

Date: May 10, 2013

Title: Support from Bedside Nurses for Caregivers of Children Newly Diagnosed with Type 1 Diabetes Mellitus

Clinical Question:

- P (*Population/Problem*) Among caregivers of children newly diagnosed with type 1 diabetes mellitus (T1DM) with or without incidence of diabetic ketoacidosis (DKA)
- I (*Intervention*) does provision of diabetes self-care management skills (“survival skills”*), comforting presence, and reassurance from the bedside RN
- O (*Outcome*) promote perceived emotional support* of caregivers by the bedside RN
- T (*Time*) at the time of diagnosis?

[Definitions for terms marked with * may be found in the Supporting Information section.](#)

Target Population for the Recommendation:

Caregivers of children receiving inpatient care, aged 12 months to 18 years, newly diagnosed with T1DM with or without incidence of DKA.

Recommendation:

It is recommended that caregivers of children newly diagnosed with T1DM, with or without incidence of DKA, receive diabetes education, demonstration of diabetes care skills, comforting presence, and reassurance from inpatient nursing staff (Schmidt, Bernaix, Chiapetta, Carroll, & Beland, 2012 [4a]; Evidence-Based Care Guideline Chronic Care: Self-Management, 2007 [5a]; Modi et al., 2011 [5a]).

Discussion/Synthesis of Evidence related to the recommendation:

The diagnosis of T1DM in children has been described by their caregivers as, “overwhelming” and “heartbreaking,” (Schmidt et al., 2012[4a]) and a time of crisis. According to Schmidt et al., (2012[4a]), caregivers delineated four actions by bedside nurses that were perceived as emotionally supportive and educational during their hospitalization at diagnosis; provision of knowledge, skill demonstration, comforting presence, and reassurance for long term quality of life. When working with a bedside RN that incorporated these four actions into their care delivery, caregivers reported feeling empowered and more confident in the management of their child’s blood glucose levels and insulin administration outside of the hospital (Schmidt et al., 2012[4a]).

In order for families to retain new education associated with diabetic skills they first need emotional nurturing and support during the crisis period. As stated in the Self-Management Guideline, which provides healthcare providers a template to promote self-management behaviors in caregivers of children with a chronic illness, healthcare providers must provide “support and care to promote optimal health outcome from a family-centered, holistic perspective including considerations of intellectual, emotional, social, financial, physical, and spiritual wellbeing,” (Evidence-Based Care Guideline Chronic Care: Self-Management 2007 [5a]). Modi et al., (2011 [5a]), also recognized that, “Opatients’ and families’ readiness for self-management intervention is heightened during periods of vulnerability.” The diagnosis period is a very vulnerable time for caregivers, but also a time for caregivers to be engaged and invested in learning self-care management skills for their child’s new chronic diagnosis. Inpatient nursing staff on diabetes units should be aware of the opportunity to demonstrate and teach these skills to caregivers and provide emotional support in the form of comforting presence and reassurance during the inpatient hospital stay to maximize caregiver success with new self-management “survival” skills.

Reference List:

- Schmidt, C. A., Bernaix, L.W., Chiapetta, M., Carroll, E., & Beland, A., (2012). In-hospital survival skills training for type 1 diabetes: perceptions of children and parents. *American Journal of Maternal Child Nursing*, 37(2), 88-94. [4a]
- ADA: Standards of medical care in diabetes--2010, American Diabetes Association. *Diabetes Care*, 33 Suppl 1: S11-61. [5a]
- Chronic Care: Self-Management Guideline Team 2007. 2007. Evidence-Based Care Guideline Chronic Care: Self-Management. Retrieved from <http://centerlink.cchmc.org> [5a]
- Modi, A.C., Pai, A.L., Hommel, K.A., Hood, K.K., Cortina, S., Hilliard, M.E., Guilfoyle, S.M., Gray, W.N., Drotar, D., (2011). Pediatric Self-management: A Framework for Research, Practice, and Policy. *Pediatrics*, 129(2), 473-485. [5a]
- Policy CDE-26 Diabetes/Endocrinology [Care of a Child with New Onset Diabetes](#) [5a]

IMPLEMENTATION**Applicability Issues:**

In order to provide adequate provision of diabetes survival skills, the inpatient unit must be able to provide educational tools that outline diabetes self-management “survival skills.” During orientation, new staff members must have extensive exposure to and education about these same “survival skills” and understand to not teach them to caregivers until they are competent to do so. The unit must also be able to provide adequate staffing to allow time for intensive supportive care and education to new onset families on the inpatient unit. To assure the caregivers are prepared for safe discharged after education and emotional support is provided, accurate documentation in the patient education record to record completion of T1DM education topics and psychosocial Patient Plan of Care (PPOC) template must be charted. Lastly, the inpatient nursing staff should be well versed in conversational and interpersonal techniques that provide emotional support to caregivers.

