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Communication of health care information to patients and caregivers using multiple means¹

Clinical Question

- P (population/problem) In children 6-18 years old and their caregivers who are referred to OT/SLP within inpatient psychiatry
- I (intervention) does communication through written information
- C (comparison) versus verbal information
- O (outcome) improve health literacy and understanding of discharge recommendations

Target Population

Children 6-18 years old and their caregivers who are referred to OT/SLP within inpatient psychiatry

Recommendation (See Table of Recommendation Strength following references)

It is recommended that healthcare professionals communicate health care information to patients and caregivers using multiple means (*Johnson 2005 [1b], Hill 2003 [2a], Hatonen 2010 [4b], Akkuzu 2009 [4b], Huang 2002 [4b], Houts 2001 [4b], Jonas 2000 [4b], Murphy 2000 [4b], Watson 1983 [4b]*).

Note: Considerations need to be taken when providing written and/or verbal information to improve health literacy and understanding. This includes:

- standardization of verbal and written discharge information (*Isaacman 1992 [2a]*)
- appropriate use of literacy levels for the intended audience (*Akkuzu 2009 [4b], Houts 2001 [4b], Jonas 2000 [4b], Murphy 2000 [4b]*)
- limited use of medical terminology (*Akkuzu 2009 [4b]*)
- using a concise style of communication, such as use of active versus passive voice, clearly emphasizing main points, and avoiding long sentences (*Akkuzu 2009 [4b]*).
- appropriate and selective use of visual aids, including but not limited to pictographs (*Akkuzu 2009 [4b], Houts 2001 [4b]*), PowerPoint (*Patel 2008 [4a]*), and video (*Murphy 2000 [4b]*).

Discussion/summary of evidence

The search did not provide literature specific to this population. Thus the recommendation is based on indirect evidence related to verbal and written communication and its effects on improving health literacy and understanding.

When comparing written versus verbal information the review of evidence did not indicate that either method was more effective in increasing understanding and health literacy. This review produced a moderate body of evidence with consistent findings that support the communication of information to patients and caregivers through multiple means, primarily a combination of written and verbal information. This body of evidence consisted of nine studies; consisting of varying strengths of evidence and one systematic review.

¹ Please cite as Tomawis, L., Carter, M., Carvitti, L., Frost, T., Girtten, D., McCormick, K., Nelson, A., Schnieber, S., Schwendeman, M., Weber, B. Cincinnati Children's Hospital Medical Center: Best Evidence Statement for Communication of Information to Patients and Caregivers Using Multiple Means, <http://www.cincinnatichildrens.org/svc/alpha/h/health-policy/best.htm>, BES t#096 pages 1 to 5, 5-12-11.

Several studies indicate that a combination of information provision supports higher levels of understanding (Johnson 2005 [1b], Hill 2003 [2a], Jonas 2000 [4b], Watson 1983 [4b]). In one study, the provision of written and verbal information together demonstrated that parent understanding of medical and diagnostic information was equal to a professional's understanding of the same information (Watson 1983 [4b]). Further support is provided by studies which demonstrate that utilization of a single modality (written only) was not as effective in increasing understanding (Patel 2008 [4a], Hatonen 2010 [4b], Huang 2002 [4b]).

Additional studies identify other means of providing information to caregivers and patients as beneficial to increasing understanding. For example, one study used pictographs to enhance recall of medical information (Houts 2001 [4b]), one supplemented written information with videos (Murphy 2000 [4b]) and a third used PowerPoint and found it to be a preferred method of education for retention of information (Patel 2008 [4a]). Each study measured increased understanding of educational health information with the use of multiple versus single modalities.

