

Lehigh Valley Health Network
LVHN Scholarly Works

Department of Community Health and Health Studies

Understanding Non-Emergent Pediatric ED Visits: Using Hospital and Family Centric Data to Inform System Redesign

Deborah Swavely DNP, RN
Lehigh Valley Health Network, Deborah.Swavely@lvhn.org

Kathy Baker MPH, RN
Lehigh Valley Health Network, Kathy.Baker@lvhn.org

Krista L. Bilger BSN, RN
Lehigh Valley Health Network, Krista_L.Bilger@lvhn.org

David Zimmerman MPH
Lehigh Valley Health Network, david.zimmerman@lvhn.org

Andrew Martin MSN, RN
Lehigh Valley Health Network, Andrew_S.Martin@lvhn.org

Follow this and additional works at: [https://scholarlyworks.lvhn.org/
community_health_and_health_studies](https://scholarlyworks.lvhn.org/community_health_and_health_studies)



Part of the [Community Health and Preventive Medicine Commons](#), [Emergency Medicine Commons](#), [Health Services Research Commons](#), [Nursing Commons](#), [Pediatrics Commons](#), and the [Statistics and Probability Commons](#)

Let us know how access to this document benefits you

Published In/Presented At

Swavely, D., Baker, K., Bilger, K., Zimmerman, D., & Martin, A. (2014, June 8-10). *Understanding non-emergent pediatric ED visits: Using hospital and family centric data to inform system redesign*. Poster presented at: The Academy Health 2014 Annual Research Meeting, San Diego, CA.

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact LibraryServices@lvhn.org.

Understanding Non-Emergent Pediatric Emergency Department Visits: Using Hospital and Family Centric Data to Inform System Redesign

Swavely, Deborah, DNP, RN, Baker, Kathy, MPH, RN, Bilger, Krista, BSN, RN, Zimmerman, David, MPH, and Martin, Andrew, MSN, RN
Lehigh Valley Health Network, Allentown, Pennsylvania

Research Objective

The purpose of this mixed method study was to analyze pediatric Emergency Department (ED) population data to identify a cohort of patients using the ED for non-emergent problems; and within this cohort to understand the determinants of adult caregivers that led to their decision to use the ED.

Study Design

This was an explanatory mixed methods study. The first phase used retrospective quantitative data from the McKesson Horizon Performance Manager database to describe the population and problem. Variables of interest included diagnoses, age, ethnicity, race, insurance, the Emergency Severity Index (ESI) score, and patient services net margin. The Barton Schmitt Triage (BST) Telephone Protocols was used to identify the most appropriate location to receive treatment.

The second phase used qualitative data from semi-structured interviews to develop an explanatory framework for the adult decision making process to use the ED for non-emergent problems. Face-to-face interviews were conducted over six months. The interview data were transcribed into NVivo version 10. A thematic analytic process was used to explore the data, concluding when there was saturation of themes.

Population Studied

Phase 1

Pediatric patients presenting to the ED during 7/1/2011-6/30/2012.

Phase 2

Convenience sample of 23 participants who met the inclusion criteria: caregivers 18 years or older with a child 0-4 years of age, presenting problem of fever, ESI score greater than 3, the ED would not have been the appropriate treatment locale determined by the BST score, and primary language was English or Spanish.

Principle Findings

Phase 1

- 10,505 patients less than 19 years of age visited the ED
- Top two diagnoses were fever at 15.2 percent and cough at 13.9 percent
- Of these patients, 4,299 (40 percent) were less than 4 years of age, 25 percent of whom were diagnosed with fever, with 17 (0.4 percent) admitted to the hospital
- Of the patients less than 4 years of age with an ESI greater than 3 (indicating the least severity of illness) the average PSNM was \$65.21, mean age was 21.7 months and presented to the ED with a mean temperature of 100.7 degrees F. The patients were predominantly insured by Medical Assistance and Hispanic. Upon review of 803 medical records, for 91 percent of these patients the BST "Call 911 or Go to ED" classification did not apply