Barriers:

Potential barriers to providing diabetes survival skills, comforting presence, and reassurance by staff are allocation of resources to compile and provide teaching materials to caregivers, decreased staff motivation to learn conversational and interpersonal techniques to promote emotionally supportive behaviors, and allocation of funds to appropriately staff the inpatient unit to staff numbers that allow time for intensive supportive nursing and educational sessions.

Relevant CCHMC Tools for Implementation:

Chronic Care: Self-Management Guideline (Evidence-Based Care Guideline Chronic Care: Self-Management 2007 [5a])
World of Diabetes Binder, Cincinnati, OH: Division of Endocrinology. Available to Caregivers through Cincinnati Children’s Hospital Medical Center Division of Endocrinology
 Policy CDE-26 Diabetes/Endocrinology [Care of a Child with New Onset Diabetes](#)

Outcome or Process Measures:

10% Above Benchmark on Magnet Data Assessment Score of Patient Satisfaction Survey % of Patient/Family Excellent Responses to: nurse’s “Understanding and Caring?”
 Patient Education Record charted and completed in Epic at time of discharge
 Psychosocial dimension of PPOC documenting interventions providing emotional support for caregivers resolved at time of discharge

SUPPORTING INFORMATION**Background/Purpose of BEST Development:**

Caring for a child with a newly diagnosed chronic disease is challenging, especially when that care is highly specialized. Providing safe care for a child living with diabetes is extremely specialized. Skills that must be mastered include carbohydrate counting, insulin dosage calculations and insulin administration via a syringe or pen device (Policy CDE-26 [5a]; ADA, 2010 [5a]). Having an RN at bedside “to be present and demonstrate skills first” as caregivers see their child respond to treatment and feel better is very important for caregivers (S. Schultz, personal communication, January 16,

2013). Caregivers experienced, “a challenge to shift gears from the shock, denial and every other emotion you can imagine of hearing the words that our son had T1DM, to the reality that we needed to quickly learn how to take care of him. Thinking about that, one of the key elements to that transition is the constant education and emotional support of the bedside nurses” (M. Paterno, personal communication, February 7, 2013). Providing families with initial survival skills and emotional support to safely manage T1DM is paramount to the successful long term home management of this pediatric population (Schmidt et al., 2012 [4a]).

Definitions:

Emotional Support: Providing comfort to people when they are experiencing stress

Survival Skills: Diabetes self-management skills that include blood glucose level monitoring, carbohydrate counting, insulin dosage calculation, administration of insulin via syringe or pen device, and administration of emergency glucagon medication

Search Strategy:

Databases: CINHAL, Medline, PsychInfo

Search Terms: Parental perceptions, new onset type 1 diabetes, emotional support, comforting presence, type 1 diabetes diagnosis, family expectations, bedside nursing, and diabetes survival skills

Limits or Filters: Publications written in English. Research with human subjects aged 12 months to 18 years.

Final Search: 11/29/12

Dates Searched: 1/1/1990- 11/29/2012

Relevant CCHMC Evidence-Based Documents:

Policy CDE-26 Diabetes/Endocrinology [Care of a Child with New Onset Diabetes](#)

Evidence-Based Care Guideline for Chronic Care: Self-Management. Retrieved from <http://centerlink.cchmc.org>, James M Anderson Center for Health Systems Excellence, Evidence Based Care Recommendations

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Conflicts of Interest were declared for each team member:

- No financial or intellectual conflicts of interest were found.
- No external funding was received for development of this BES.
- The following conflicts of interest were disclosed:

Note: Full tables of the [LEGEND evidence evaluation system](#) are available in separate documents:

- [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](#) (dimensions table below)

Table of Evidence Levels (see note above):

Quality level	Definition
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
5a or 5b	General review, expert opinion, case report, consensus report, or guideline
5	Local Consensus

