Parent Readiness for Hospital Discharge Scale: Psychometrics and Association with Postdischarge Outcomes

Marianne Weiss
Marquette University, marianne.weiss@marquette.edu

Stacee M. Lerret
Medical College of Wisconsin

Rachel Schiffman
University of Wisconsin - Milwaukee

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Marianne E. Weiss
Marquette University, College of Nursing, Milwaukee, WI
Stacee M. Lerret
Medical College of Wisconsin, and Nurse Practitioner, Children's Hospital of Wisconsin, Milwaukee, WI
Rachel F. Schiffman
Research College of Nursing, University of Wisconsin-Milwaukee, Milwaukee, WI

ABSTRACT

Introduction
The purpose of this study is to validate the Readiness for Hospital Discharge Scale (RHDS) for use with parents of hospitalized children. PedRHDS is a structured tool for a discharge readiness assessment before pediatric discharge.

Methods

Using combined data from four studies with 417 parents, psychometric testing and item reduction proceeded with principal component analysis for factor structure delineation, Cronbach's alpha for reliability estimation, and regression analysis for predictive validity.

Results

A 23-item PedRHDS retained the a priori factor structure. Reliability ranged from 0.73 to 0.85 for the 23-item and 10- and 8-item short scales. PedRHDS (all forms) was associated with postdischarge coping difficulty (explaining 12%–16% of variance) and readmission (odds ratio = 0.71–0.80).

Discussion

The PedRHDS and both short forms (PedRHDS-SF10 and PedRHDS-SF8) are reliable and valid measures of parental discharge readiness that can be used as outcome metrics of hospital care and risk indicators for postdischarge coping difficulty and readmission.

Key words

Discharge readiness, pediatric, parent, hospital discharge, psychometrics

INTRODUCTION

Intensive efforts to improve patient and family preparation for hospital discharge and reduce adverse outcomes associated with poor discharge preparation have been implemented in adult settings. However, these efforts are less visible for the pediatric population. With a 4-fold increase in the prevalence of children with complex medical conditions in the past four decades (Raphael, Mei, Brousseau, & Giordano, 2011) and resource use and readmission rates for children with certain chronic conditions approaching those reported for Medicare beneficiaries (Berry et al., 2013a, Srivastava and Keren, 2013), the interest in improving the transition from hospital to home for pediatric patients has intensified (Auger et al., 2015, Berry et al., 2014).

Discharge preparation efforts during hospitalization focus on readying patients and families for the transition to home and for managing care at home after discharge (McBride and Andrews, 2013, Weiss et al., 2015). Although numerous professional disciplines may contribute to planning and coordination for hospital discharge, discharge preparation throughout hospitalization is a primary function of hospital-based clinical nurses. Clinical nurses are the front-line professionals responsible for preparing the patient, family, and care delivery systems for discharge and postdischarge care needs (Foust, 2007, Rhudy, Holland and Bowles, 2010). The discharging nurse is the last line of defense before the patient is formally discharged in assuring that both patients and families are well prepared and ready for the transition to home (Weiss et al., 2015). The availability of a tool for nurses to use in evaluating whether parents are ready to take their child home from the hospital will assist clinical nurses in finalizing discharge preparations.

Discharge readiness incorporates preparedness in terms of knowledge needed for continuing care needs and recovery at home; self-assessments of personal, physical, and emotional status on the day of discharge; ability to cope with medical care needs and family life at home; and availability of support after discharge (Weiss & Piacentine, 2006). Patient and family perceptions of readiness are important outcome indicators of the discharge preparation process and convey risk for a difficult postdischarge transition that can lead to adverse outcomes and readmission. Feeling prepared for discharge is inversely associated with readmissions and postdischarge emergency department (ED) visits in adult patients (Graumlich, Novotny and Aldag, 2008, Jack et al., 2009, Weiss et al., 2007, Weiss, Yakusheva and Bobay, 2011, Weiss, Costa, Yakusheva and Bobay, 2014). In pediatric settings, the findings from research on parent perceptions of discharge readiness indicate that low

readiness is associated with greater coping difficulty after discharge (Weiss et al., 2008, Weiss et al., 2017), less confidence in infant care and more postdischarge feeding problems (Smith, Dukhovny, Zupancic, Gates, & Pursley, 2012), more visits to the pediatric provider (Bernstein et al., 2002, Weiss and Lokken, 2009), and greater likelihood of readmission (Berry et al., 2013b).