Health Benefits, Side Effects and Risks

- The potential benefits to using multiple means of communication of healthcare information are decreased re-admission; decreased recovery time; increased confidence in self-care; increased satisfaction of services; increased knowledge of information (Johnson 2005 [1b]); increased recall (Patel 2008 [4a], Houts 2001 [4b]); increased adherence to recommended care (Johnson 2005 [1b], Hill 2003 [2a]).
- Failure to consider individual needs of patients and caregivers (reading levels and education) has a potential risk for decreased understanding (potentially overwhelming and/or inappropriately matched to needs) (Hatonen 2010 [4b]).
- Providing information using a single modality of communication may result in a lack of understanding the provided information.

References (evidence grade in []; see Table of Evidence Levels following references)

Note: When using the electronic version of this document,  indicates a hyperlink to the PubMed abstract. A hyperlink following this symbol goes to the article PDF when the user is within the CCHMC network.

1. **Akkuzu, G.; Arslantas, S.; Kosker, S. B.; and Sen, S.:** Evaluation by patients and caregivers of the effectiveness of a brochure developed to prevent pressure ulcers. *J Wound Ostomy Continence Nurs*, 36(6): 610-5, 2009, [4b]  [_____](#)
2. **Hatonen, H.; Suhonen, R.; Warro, H.; Pitkanen, A.; and Valimaki, M.:** Patients' perceptions of patient education on psychiatric inpatient wards: a qualitative study. *J Psychiatr Ment Health Nurs*, 17(4): 335-41, 2010, [4b]  [_____](#)
3. **Hill, J., and Bird, H.:** The development and evaluation of a drug information leaflet for patients with rheumatoid arthritis. *Rheumatology (Oxford)*, 42(1): 66-70, 2003, [2a]  [_____](#)
4. **Houts, P.; Witmer, J.; Egeth, H.; Loscalzo, M.; and Zabora, J.:** Using pictographs to enhance recall of spoken medical instructions II. *Patient Education and Counseling*, 43(3): 231-242, 2001, [4b]  [_____](#)
5. **Huang, M. C.; Liu, C. C.; Chi, Y. C.; Thomas, K.; and Huang, C. C.:** Effects of educational intervention on changing parental practices for recurrent febrile convulsions in Taiwan. *Epilepsia*, 43(1): 81-6, 2002, [4b]  [_____](#)
6. **Isaacman, D. J.; Purvis, K.; Gyuro, J.; Anderson, Y.; and Smith, D.:** Standardized instructions: do they improve communication of discharge information from the emergency department? *Pediatrics*, 89(6 Pt 2): 1204-8, 1992, [2a]  [_____](#)
7. **Johnson, A., and Sandford, J.:** Written and verbal information versus verbal information only for patients being discharged from acute hospital settings to home: systematic review. *Health education research*, 20(4): 423, 2005, [1b]  [_____](#)
8. **Jonas, D., and Worsley-Cox, K.:** Information giving can be painless. *J Child Health Care*, 4(2): 55-8, 2000, [4b]  [_____](#)
9. **Murphy, P. W.; Chesson, A. L.; Walker, L.; Arnold, C. L.; and Chesson, L. M.:** Comparing the effectiveness of video and written material for improving knowledge among sleep disorders clinic patients with limited literacy skills. *South Med J*, 93(3): 297-304, 2000, [4b]  [_____](#)
10. **Patel, J. H.; Moles, D. R.; and Cunningham, S. J.:** Factors affecting information retention in orthodontic patients. *Am J Orthod Dentofacial Orthop*, 133(4 Suppl): S61-7, 2008, [4a]  [_____](#)
11. **Watson, B., and Thompson, R.:** Parents' perception of diagnostic reports and conferences. *Language, Speech, and Hearing Services in Schools*, 14(2): 114, 1983, [4b]  [_____](#)

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 or 5a or 5b	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

This clinical question was selected by the Occupational Therapy and Speech Pathology Evidence-based Practice (EBP) team due to its relevance in a psychiatric setting. Occupational therapists and speech and language pathologists administer developmental screens, tests, and assessments and identify deficits that impact the functioning in age-appropriate daily activities. Both agreed that conveying this information to patients and caregivers was imperative. It was also agreed that many methods of providing this information were currently being used. The PICO question was selected to determine which methods of providing health information to patients and caregivers was best in order to maximize understanding and adherence within pediatric psychiatric population.

