based care;
- hyperlinks to the CCHMC website may be placed on the organization's website;
- the BESt may be adopted or adapted for use within the organization, provided that CCHMC receives appropriate attribution on all written or electronic documents; and
- copies may be provided to patients and the clinicians who manage their care.

Notification of CCHMC at HPCEInfo@cchmc.org for any BESt adopted, adapted, implemented or hyperlinked by the organization is appreciated.

Additionally for more information about CCHMC Best Evidence Statements and the development process, contact Center for Professional Excellence/Research and Evidence-based Practice office at CPE-EBP-Group@chmcc.org.

Note

This Best Evidence Statement addresses only key points of care for the target population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Best Evidence Statement does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure.

Reviewed by Center for Professional Excellence *or* Clinical Effectiveness