Parental readiness is an important predictor of successful transition from hospital to home-based care, yet there is not currently a standard measure in use in pediatric acute care settings for assessing parental readiness before the child's discharge from the hospital. Parent-report tools have been developed to assess hospital to home transitions, but these tools typically ask parents to reflect retrospectively on the experience. For example, a caregiver-reported experience measure of pediatric hospital to home transition captures transition knowledge and transition support at 2–8 weeks after discharge (Desai et al., 2018). Berry et al. (2013b) and Lerret & Weiss (2011) have adapted the Care Transitions Measure (Coleman, Mahoney, & Parry, 2005) for the pediatric population for use between 48 hr and 3 weeks after discharge. A parallel version of the adult Hospital Consumer Assessment of Healthcare Providers and Systems survey, the child Hospital Consumer Assessment of Healthcare Providers and Systems is a standardized survey of the pediatric inpatient experience of care; it includes items about perceptions of the discharge transition and is administered from 48 hr to 6 weeks after discharge (Toomey et al., 2015).

The RHDS (Weiss & Piacentine, 2006) was developed to measure patient perception of discharge readiness following acute care hospitalization across the range of patients being discharged from acute care hospitals. Initial testing with a combined sample of adult medical-surgical patients, postpartum mothers, and parents of hospitalized children provided preliminary evidence of scale reliability and validity. Further evaluation of the RHDS with adult medical-surgical patients has confirmed both the underlying factor (subscale) structure and a shorter form of the scale more amenable for clinical use with the adult patient type (Weiss, Yakusheva and Bobay, 2011, Weiss, Costa, Yakusheva and Bobay, 2014). It is not yet known if the underlying structure of the RHDS is the same or different when used in a sample exclusively consisting of parents of hospitalized children. Therefore, the purpose of the analysis is to test the psychometric properties of the PedRHDS, including scale reliability, construct validity of the scale structure, and predictive validity for parental postdischarge coping and for postdischarge use of ED visits or readmission. An additional purpose is to reduce the number of items in the PedRHDS to a clinically useful length.

METHODS

Study Design and Sample

The study design was a sequential process of psychometric evaluation of the PedRHDS through (1) construct validity assessment using principal component analysis (PCA) to identify the factor structure of the scale when administered to parents, (2) Cronbach's alpha reliability estimation to test internal consistency of the items retained in the scale, and (3) predictive validity testing for the hypotheses that higher parental Readiness for Hospital Discharge Scale (PedRHDS) would be associated with less coping difficulty at home after discharge and lower postdischarge usage in the form of fewer readmission and ED visits. Following the evaluation of the PedRHDS, we identified items for shorter forms of the PedRHDS and retested the reliability and predictive validity to determine if a short form could adequately substitute for the longer form.

To create a data set of adequate size for psychometric analysis (typically at least 300 patients; Comrey & Lee, 1992), the samples from four previous studies that used the PedRHDS were combined, resulting in a sample of 417 parents (and data related to their hospitalized children). The original study (study 1), which was conducted to evaluate the PedRHDS as a new instrument, included 135 parents and children with a variety of conditions from multiple units of a single tertiary pediatric medical center (Weiss et al., 2008). Study 2 included 37 parents

of children with solid organ transplants from three Midwestern pediatric medical centers (Lerret & Weiss, 2011). Study 3 included 51 additional parents of children with solid organ transplants from five pediatric medical centers (Lerret et al., 2015). Study 4 included 194 parents from two units, one medical and one surgical, from the same pediatric center as study 1 (Weiss et al., 2017). Each of the four studies had institutional review board approval from the hospitals where the study was conducted, and parents signed informed consent documents.

Measures

The RHDS (Weiss & Piacentine, 2006) was developed as a package of parallel patient-reported measures of discharge readiness for use on the day of hospital discharge. Versions of the RHDS are available for adult medical-surgical patients, postpartum mothers, and parents of hospitalized children. The patient population–specific versions of the scales use the same content domains, derived from literature review and inputs from clinical nurses and patients, but the scale items are specifically worded for each patient population. PCA of the combined three patient populations used for construct validity testing supported a 21-item scale with a four-subscale structure (Weiss & Piacentine, 2006). The four subscales are (1) Personal Status: six items related to how the person is feeling today; (2) Knowledge: eight items related to how much the person knows about key content areas related to care at home after discharge; (3) Coping Ability: three items related to how well the person thinks he or she can handle the life situation at home; and (4) Expected Support: four items related to the amount of support the person expects to have at home. The parent version of the RHDS (PedRHDS) contains 29 items in five subscales; the Personal Status domain is expanded to two subscales, Personal Status–Parent: eight items (two new items related to perceived stress and difficulty dealing with the child's behavior) and Personal Status–Child: five items to incorporate the parent's perception of their own personal status and the child's status, and a Knowledge item related to growth and development (Weiss et al., 2008). The PedRHDS, similar to all the RHDS scales, is scored on a 0 (not at all, none) to 10 (totally, extremely, a great deal) scale, with higher scores indicating greater readiness for hospital discharge. Scores are reported as the mean of items for ease of interpretation. Reliability and validity estimates reported for the four pediatric study samples combined for this secondary data analysis are presented in Table 1.

