Lessons Learned From Examining After-Hours Call Patterns

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ABSTRACT

In this study we examine after-hours calls at 2 primary-care, nurse-managed health centers to identify the role and cost saving of having an after-hours call system for averting emergency department (ED) visits. Data were collected over a 1-year period on a standardized template. Fifty percent of the 124 calls averted an ED visit, saving an estimated $19,406. Another 43% of the calls were for non-urgent concerns and only 9 (7%) calls resulted in an ED referral. Findings suggest that a process for documenting after-hours calls can reduce systems costs and improve communication between providers.

Keywords: access to care, after-hours calls, nurse managed health center, primary care

Improving patient access to their primary-care provider outside of regular clinic hours and avoiding unnecessary emergency department (ED) visits has received more attention as one possible strategy to help reduce national health-care costs as part of the Affordable Care Act.[1] Unfortunately, the United States primary health-care system has not been keeping pace with other developing countries in its ability to provide after-hours care.[2] In 2007, there were 116.8 million ED visits made, equating to 39.4 visits per 100 persons.[3] The majority of these patients (64.7%) arrived to the ED outside of regular business hours, meaning they arrived between 5:00 PM and 8:00 AM, on weekends, or on holidays.[3] This high-level use of the ED for non-emergent needs has contributed to ED overcrowding, poor use of resources, and higher health-care costs.[4]

Furthermore, health care provided in a fragmented fashion by various EDs, urgent cares, and primary health-care providers presents the possibility of lost opportunities for patient care, patient education, and primary prevention.[5] Recent studies have shown that patients who reported less difficulty contacting their primary-care practice after-hours had significantly fewer ED visits and a lower rate of unmet medical need than patients who had more difficulty contacting their primary-care provider.[6,7] In this study we examine after-hours calls at 2 primary-care, nurse-managed health centers (NMHCs) to identify: patient characteristics; reason for calls; the role of an after-hours call system in averting ED visits; and cost savings when ED visits were averted.

BACKGROUND ON AFTER-HOURS CALLS

In a systematic review of inappropriate ED use, Carret and colleagues found patients often preferred the ED due to difficulties in contacting or consulting their primary-care provider.[8] Data from 2009 demonstrate a mere 29% of primary-care practices within the United States provided an after-hours arrangement for patients to see a health-care practitioner without having to go to an ED.[9] Thus, many patients are using after-hours call services or going to the ED on their own to meet their health-care needs. Although the burden placed on EDs to provide after-hours minor acute care has been well recognized, less is known about what type of after-hours calls are received or the quality of the care provided within the primary-care sector.[10-12]

Telephone triaging has the potential to allow patients to interface with a health-care provider for counseling and advice as well as the possibility of avoiding unnecessary ED visits, which drive up health-care costs.[13] There has been a rapid expansion of telephone triage by answering systems and on-call systems. One study examining the use of an answering service on patient safety indicated that the majority of practices (93%) required the patient to decide whether the problem was emergent enough to require immediate notification of the on-call physician.[10] Based on these criteria, 50% of the calls that were not forwarded to the on-call physician were determined to be an emergency requiring immediate contact with the physician.[10]

In contrast, a large pediatric study did support the safety of triage by call centers. However, it was noted that under-referral may result in delay of care or suboptimal care.[14] Thus, after-hours calls taken by health-care providers may provide a suitable avenue to address patients' questions and concerns while also maintaining safety and avoiding unnecessary ED visits.

NURSE-MANAGED HEALTH CENTERS

Primary-care NMHCs have a long history of patient-centered care and managing the full range of primary-care issues.[15,16] NMHCs had their origins in community-based care and date back to visionaries such as Lilian Wald in the early part of the 20th century.[17] Schools of nursing have developed NMHCs over the years to provide opportunities for faculty practice, faculty and student research, clinical placement for students, and fulfillment of a community service mission.[15,16] The number of NMHCs is unknown as there is no national tracking of centers, but estimates range between 200 and 300. In a national sample of schools of nursing in 2006, there were close to 200 NMHCs, and that number did not include the numerous other NMHCs not linked with academia.[18] NMHCs are very similar to the federally funded community health centers, serving a similar patient base and including broad services to address access and needs of vulnerable populations.[19] They tend to be located in medically underserved areas, such as public and Section 8 housing developments, schools, churches, community and recreation centers, homeless and domestic violence shelters, and correctional facilities.[20,21] Avoiding unnecessary ED visits and providing immediate support after-hours are key components of primary care, NMHCs, and the patient-centered medical home.[7]

PURPOSE

In this study we examined after-hours calls at 2 academic primary-care NMHCs. The purpose of this study was to examine key components of after-hours calls, including: (a) patients' characteristics (gender, age, and reason/chief concern); (b) level of ED visits averted; and (c) cost savings when ED visits were averted.

METHODS

Study Design

This longitudinal study addressed all after-hours calls in 2 academic NMHCs in the midwestern United States over a 1-year period (January 1, 2011 through December 31, 2011). During the study period, all after-hours calls data were entered by each provider into the electronic record using a standardized template. The template included the following indicators: (a) demographics of the patient (gender and

Figure. On-call note template.

Date:

Time:

Person Calling:

Description of Problem:

Allergies:

Assessment:

Plan:

Medications:

Patient Instructions:

Pharmacy Called (Name, date, time):

Outcome:

[ ] Patient was instructed to go to the Emergency Room/Urgent Care

[ ] Emergency Room or Urgent Care visit was averted by this interaction

[ ] Patient required information or advice only