

Background

- Mother's own milk (MOM) provides optimal infant nutrition
- Ill infants requiring hospitalization in the pediatric acute care setting (general pediatric wards and pediatric critical care units) often lack support to continue MOM
- Pediatric acute care providers caring for critically ill infants often not prepared to support MOM
- Prior to developing interventions to support MOM in pediatric acute care an understanding pediatric acute care providers' MOM attitudes, skills, and knowledge is needed
- Six measures of providers' MOM attitudes, skills and knowledge published since 2010 are:
 - Not based on the 2010 US Breast Feeding committee (USBC) *Core Competencies in Breastfeeding Care and Services for All Health Professional*
- Focused only on maternal-child and primary care settings

Purpose

- Develop a measure of MOM attitudes, skills, and knowledge based on the 2010 USBC *Core Competencies* for use in the pediatric acute care setting
- Determine the content validity of newly developed measure

Methods

Measurement Development

- Three domains (*attitudes, skills, knowledge*) and 42 competencies (27 for all providers, 15 for women/children providers) from the 2010 USBC *Core Competencies* lay the foundation for instrument development:
 - Domains were matched to competencies for all providers and women/children by two researchers and compared
 - Items from the 6 measures published since 2010 were matched to a competency within each domain by 2 researchers and compared
 - Resulted in: 58-item measure of *Pediatric Acute Care Provider Attitudes, Skills, and Knowledge of MOM*

Match Between Domain, Competencies, and Measure Items

Domain (n=3)	Competencies (n=42)	Measure Items (n=58)	Item Examples
Attitude		19	
All providers	11		<i>Are you uncomfortable observing a mother-infant dyad breastfeeding ?</i>
Maternal/child	1		
Skill		16	
All providers	5		<i>In the past month, how many experiences have you had with pre and post test weights ?</i>
Maternal/child	8		
Knowledge		23	
All providers	11		<i>Any formula use during the first 6 months of life is associated with an increase in otitis media risk for the infant. (YES/NO)</i>
Maternal/child	6		

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Methods, contd.

Measurement content validity testing

Design

- Survey of nursing unit directors and APRNs and a random selection of 50% attending physicians and 21% of acute care RN content experts from two pediatric acute care units

Setting

- Two 20-bed pediatric acute care units in a large, midwestern academic medical center
- Providers (88): 4 nursing unit directors, 7 APRNs, 12 attending physicians, and 65 pediatric acute care RNs

Participants (Content Experts)

- **Inclusion criteria:** provider in the acute care pediatric units with at least two years of experience
- **Recruitment:** email sent to 31 pediatric acute care providers introducing study, their role as content experts in pediatric acute care, and inviting them to participate

Measure: 58-item "Attitudes, Skills, and Knowledge Regarding MOM for Pediatric Acute Care Provider"

- Instructions for content experts:

- Rated each item *representativeness* of pediatric acute care practice on a 4-point Likert scale (1=not representative, 2=requires major revision, 3=requires minor revision, 4=representative)
- Rated each item *clarity* (yes/no)

- Provided write-in suggestions for revisions for all items rated 1 or 2 on *representativeness* or rated "no" for *clarity*

- Scoring and analysis

- Content validity index(I-CVI) calculation:
 - $I-CVI = \frac{N_{\text{experts rating item as 3}} + N_{\text{experts rating item as 4}}}{N_{\text{total number of items}}}$

- I-CVI thresholds:

- *Appropriate* (I-CVI > 0.79),
- *Consider revision* (I-CVI between 0.70 and 0.79),
- *Consider elimination* (I-CVI < 0.70)

- For items "*consider revision*" write-in revision suggestions reviewed by 2 researchers and revisions made by consensus

- Items "*consider elimination*" reviewed by 2 researchers and decision to eliminate made by consensus

Protocol

- Providers who agreed to participate moved to a REDCap link within introductory email
- Asked to respond within 2 weeks, reminder sent after 2 weeks and 4 weeks to non-responders
- Responders entered in a drawing for a \$25 gift card

Results

- Of 31 content experts, 6 (19%) responded

Demographic Characteristics of Content Experts	
Characteristic	Content Expert (n=6) n (%)
Gender	
Female	6 (100)
Profession	
Nursing leadership	2 (33.3)
APRN	2 (33.3)
Attending Physicians	0 (0)
RN	2 (33.3)
Years of practice	
3 to 5	1 (16.6)
16 or greater	5 (83.3)



	Item I-CVI Thresholds by Domain		
	Appropriate (>0.79) n (%)	Consider Revision (0.70-.079) n (%)	Consider Elimination (<0.70) n (%)
Attitude (n=19)	15 (78.9)	0 (0)	4 (21.1)
Skill (n=16)	9 (56.2)	1 (6.3)	6 (37.5)
Knowledge (n=23)	15 (65.2)	0 (0)	8 (34.8)
TOTAL (n=58)	39 (67.3)	1 (1.7)	18 (31.0)

- Consider Revision:
 - 1 item revised (1 skill)
- Consider Elimination:
 - 6 items related to early initiation of MOM eliminated (1 attitude and 5 knowledge)
 - 5 items revised and retained (3 attitude and 2 knowledge)
 - 7 retained as written (6 skill and 1 knowledge)
- New 52-item ASK MOM for PAC measure was re-reviewed by 2 researchers, and 6 items were reclassified by domain for: 21 attitude, 12 skill, and 19 knowledge items

Conclusion

- Identification of attitudes, skills, and knowledge in pediatric acute care health providers can inform the development of interventions to support MOM in the pediatric acute care setting
- Further psychometric testing of the ASK MOM for PAC measure is needed to refine those items relating to the acute care setting