TABLE 1. RHDS reliability and validity from the four studies included in the sample

Sample	Reference	Reliability	Predictive validity	
			PDCDS	Readmission
Study 1	Weiss et al., (2008)	.85	$\beta = -.31; p < .001$	ns
Study 2	Lerret & Weiss (2011)	.92	$r = -.67; p < .001$	ns ($p = .07$)
Study 3	Lerret et al., (2015)	.83	$\beta = -.37; p < .01$	ns ($p = .07$)
Study 4	Weiss et al., (2017)	.89	$\beta = .42; p = .02$	ns

Note. *ns, not significant; PDCDS, Post-Discharge Coping Difficulty Scale; RHDS, Readiness for Hospital Discharge Scale.*

The 11-item parent version of the Post-Discharge Coping Difficulty Scale (PedPDCDS)—development described in Weiss & Piacentine (2006)—measures the degree of parental difficulty in coping with stress, recovery, family management of the child's medical needs, support, confidence, and the child's adjustment after hospital discharge, typically within the first month after hospitalization (Weiss et al., 2008). Parents rate the individual items on a scale of 0 (not at all) to 10 (extremely, completely, or a great deal), where higher scores indicate greater difficulty. Scores for the PDCDS are also reported as the mean of items for ease of interpretation. In study 1, which included parents of children hospitalized in a tertiary pediatric medical center, the Cronbach's alpha reliability coefficient was .84, and the single-factor structure of the PDCDS was supported through PCA. Association of higher PedPDCDS scores with greater postdischarge usage provided evidence in support of predictive validity (Weiss et al., 2008). In each of the studies included in the current analysis, the PDCDS was administered during a telephone interview at 3 weeks after discharge by research staff.

ED visits and readmissions within 30 days after discharge were coded as dichotomous variables for nonoccurrence or occurrence. An ED visit not resulting in readmission was counted as an ED occurrence. Direct readmissions and ED visits that resulted in readmission were counted as readmissions; the concurrent ED visit was not counted in these cases. Data were obtained directly from the parent during a telephone call at 3 weeks after discharge. For studies 2 and 3, the data were also verified in the medical record; for study 4, data were obtained via telephone follow-up at 3 weeks after discharge and also electronically extracted from the medical record for the period of 30 days after discharge. In the latter case, either parent report or evidence from electronic records was used to account for ED visits and readmissions to a different hospital facility. Cause of readmission was not evaluated; all readmissions were included in the analysis.

Data Analysis

All statistical analyses were conducted using SPSS version 21. To explore construct validity, PCA with Promax rotation was selected as the analytic approach. We selected an exploratory rather than confirmatory approach to avoid the assumption that the a priori factor structure was the underlying structure for this parent-specific sample (Costello & Osborne, 2005). We selected PCA because it is a recognized data reduction approach that retains factors that explain maximum amount of variance—it reduces multiple observed variables into fewer components that summarize their variance (Mertler and Reinhart, 2002, Tabachnick and Fidell, 2007; Yong & Pearce, 2013). To achieve an adequate subscale structure, we evaluated factor loadings (a metric of the correlation between the item and the total factor) and identified items for removal that did not adequately load onto a single factor using a minimum factor loading of 0.30 and at least 0.20 difference from loadings on other factors as the criteria for retention of items in their respective factors (Tabachnick & Fidell, 2007).