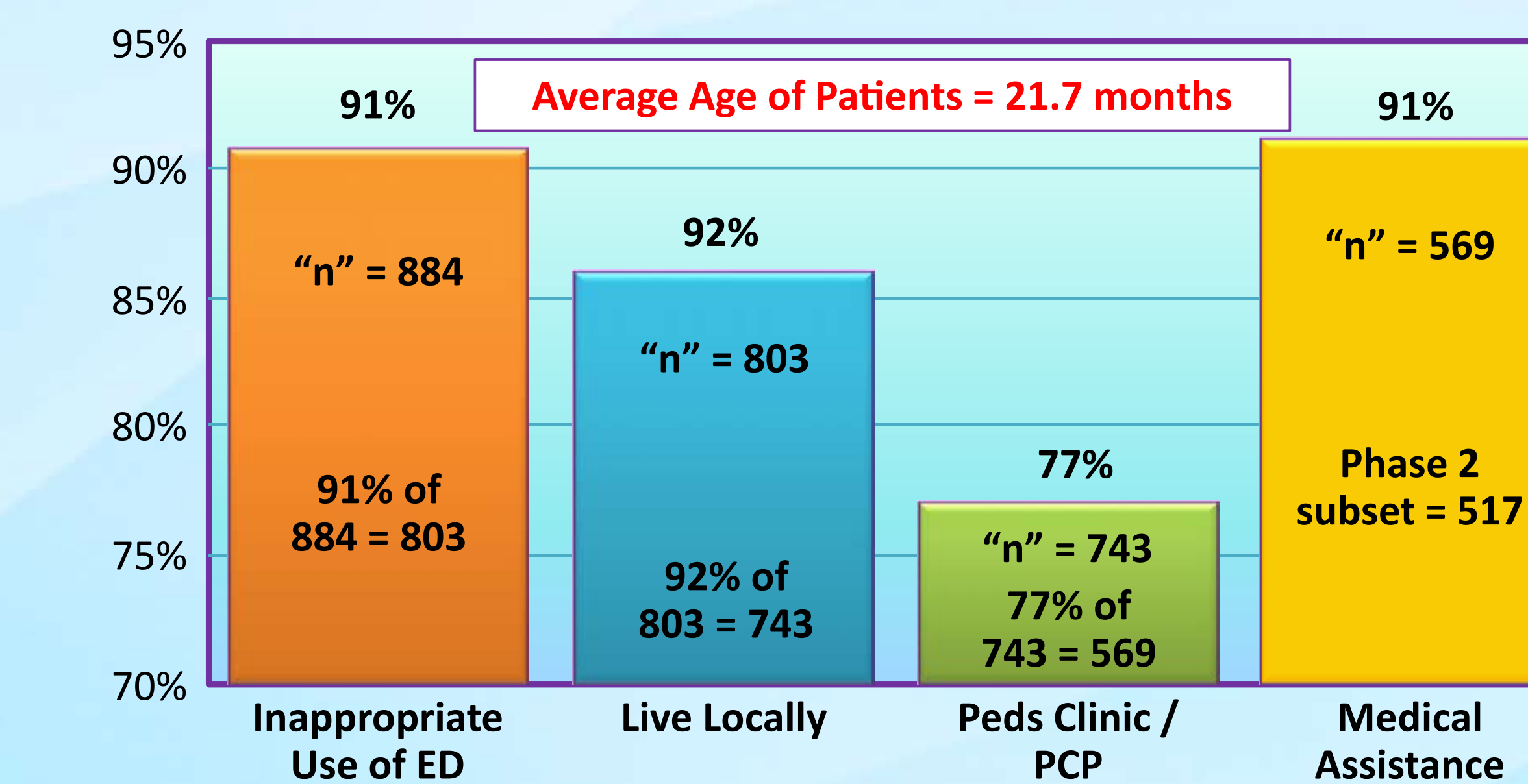
Phase 2

The results of the qualitative data analysis produced three themes:

- 1) Inability to discern an emergent from a non-emergent health condition
- 2) Anticipated or perceived problems with accessing primary care
- 3) Gap between reported relationship with PCP and action taken to go to ED

