

Seasonal Variation in Pediatric Chronic Pain Clinic Phone Triage Call Volume

■ ■ ■ *Kristen E. Jastrowski Mano, PhD,*
Robert C. Gibler, BA,* Lynn M. Rusy, MD,^{†,‡}
Renee J. Ladwig, RN, CNS, LMFT,[‡]
Caroline O. Madormo, RN, CPN,[‡]
and Keri R. Hainsworth, PhD[†]*

■ ABSTRACT:

Chronic pain is highly prevalent in youth and often results in significant health care usage and familial distress. Telephone triage nurses in pediatric pain clinics provide support and consultation to families and engage parents of pediatric pain patients in interdisciplinary intervention efforts. Despite evidence of winter predominance in rates of pain-related and psychiatric complaints, seasonal variations have not been examined in terms of the demand placed on pain clinic triage nurses. The present study investigated seasonal patterns in the frequency and type of phone calls made over the course of 1 year to an interdisciplinary outpatient pediatric chronic pain clinic at a large Midwestern children's hospital. Pain complaints, reasons for phone calls, and call outcomes (e.g., medication changes, consultation with medical or mental health providers) were recorded in patient charts and retrospectively reviewed by the clinic registered nurse. A total of 721 calls regarding 253 patients were made over the course of 1 year. Results indicated that overall call volume across pain conditions was more than two times greater in the winter than in the summer ($\chi^2 = 64.13, p = .000$), and the odds of a call involving headache pain were almost twice as likely in the winter as in the summer. The majority of calls required consultation with physicians and/or mental health providers. Present data may be useful for pediatric chronic pain clinics making staffing decisions throughout the year because the winter season appears to place a significantly greater demand on triage nurses.

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*From the *Department of Psychology, University of Cincinnati, Cincinnati, Ohio; †Medical College of Wisconsin, Department of Anesthesiology, Milwaukee, Wisconsin; ‡Children's Hospital of Wisconsin, Jane B. Pettit Pain and Headache Center, Milwaukee, Wisconsin.*

Address correspondence to Kristen E. Jastrowski Mano, PhD, Department of Psychology, University of Cincinnati, 5130D Edwards One, Cincinnati, OH 45221. E-mail: manokn@ucmail.uc.edu

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INTRODUCTION

Chronic pain is prevalent in pediatric populations. According to epidemiological estimates, approximately one fourth of children and adolescents report having experienced chronic pain (King et al., 2011), with a smaller subset of youth suffering moderate to severe disability (Huguet & Miro, 2008). Pain in childhood often occurs in the form of headaches, abdominal pain, back pain, or extremity pain; and approximately half of youth with chronic pain report pain in more than one location (e.g., Split & Neuman, 1999). Chronic pain in childhood often results in high direct and indirect health care costs as well as increased health care usage (Sleed, Eccleston, Beecham, Knapp, & Jordan, 2005). For example, consultations for abdominal pain account for 2%-4% of all pediatric primary care office visits (Chitkara, Rawat, & Talley, 2005; Di Lorenzo, Colletti, & Lehmann, 2005) and 5%-9% of emergency department visits (Drendel, Brousseau, & Gorelick, 2006; Wier, Yu, Owens, & Washington, 2013).

Telephone triage nurses in pediatric chronic pain clinics allow families to verbalize concerns, ask questions, and seek clarification on aspects of the treatment plan that may have been unclear to the family after the initial assessment—all without having to make a clinic appointment. Treatment providers in pain clinics often encourage families to contact the registered nurse if a patient's pain worsens or does not improve. Despite strong evidence of winter predominance in the rates of abdominal pain consultations (Saps et al., 2008) and complaints (Saps et al., 2009), migraines (Soriani et al., 2006), and psychiatric complaints (Morken, Sund, & Linaker, 2004), seasonal patterns have not been examined in terms of variability in the demand placed on pain clinic triage nurses—despite this being a commonly provided and highly used service provided by most tertiary pediatric pain programs. Thus, the overarching goal of the present study was to examine seasonal variance in pediatric chronic pain clinic phone triage by examining monthly patterns in the frequency and type of phone calls made over the course of 1 year to a large interdisciplinary outpatient pediatric chronic pain center. We were specifically interested in documenting whether there were seasonal differences in overall phone call volume, differences in call patterns based on the child's specific pain complaint, the reasons for parent phone calls, and the outcomes of phone calls (e.g., medication changes, consultation with medical or mental health providers). Taken together, such information was deemed important in evaluating the triage needs of pain clinics throughout the year.

Based on existing literature (e.g., Saps et al., 2008, 2009), it was hypothesized that call volume would be

lowest in the summer months (June-August) and highest during the winter months (January-March). We also aimed to (1) determine whether phone calls pertaining to specific pain complaints (e.g., headaches, abdominal pain, etc.) differentially varied by season, (2) document the nature and frequency of parent concerns (i.e., reasons for phone calls), and (3) identify the roles played by the triage nurse during and after phone calls (e.g., providing support to parents, consulting with other members of the pain team).

METHODS

Design and Setting

A retrospective chart review was conducted by a registered nurse in an outpatient interdisciplinary chronic pain center at a large Midwestern U.S. children's hospital.

Data Source and Procedure

All phone calls made to the clinic registered nurse were tracked between May 2008 and April 2009. Information regarding each call was documented in patient charts. The following *patient information* was extracted during the chart review: (1) demographic information (e.g., patient/parent gender and ethnicity, patient date of birth), (2) type of pain complaint (e.g., headache, abdominal pain, extremity pain), and (3) reason for the call (e.g., increased pain, medication side effects). The ways in which the *nurse provided support* during the phone call were categorized as follows: (1) reframing the child's pain problem as biopsychosocial in nature (i.e., reviewing the way in which biological, social, and psychological factors influence the experience of pain), (2) providing reassurance and reinforcement of the treatment plan, (3) both 1 and 2, (4) no supportive/psychological intervention, (5) referring the family to a mental health provider, or (6) arranging for the patient's mental health provider to call. *Medication-related outcomes* after the phone call were categorized as follows: (1) change in medication made, (2) dose of current medication increased or decreased, (4) no medication changes made, (5) clinic physician asked to contact the family regarding medication, or (6) a medication prescription provided. *Consultation outcomes* resulting from the phone call were categorized and recorded as follows: (1) the patient's pain team physician was consulted (yes/no) and/or (2) the patient's pain team mental health provider was consulted (yes/no).

The variables just described were extracted from patient medical records. All data were compiled into a deidentified database. Information was coded and all

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