To explore the possibility of creating a short form of the scale that adequately represents scores on the longer form, we used an approach that involved retaining the components identified in the analysis of the long form of the scale. The goal of retaining these original components in the short form was consistent with the approach taken for item reduction in the adult form of the scale (Weiss et al., 2014). We identified items in each subscale with the highest zero-order item-to-subscale correlation. This procedure was selected to preserve the assessment of each domain (component) in the PedRHDS short form (PedRHDS-SF), so that it could be used as a screening tool for areas of poor readiness that could trigger interventions before or in follow-up after discharge. We tested three versions of the PedRHDS-SF: (1) a 10-item version with two items from each subscale (PedRHDS-SF10); (2) an 8-item version with one parent and one child Personal Status item and two items from each of the other subscales (PedRHDS-SF8); and (3) a 5-item version with one item from each subscale (PedRHDS-SF5). Cronbach's alpha reliability estimates were calculated for each version of the scale. To evaluate predictive validity, linear regression was used to examine the association of PedRHDS with PedPDCDS. Logistic regression was used to examine the association of PedRHDS with occurrences of ED visits after discharge and readmissions.

RESULTS

A description of the sample is presented in Table 2. Of the 417 parents/children enrolled in the source studies for the sample, 399 provided responses to all items of the PedRHDS form, and 359 completed the PDCDS. The sample consisted predominately of white, married mothers of the hospitalized children aged between 3 weeks and 17 years. The postdischarge ED visit and readmission rates were 14.6% and 14.1%, respectively.

TABLE 2. Sample characteristics

Characteristics	Total sample (N = 417)
Parent age, years, mean (*SD*)	34.84 (9.35)
Respondent, *n* (%)	
Mother	331 (79.4)

Father	75 (18.0)
Other	4 (1.0)
Missing	7 (1.7)
Race/ethnicity, *n* (%)	
White non-Hispanic	285 (68.3)
Black	76 (18.2)
Hispanic	34 (8.2)
Other	8 (1.9)
Missing	14 (3.4)
Parents marital status, *n* (%)	
Married	266 (63.7)
Single	91 (21.8)
Separated/divorced	26 (6.2)
Other	29 (7.0)
Missing	5 (1.2)
Child age, years, mean (*SD*)	6.10 (5.78)
Child sex, *n* (%)	
Male	208 (49.9)
Female	206 (49.4)
Missing	3 (0.7)
Postdischarge use, *n* (%)	
ED visit	
Yes	61 (14.6)
No	338 (81.1)
Missing	18 (4.3)
Readmission, *n* (%)	
Yes	59 (14.1)
No	340 (81.5)
Missing	18 (4.3)

Note. *ED, emergency department; SD, standard deviation.*

Factor Structure and Reliability of the PedRHDS

The initial exploratory PCA revealed seven subscales (factors) explaining 65% of the total scale variance. The original items for the Knowledge, Coping Ability, and Expected Support loaded on their respective subscales. The Personal Status–Parent and Personal Status–Child items did not load well on their respective factors, loading onto four different factors. In exploring possible reasons for multiple factors in the personal status domains, high inter-item correlations were identified for strength and energy items of the parent (*r* = .69) and the child (*r* = .78); the energy items were eliminated. Four items that cross-loaded on multiple subscales were also eliminated (knowledge about personal care, child physically ready, difficulty managing emotions and child's behavior, and help with medical care needs). The revised PedRHDS included 23 items with adequate factor loadings in five factors accounting for 59% of scale variance (Table 3). The five-factor structure of the PedRHDS was consistent with the subscale structure of the original scale derived from a mixed sample and subsequently validated with adult patients. Reliability of the PedRHDS was 0.85. Scale statistics for the 23-item scale are presented in Table 4. In reducing the scale, items with the highest item-to-subscale correlations were considered for inclusion and screened for universal applicability to all parents and children. For example, we eliminated the pain and discomfort items from consideration because they would be relevant for some parents and children but not others. We also sought to reduce redundancy by including selected item domains only once in the shorter scales. For example, the concept of personal care of the child occurs in Knowledge, Coping Ability, and

Expected Support domains. The Knowledge item was removed because of cross-loading. The personal care item in the Expected Support subscale had the highest item-to-subscale correlation. The Coping Ability item was replaced with the next highest item in its subscale. Three short forms (10-item, 8-item, and 5-item) of the scale were evaluated. Mean scale scores and reliability estimates for all forms of the scale are presented in Table 4. All scales, except the PedRHDS-SF5 item, had Cronbach's alpha reliability estimates above .70, the acceptable criterion for a new scale (Nunnally & Bernstein, 1994). Scale item means (sum of all items in the scale/number of items) are reported for comparability in comparisons across the scales. Mean scores were similar, ranging from 8.4 to 8.7 on the 0–10 point scale.