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

Table of Language and Definitions for Recommendation Strength (see note above):

Language for Strength	Definition
It is strongly recommended that... It is strongly recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is high support that benefits clearly outweigh risks and burdens. <i>(or visa-versa for negative recommendations)</i>
It is recommended that... It is recommended that... not...	When the dimensions for judging the strength of the evidence are applied, there is moderate support that benefits are closely balanced with risks and burdens.
There is insufficient evidence and a lack of consensus to make a recommendation...	
<i>Given the dimensions below and that more answers to the left of the scales indicate support for a stronger recommendation, the recommendation statement above reflects the strength of the recommendation as judged by the development group. (Note that for negative recommendations, the left/right logic may be reversed for one or more dimensions.)</i>	
Rationale for judgment and selection of each dimension:	
1. Grade of the Body of Evidence	<input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low
<i>Rationale:</i> One study was found that addressed the specific interventions, one guideline was found that outlined how to facilitate self-care behaviors and education, and one Evidence Based guideline was found to guide health care team members on how to best promote chronic care self-management.	
2. Safety/Harm (Side Effects and Risks)	<input checked="" type="checkbox"/> Minimal <input type="checkbox"/> Moderate <input type="checkbox"/> Serious
<i>Rationale:</i> Patient education and emotional support will be provided to promote safety and reduce the risk of harm.	
3. Health benefit to patient	<input checked="" type="checkbox"/> Significant <input type="checkbox"/> Moderate <input type="checkbox"/> Minimal
<i>Rationale:</i> As parents and guardians are educated and emotionally supported by staff, they feel confident and able to manage child's blood glucose and insulin dosages at home more effectively (Schmidt, 2012 [4a]).	
4. Burden on patient to adhere to recommendation	<input type="checkbox"/> Low <input checked="" type="checkbox"/> Unable to determine <input type="checkbox"/> High
<i>Rationale:</i> Burden is on staff to provide emotional and educational support.	
5. Cost-effectiveness to healthcare system	<input checked="" type="checkbox"/> Cost-effective <input type="checkbox"/> Inconclusive <input type="checkbox"/> Not cost-effective
<i>Rationale:</i> No additional cost incurred by organization, tools for developing emotionally supportive nursing behaviors will be disseminated at previously scheduled staff meetings or via email. Literature for families has already been produced and available. Fully staffed unit provides for adequate nurse to patient ratios in order to provide intensive nursing support and education.	
6. Directness of the evidence for this target population	<input checked="" type="checkbox"/> Directly relates <input type="checkbox"/> Some concern of directness <input type="checkbox"/> Indirectly relates
<i>Rationale:</i> The evidence explores caregivers' perceptions of nursing interventions at the time of their child's T1DM diagnosis.	
7. Impact on morbidity/mortality or quality of life	<input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
<i>Rationale:</i> As parents and guardians are emotionally supported by staff, they feel confident and able to manage child's blood glucose and insulin dosages at home more effectively (Schmidt, 2012 [4a]).	

Copies of this Best Evidence Statement (BEST) and related tools (if applicable, e.g., screening tools, algorithms, etc.) 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/service/i/anderson-center/evidence-based-care/bests/>

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 EBDMinfo@cchmc.org for any BEST adopted, adapted, implemented, or hyperlinked by the organization is appreciated.

Please cite as: Culver, S., Cincinnati Children's Hospital Medical Center: Best Evidence Statement Support from Bedside Nurses for Caregivers of Children Newly Diagnosed with Type 1 Diabetes Mellitus, <http://www.cincinnatichildrens.org/svc/alpha/h/health-policy/best.htm>, BEST 157, pages 1-5, 5/10/13.

This Best Evidence Statement has been reviewed against quality criteria by two independent reviewers from the CCHMC Evidence Collaboration. Conflict of interest declaration forms are filed with the CCHMC EBDM group.

Once the BEST has been in place for five years, the development team reconvenes to explore the continued validity of the guideline. This phase can be initiated at any point that evidence indicates a critical change is needed. CCHMC EBDM staff perform a quarterly search for new evidence in an horizon scanning process. If new evidence arises related to this BEST, authors are contacted to evaluate and revise, if necessary.

For more information about CCHMC Best Evidence Statements and the development process, contact the Evidence Collaboration at EBDMinfo@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.