BEST Development Team [Team members and Contributors]:

Lindy Tomawis, MOT, OTR/L, Team Leader, Division of Occupational and Physical Therapy
Mallory Carter, MS, CCC-SLP, Division of Speech Pathology
Lisa Carvitti, MOT, OTR/L, Division of Occupational and Physical Therapy
Tabetha Frost, MS, OTR/L, Division of Occupational and Physical Therapy
Dawn Girten, MA, CCC-SLP, Division of Speech Pathology
Katherine McCormick, MOT, OTR/L, Division of Occupational and Physical Therapy
April Nelson MA, CCC-SLP, Division of Speech Pathology
Sarah Schnieber, MS, CCC-SLP, Division of Speech Pathology
Matthew Schwendeman, OTR/L, Division of Occupational and Physical Therapy
Brigid Weber, MOT, OTR/L, Division of Occupational and Physical Therapy

Senior Clinical Directors

Rebecca D. Reder OTD, OTR/L, Division of Occupational Therapy and Physical Therapy
Ann W. Kummer, PhD, CCC-SLP, ASHA-F, Division of Speech Pathology

Ad Hoc Members

Erin Redle, Ph.D, CCC-SLP, Division of Speech Pathology

James M. Anderson Center for Health Systems Excellence

Karen Vonderhaar, MS, RN, Methodologist, Guidelines Program Administrator
Alison Kissling, BA, MLIS, Pratt Library

CCHMC Reviewer(s):

Shelley Goldman, RN, BSN, LICDC, Child and Adolescent Services
Joan Morgan, MSHA, MBA, RN, Patient/Family Education Center for Professional Excellence/Education

Ad hoc Advisors

Mary Gilene, MBA, Division of Occupational Therapy and Physical Therapy
Michelle Kiger, OTR/L, Division of Occupational Therapy and Physical Therapy

All Team Members and Anderson Center support staff listed above have signed a conflict of interest declaration, and no conflicts of interest were found.

Search strategy

Search Engines, Databases and Web Sources: OVID Medline, OVID Cinahl, Cochrane Database of Systematic Reviews, PubMed Clinical Queries, The Academic Center for Evidence-Based Practice, American Occupational Therapy Association, Clinically Appraised Topics (CAT) Banks, Center for Evidence-based Medicine, Evidence-Based Occupational Therapy Web Portal, National Guideline Clearinghouse, OT Seeker, PEDro, University of Michigan Department of Pediatrics-Evidence-Based Pediatrics Website.

Search Terms: health literacy, client education, verbal information, patient education, patient discharge, written education, pamphlets, information dissemination, verbal, written, health education, verbal learning, communication, health knowledge, parents education, caregivers/or caregiver education, written education, written information, mental health services, client education, discharge,

Search Limits: The initial search was conducted with the following limitations: English language, year 2000-2010, child (6 to 12 years), adolescent (13 to 18 years). An additional search removed age limitations in order to find more information (little information was revealed during initial searches with these limitations).

Relevant policies, procedures, and guidelines

Chronic Care: Self-Management Evidence-Based Care Guideline

Developing Patient and Family Education Materials: A Guide for CCHMC Staff

Applicability issues

Barriers to applying these concepts in practice may be lack of access to standardized written materials and lack of training for professionals regarding how to best communicate information to patients and caregivers (addressing educational levels, appropriate language, in person/over the phone conversations, etc.)

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.

For more information about CCHMC Best Evidence Statements and the development process contact. Division of Occupational Therapy and Physical Therapy at: 513-636-4651 or OTPT@cchmc.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 against quality criteria by 2 independent reviewers.