TABLE 3. Factor loadings with item-to-subscale correlations

Items	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Item-to-subscale correlation
Personal status–parent						
2a. Physically ready	.522					.61
3a. Pain or discomfort	.721					.63
4a. Strength	.585					.80
5a. Energy[a]						
6a. Stress	.584					.40
7a. Emotionally ready	.470					.56
7b. Emotions and/or behavior[a]						
8a. Physical ability to care for yourself	.626					.47
Personal status–child						
2b. Physically ready[a]						
3b. Pain or discomfort		.740				.77
4b. Strength		.804				.79
5b. Energy[a]						
8b. Usual activities for age		.730				.80
Knowledge (about taking care of child)						
9. Caring for child			.645			.71
10. Personal needs[a]						
11. Growth and development			.622			.70
12. Medical needs			.756			.73
13. Problems to watch for			.847			.76
14. Who and when to call for problems			.843			.75
15. Allowed and not allowed to do			.840			.76
16. What happens next			.717			.71
17. Services and information in your community			.454			.65
Coping ability						
18. Handle the demands of life at home?				.691		.89
19. Perform child's personal care				.931		.87
20. Perform child's medical treatments				.868		.85
Expected support						
21. Emotional support					.707	.72

22. Help with child's personal care					.882	.90
23. Help with household activities					.875	.90
24. Help child's medical care[a]						

[a] Item eliminated in 23-item PedRHDS.

TABLE 4. Scale statistics and predictive validity for PedRHDS total and short form scales

Scale	Number of items	Item numbers[a]	Item mean, 0–10 scale (*SD*)	Cronbach's alpha	R^2: % of explained variance in 23-item/29-item versions of PedRHDS	R^2: % of explained variance in PDCDS	OR for readmission
PedRHDS–total	29		8.6 (0.95)	.88		17	0.72 (0.54–0.95); *p* = .02
	23	(omitted 2b, 5a, 5b, 7b, 10, 24)	8.6 (0.91)	.85	–/.97	16	0.73 (0.55–0.97); *p* = .03
PedRHDS-SF10	10	4a, 4b, 2a, 8b, 13, 15, 18, 20, 22, 23	8.6 (1.15)	.75	.84/.87	14	0.71 (0.56–0.90); *p* = .01
Ped RHDS -SF8	8	4a, 4b, 13, 15, 18, 20, 22, 23	8.6 (1.12)	.73	.78/.82	12	0.75 (0.60–0.94); *p* = .01
PedRHDS-SF5	5	4a, 4b, 13, 18, 22	8.4 (1.27)	.63	.74/.78	12	0.80 (0.65–0.99); *p* = .047

Note. *OR, odds ratio; PedRHDS, pediatric Readiness for Hospital Discharge Scale; PDCDS, Post-Discharge Coping Difficulty Scale; SD, standard deviation; SF, short form.*

[a] *numbers from original scale*.

Predictive Validity

The 23-item PedRHDS explained 97% of the variance in the original 29-item scale. RHDS-SF 5-item, 8-item, and 10-item forms explained 74%, 78%, and 84% of the 23-item PedRHDS variance, respectively. Results of linear and logistic regression analyses of PDCDS and postdischarge use of ED visits and readmission, respectively, were used to evaluate predictive validity of the PedRHDS long and short forms (Table 4). PedRHDS was negatively associated with PedPDCDS; higher parental readiness was associated with less coping difficulty. PedRHDS in the revised 23-item form explained 16% of PDCDS variance; the PedRHDS short forms explained 12%–14% of PedPDCDS variance. Scores on all three PedRHDS short forms were associated with the likelihood of readmission. A 1.0 point (on the 0–10 scale) higher score above the PedRHDS scale mean (8.6) was associated with 20%–29% (odds ratio = 0.80–0.71) lower odds of readmission (Table 4), and conversely, a score 1.0 lower than the PedRHDS scale mean was associated with a comparable increase in the odds of readmission. No association between any of the PedRHDS versions and ED visits was found.

DISCUSSION

In evaluating the RHDS specifically for use in a pediatric population, PCA resulted in a 23-item version of the PedRHDS that has acceptable reliability properties and predictive validity in relation to postdischarge coping difficulty and readmission, but not ED visits after discharge. To reduce the length of the PedRHDS for clinical use, three short forms were tested. All three forms have similar associations with PDCDS and the likelihood of readmission. The PedRHDS-SF10 and PedRHDS-SF8 had acceptable reliability estimates. The PedRHDS-SF5 had poorer reliability estimate, which is not surprising given the small number of items and method of selection of items to assure distribution across the five dimensions of readiness. The PedRHDS in long form offers a more comprehensive assessment of parental readiness for discharge, whereas the short forms are acceptable substitutes for use as screening tools to identify parents with low readiness in one or more of the scale domains.