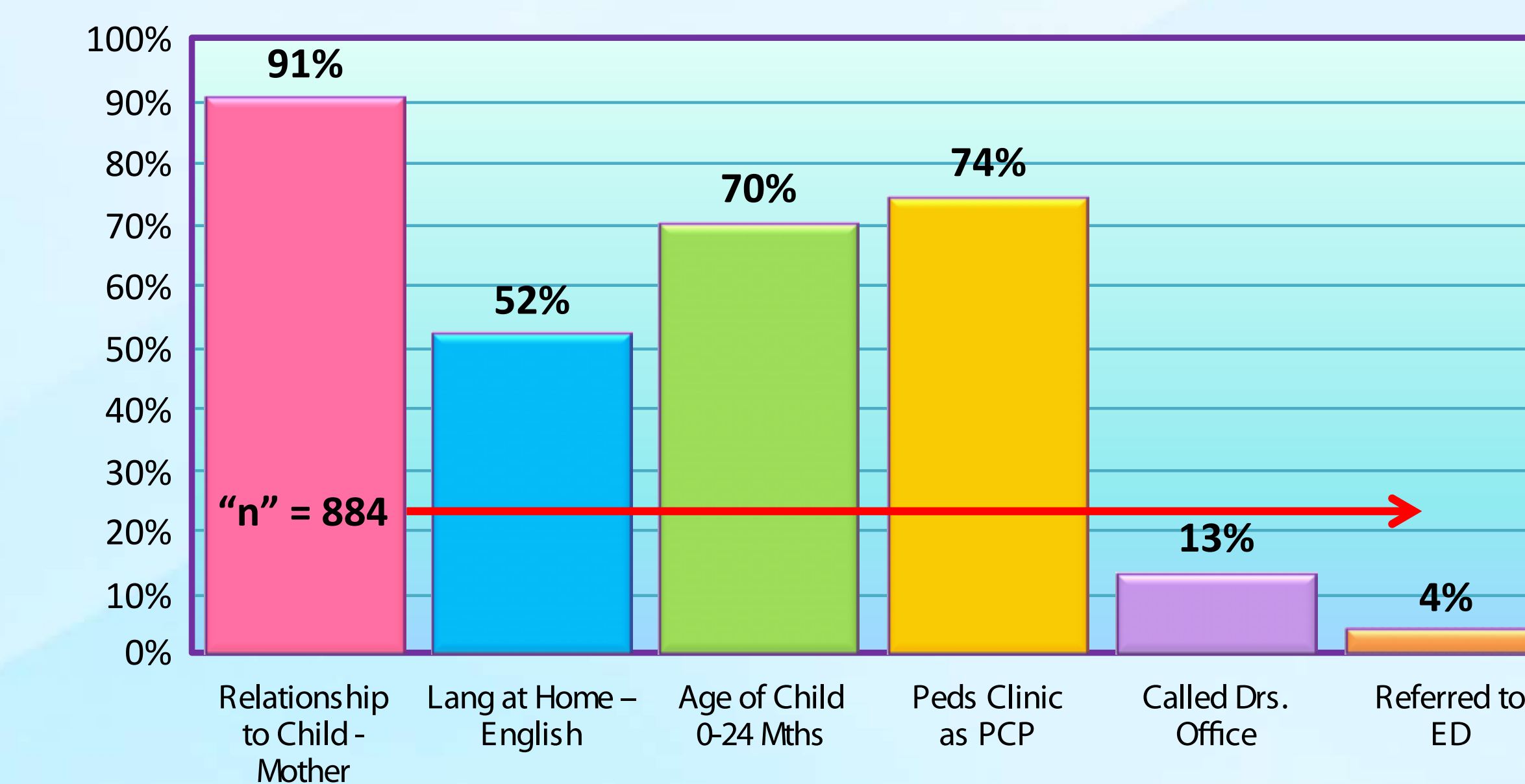
Characteristics of Phase 1 Patients Presenting to the ED

Inappropriate use of Services



Selected Characteristics of Phase 2 Patients Presenting to the ED

Inappropriate use of Services



Conclusions

The first phase revealed a cohort of pediatric patients seen in the ED with a non-emergent problem of fever that had a negative financial impact for the health care organization. Analysis of qualitative data revealed the impact that low health literacy and the relationships and communication between primary care physicians and child caregivers had on healthcare system utilization.

Implications for Practice

The findings from this study guided administrators and clinicians to design an intervention that will address health literacy and patient engagement and communication for socially and economically disadvantaged new mothers.

© 2014 Lehigh Valley Health Network

A PASSION FOR BETTER MEDICINE.™

Lehigh Valley Health Network

610-402-CARE LVHN.org