

NAPNAP 2014 ANNUAL CONFERENCE EMERGING KNOWLEDGE FOR CLINICAL PRACTICE PODIUM PRESENTATION ABSTRACTS

Text Messaging as an Adjunct Treatment for Urban Mothers with Postpartum Depression

Elizabeth Paster Rhyne, RN, CPNP,
& Ashley Borawski, RN, CPNP

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Purpose: To evaluate the feasibility of receiving scheduled text messages from pediatric providers as an adjunct treatment for postpartum depression (PPD) in urban mothers identified in a high-volume, academic, primary care clinic.

Background: Rates of perinatal depression among postpartum women range from 5-25%; however among low-income mothers and parenting teens, rates may approach 40-60% (Earls, 2010). For pediatric health care providers, it is important to take a holistic approach in caring for patients and families (Connelly, et al, 2007). Studies have found that low-income mothers are more likely to experience PPD, but are less likely than those of higher income, to seek treatment (Abrams, 2009). Mobile-phone-based text messaging is a widely available and relatively inexpensive tool that can be used for health behavior change (Cole-Lewis and Kershaw, 2010). Texting has the benefit of reaching all mobile phones, regardless of model or service provider (Aguilera, 2011), even when barriers are present.

Research Hypotheses: When used as an adjunct treatment, text messaging is a feasible option for urban mothers who experience barriers to receiving treatment for postpartum depression.

Methods: Prospective study. Inclusion criteria: mothers scoring ≥ 10 on the Edinburgh Postnatal Depression Scale (EPDS) between 1 week to 6 months post-delivery, were English speaking, and lived within St. Louis City. Exclusion criteria: non-English speaking and residence outside of St. Louis City. Thirty mothers received text messages from the research team, either 1, 2, or 4 times per week. Message content varied be-

tween routine infant care and basic information on PPD. Additional messages provided support, encouragement, and motivation. Some messages included an option to receive a call back from a team member within 24 hours. Mothers also received cognitive behavioral therapy during the intervention. Descriptive statistics were used for the preliminary analyses.

Discussion questions: What is the likelihood and feasibility of using text messages as a form of supportive treatment for mothers with PPD in your practice?

Results: In 6 months, 1362 text messages were sent to 30 mothers. Only 6.3% (n=86) of these messages were noted to have message failure. Of messages with 'Yes/No' option to request a phone call from the team, 4.6% (n=63) of messages were answered 'Yes.' Nearly 75% of all contacts between the research team and enrolled mothers occurred via text message (additional contacts were via phone or appointments). Among all participants, 69% (n=20) had smart phones. Regarding maternal texting use, 31% (n=9) of mothers texted between 0-10 times daily, however 41% (n=12) texted at least ≥ 51 times daily, and 7% (n=2) reported texting ≥ 300 times daily.

Discussion/Conclusion: Sending mothers informational and motivational text messages is a feasible and viable method of communication and support for use as an adjunct therapy for postpartum depression. Text messaging overcomes common obstacles, namely access to care and transportation, faced by urban mothers in obtaining treatment. Texting is a practical and inexpensive alternative for pediatric providers to communicate with and support families who struggle with postpartum depression.

Validation of an Early Warning Scoring Tool for the Identification of Pediatric Patients at Risk for Cardiopulmonary Arrest

Mary McLellan, RN, BSN, CPN,
Kimberlee Gauvreau, ScD,
& Jean Anne Connor, PhD, RN, CPNP

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Background and Significance: Most inpatient pediatric arrests are preventable by early recognition/treatment of deterioration. Early warning scoring (EWS) systems provide early identification of children at arrest risk. In 2009, the Children's Hospital Early Warning Score (CHEWS) was developed and validated in a single center of pediatric cardiac patients.

Purpose: To further validate the Children's Hospital Early Warning Score tool and algorithm in inpatient pediatric non-cardiac patients.

Methods: Nurses assess and document patients' CHEWS scores during routine vital signs. An escalation of care algorithm directs either: routine care (score 0-2), increased assessment/intervention (3-4), or ICU consult/transfer (≥ 5). Sensitivity and specificity were estimated from a retrospective review of patients admitted to our inpatient units over 12 months who experienced arrest or unplanned ICU transfer (n=360) and a randomized comparison sample (n=776) of admissions. All patients in non-ICU or critical care areas that experienced an unplanned arrest or ICU transfer were included, patients at end of life with anticipated death were excluded from the case sample. All patients admitted to non-ICU or critical care were considered for inclusion for comparison control sample.

Analysis: The previously validated Pediatric Early Warning Score (PEWS) tool was used for comparison. Patients' highest CHEWS scores were compared to calculated PEWS scores. Area under the receiver operating characteristic (AUROC) curve was calculated for PEWS and CHEWS to measure discrimination.

Findings: CHEWS algorithm sensitivity was 97.8 (≥ 2), 84.2 (≥ 4) and 75.6 (≥ 5) versus PEWS of 82.8 (≥ 2), 54.4 (≥ 4), and 38.9 (≥ 5). CHEWS specificity was 52.5 (≥ 2), 80.9 (≥ 4), and 88.5 (≥ 5) versus PEWS of 63.7 (≥ 2), 85.3 (≥ 4) and 93.9 (≥ 5). The AUROC curve for CHEWS was 0.902 compared to PEWS 0.798.

Implications: In this single center examination, the CHEWS demonstrated a higher discrimination and

sensitivity than the PEWS in identifying deterioration in hospitalized children.

The Role of Advanced Practice Nursing in Child Maltreatment: A National Survey

**Gail Hornor, DNP, CPNP,
& Pam Herendeen, DNP, CPNP**

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Introduction: Although there have been studies describing the global PNP role as well as specific practice specialties such as in-patient, pre-operative, and early intervention settings no studies to date have described the role of the PNP and/or other advanced practice nurses in child maltreatment. PNPs have been working in child maltreatment for decades yet to date there has been no comprehensive assessment of their roles nor their clinical and academic contributions to the field. This study described the role of the APN in child maltreatment.

Methods: Children's Hospitals and Child Advocacy Centers across the United States (N=970) were contacted to determine the employment of child maltreatment APNs in their facility (N=312). Lead APNs were emailed a NP survey describing their APN team and practice.

Results: 136 lead APNs responded to the survey (response rate 42%). APNs working in the field of child maltreatment were PNPs (62%); held master's degrees (83%); had been practicing as an APN for >10 years (61%); and practicing in child maltreatment for > 10 years (41%). The majority worked in Child Advocacy Centers (58%) and provided both in-patient and out-patient care to victims of physical and sexual abuse.

Discussion: APNs are filling vital roles in the care of maltreated and neglected children not only in the