The structure of the PedRHDS, as refined through elimination of items in the factor analysis process, retained the same structure as identified in early testing of the RHDS that used a combined sample of adult medical-surgical patients, postpartum mothers, and parents of hospitalized children. The findings of this study point to the universality of the dimensions of readiness for discharge across the broad range of patients and families who are discharged home following acute hospitalization in the samples included in the analysis. Moreover, the relationship of parental discharge readiness measured immediately before going home with postdischarge coping difficulty and the likelihood of readmission was similar to prior findings in adults (Weiss et al., 2007, Weiss, Costa, Yakusheva and Bobay, 2014).

Assessment of the five dimensions of parental readiness for discharge using the PedRHDS (Personal Status–Parent and Child, Knowledge, Coping Ability, and Expected Support) accesses information about key variables of the family experience with the discharge transition that are different than the disease, health status, demographic, and social determinant parameters typically used in risk prediction models (Kansagara et al., 2011). Using disease-based and patient-family reported risk screening approaches together may improve identification of patients and families at risk for readmission. In this study, PedRHDS was not associated with postdischarge ED visits. Studies to explore prediction models for ED use following hospital discharge are needed.

Limitations

This analysis has several limitations that point to the need for further study. Most of the parents in the sample were from one children's medical center. Validation in a broader parent sample from different geographic settings and with a broader range of sociodemographic and child clinical conditions is needed. In particular, further determination of differences in predictive validity for children with various conditions will further improve the utility of the tools for clinical practice. In addition, many factors including language concordance

between parent and nurse, health literacy, and use of home care services could be evaluated for their influence on the relationship between parental readiness and postdischarge outcomes, including readmissions.

The readmission rate in this sample was higher than the 6.5% unplanned readmission rate reported in a study of 72 children's hospitals (Berry et al., 2013a). This finding was likely because of the inclusion of all-cause readmissions as well as the characteristics of the patient population at the academic pediatric medical center, many of whom were at high risk for readmission, such as the transplant patients. Readmissions in the included studies were based primarily on patient report; one of the studies' readmissions included data from electronic records and parent report, whereas the others were from parent report only. In future studies, readmission data should be collected at a consistent interval from discharge and from multiple sources to account for same- and other-hospital admissions. Same-hospital readmissions may underestimate actual readmission rates (Nasir et al., 2010). In addition, future studies should differentiate unplanned and all-cause readmissions.

The PedRHDS is designed to capture parent perception of readiness for their child's discharge. Children may have their own perceptions that are important both in determining discharge preparation needs and as an outcome metric of hospitalization. Perceptions of health care providers play a role in discharge decisions. Future studies should compare the varying perspectives on discharge of the physician, nurse, parent, and child for their impact on discharge decisions and the relationship to postdischarge care needs. Measurement development is needed in this area.

Implications for Practice

The PedRHDS, PedRHDS-SF10, and PedRHDS-SF8 are reliable measures of parent perception of readiness for discharge. The short forms may be particularly useful as patient-reported outcome measures of hospital discharge preparation, for which nurses have a primary responsibility, and as risk indicators for readmission. At an individual patient level, incorporating the parent's perspective on discharge readiness within discharge preparations will improve the quality of discharge care provided by the discharging nurse. Nursing interventions to improve parental discharge readiness can including teaching, skill development, and follow-up reinforcement of instructions on physical and emotional recovery, care and practice with managing the child's personal and medical needs, identification of coping strategies for handling the demands of life at home after discharge, and engaging family and community-based support systems. Discharge readiness assessment implemented as a component within standard nursing discharge processes has the potential to identify parents with low readiness who can benefit from additional readiness-promoting interventions that mitigate risks for adverse postdischarge experiences and contribute to reduction in avoidable pediatric readmissions. As electronic health record capacity expands, inclusion of parent-experience measures will support engaging parents in communication with providers, flagging patient- and parent-centered problems that need provider attention, and improving nursing care delivery to address parent-identified concerns.

REFERENCES

Auger et al., 2015. K.A. Auger, T.D. Simon, D. Cooperberg, J. Gay, D.Z. Kuo, M. Saysana, ..., M.W. Shen. **Summary of STARNet: Seamless Transitions and (Re)admissions Network.** *Pediatrics*, 135 (2015), pp. 164-175

Bernstein et al., 2002. H.H. Bernstein, C. Spino, A. Baker, E.J. Slora, C.L. Touloukian, M.C. McCormick. **Postpartum discharge: do varying perceptions of readiness impact health outcomes?** *Ambulatory Pediatrics*, 2 (2002), pp. 388-395

Berry et al., 2014 J.G. Berry, K. Blaine, J. Rogers, S. McBride, E. Schor, J. Birmingham, ..., C. Feudtner. **A framework of pediatric hospital discharge care informed by legislation, research, and practice.** *JAMA Pediatrics*, 168 (2014), pp. 955-962 quiz 965–966

Berry et al., 2013a

J.G. Berry, S.L. Toomey, A.M. Zaslavsky, A.K. Jha, M.M. Nakamura, D.J. Klein, ..., M.A. Schuster. **Pediatric readmission prevalence and variability across hospitals.** *JAMA*, 309 (2013), pp. 372-380

Berry et al., 2013b. J.G. Berry, S.I. Ziniel, L. Freeman, W. Kaplan, R. Antonelli, J. Gay, ..., D. Goldmann. **Hospital readmission and parent perceptions of their child's hospital discharge.** *International Journal for Quality in Health Care*, 25 (2013), pp. 573-581

Coleman, Mahoney and Parry, 2005 E.A. Coleman, E. Mahoney, C. Parry. **Assessing the quality of preparation for posthospital care from the patient's perspective: the Care Transitions Measure.** *Medical Care,* 43 (2005), pp. 246-255

Comrey and Lee, 1992. A.L. Comrey, H.B. Lee. *A first course in factor analysis.* Lawrence Erlbaum Associates, Inc, Hillsdale, NJ (1992)

Costello et al., 2005 A.B. Costello, J.W. Osborne. **Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis.** *Practical Assessment, Research & Evaluation*, 10 (2005), pp. 1-9

Desai et al., 2018 A.D. Desai, E.A. Jacob-Files, S.J. Lowry, D.J. Opel, R. Mangione-Smith, M.T. Britto, W.J. Howard. **Development of a caregiver-reported experience measure for pediatric hospital-to-home transitions.** *Health Services Research*, 53 (Suppl. 1) (2018), pp. 3084-3106

Foust, 2007. J.B. Foust. **Discharge planning as part of daily nursing practice?** *Applied Nursing Research*, 20 (2007), pp. 72-77

Graumlich, Novotny and Aldag, 2008 J.F. Graumlich, N.L. Novotny, J.C. Aldag. **Brief scale measuring patient preparedness for hospital discharge to home: psychometric properties.** *Journal of Hospital Medicine*, 3 (2008), pp. 446-454

Jack et al., 2009 B.W. Jack, V.K. Chetty, D. Anthony, J.L. Greenwald, G.M. Sanchez, A.E. Johnson, ..., L. Culpepper. **A reengineered hospital discharge program to decrease rehospitalization: a randomized trial.** *Annals of Internal Medicine*, 150 (2009), pp. 178-187

Kansagara et al., 2011 D. Kansagara, H. Englander, A. Salanitro, D. Kagen, C. Theobald, M. Freeman, S. Kripalani. **Risk prediction models for hospital readmission: a systematic review.** *JAMA*, 306 (2011), pp. 1688-1698

Lerret and Weiss, 2011 S.M. Lerret, M.E. Weiss. **How ready are they? Parents of pediatric solid organ transplant recipients and the transition from hospital to home following transplant.** *Pediatric Transplantation*, 15 (2011), pp. 606-616

Lerret et al., 2015 S.M. Lerret, M.E. Weiss, G.L. Stendahl, S. Chapman, J. Menendez, L. Williams, ..., P. Simpson. **Pediatric solid organ transplant recipients: transition to home and chronic illness care.** *Pediatric Transplantation*, 19 (2015), pp. 118-129

McBride and Andrews, 2013. M. McBride, G.J. Andrews. **The transition from acute care to home: a review of issues in discharge teaching and a framework for better practice.** *Canadian Journal of Cardiovascular Nursing*, 23 (2013), pp. 18-24

Mertler and Reinhart, 2002. C.A. Mertler, R.A. Vannatta. *Advanced and multivariate statistical methods: Practical application and interpretation.* (2nd ed.), Pyrczak Publishing, Los Angeles, CA (2002)

Nasir et al., 2010. K. Nasir, Z. Lin, H. Bueno, S.L. Normand, E.E. Drye, P.S. Keenan, H.M. Krumholz. **Is same-hospital readmission rate a good surrogate for all-hospital readmission rate?** *Medical Care*, 48 (2010), pp. 477-481

Nunnally and Bernstein, 1994. J.C. Nunnally, I.H. Bernstein. *Psychometric theory.* McGraw-Hill, New York, NY (1994)

Raphael, Mei, Brousseau and Giordano, 2011. J.L. Raphael, M. Mei, D.C. Brousseau, T.P. Giordano. **Associations between quality of primary care and health care use among children with special health care needs.** *Archives of Pediatrics and Adolescent Medicine*, 165 (2011), pp. 399-404

Rhudy, Holland and Bowles, 2010. L.M. Rhudy, D.E. Holland, K.H. Bowles. **Illuminating hospital discharge planning: staff nurse decision making.** *Applied Nursing Research*, 23 (2010), pp. 198-206

Smith et al., 2012. V.C. Smith, D. Dukhovny, J.A. Zupancic, H.B. Gates, D.M. Pursley. **Neonatal intensive care unit discharge preparedness: primary care implications.** *Clinical Pediatrics*, 51 (2012), pp. 454-461

Srivastava and Keren, 2013. R. Srivastava, R. Keren. **Pediatric readmissions as a hospital quality measure.** *JAMA*, 309 (2013), pp. 396-398

Tabachnick and Fidell, 2007. B.G. Tabachnick, L.S. Fidell. ***Using multivariate statistics.*** (5th ed.), Allyn & Bacon, Inc, Needham Heights, MA (2007)

Toomey et al., 2015.
S.L. Toomey, A.M. Zaslavsky, M.N. Elliott, P.M. Gallagher, F.J. Fowler Jr., D.J. Klein, ..., M.A. Schuster. **The development of a pediatric inpatient experience of care measure: child HCAHPS.** *Pediatrics*, 136 (2015), pp. 360-369

Weiss et al., 2015. M.E. Weiss, K.L. Bobay, S.J. Bahr, L. Costa, R.G. Hughes, D.E. Holland. **A model for hospital discharge preparation: from case management to care transition.** *Journal of Nursing Administration*, 45 (2015), pp. 606-614

Weiss, Costa, Yakusheva and Bobay, 2014. M.E. Weiss, L.L. Costa, O. Yakusheva, K.L. Bobay. **Validation of patient and nurse short forms of the Readiness for Hospital Discharge Scale and their relationship to return to the hospital.** *Health Services Research*, 49 (2014), pp. 304-317

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

Weiss and Lokken, 2009 M.E. Weiss, L. Lokken. **Predictors and outcomes of postpartum mothers' perceptions of readiness for discharge after birth.** *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 38 (2009), pp. 406-417

Weiss and Piacentine, 2006. M.E. Weiss, L.B. Piacentine. **Psychometric properties of the Readiness for Hospital Discharge Scale.** *Journal of Nursing Measurement*, 14 (2006), pp. 163-180

Weiss et al., 2007. M.E. Weiss, L.B. Piacentine, L.B. Lokken, J. Ancona, J. Archer, S. Gresser, ..., T. Vega-Stromberg. **Perceived readiness for hospital discharge in adult medical-surgical patients.** *Clinical Nurse Specialist*, 21 (2007), pp. 31-42

Weiss, Yakusheva and Bobay, 2011. M.E. Weiss, O. Yakusheva, K.L. Bobay. **Quality and costanalysis of nurse staffing, discharge preparation, and postdischarge utilization.** *Health Services Research*, 46 (2011), pp. 1473-1494

Weiss et al., 2017.
M.E. Weiss, K. Sawin, K. Gralton, N. Johnson, C. Klingbeil, S.M. Lerret, M. Malin, O Yakusheva, R. Schiffman. **Discharge teaching, readiness for discharge, and post-discharge outcomes in parents of hospitalized children.** *Journal of Pediatric Nursing*, 34 (2017), pp. 58-64

Yong et al. 2013. A.G. Yong, S. Pearce. **A beginner's guide to factor analysis: Focusing on exploratory factor analysis.** *Tutorials in Quantitative Methods for Psychology*, 9 (2013), pp. 79-94