

pathways for facilitation of evidence- based wound care”, *Biomed Central Health Services Research*, 13(86), pp. 1-10.

19. Bradshaw, M. & Hultquist, B. (2017), *Innovative teaching strategies in nursing and related health professions*. (7<sup>th</sup> Ed.). Jones & Bartlett Learning, Burlington, MA.

(Received: 7/11/2019 - Accepted: 24/12/2019)

---

## **IMPROVING PATIENT OUTCOMES IN POST-ACUTE**

**Dr. Charleen Singh \***, Ms. Lee Thorpe

San Jose Regional Hospital

\* Corresponding author: charby85@hotmail.com

### **ABSTRACT**

**Introduction:** Historically post-acute after hours is managed by providers agreeing to take calls or assigned to a provider or part of the work description. Providers may not like taking calls after hours or call may start at the end of an already long working day. Not having designated providers may contribute to why more patients are sent to the emergency room in the middle of the night than during the day or delay in appropriate therapy. **Methods:** Our groups aim was to decrease the number of patients sent to the emergency room and improve the time between the first antibiotic was given and symptoms started while avoiding an increase in clostridium difficile. The method in how after-hours call was managed was changed. Instead of the providers in the practice taking turns being on call after hours, two designated providers took call as part of the pilot program. The designated providers' on-call had access to the patient chart and did consecutive nights to provide continuity in care. The post-acute care facilities spanned over a 120-mile radius. **Results:** Patients sent to the emergency room during after-hours from the post-acute averaged two patients per week with an average patient load of 2600 patients. There were no post-op readmissions within 30 days during the pilot period. First dose of antibiotics was given within the shift after blood and urine was collected and sent. Establishing partnership with after-hours radiology and vascular access supported the process. There was no incidence of clostridium difficile. **Conclusion:** Having dedicated providers for managing after-hours call can improve patient outcomes in post-acute care.

*Keywords:* Post-acute, antibiotics, emergency room.

### **I. INTRODUCTION:**

The quality of care in post-acute care is at risk related to access to providers [1]. In post-acute care access to medical care providers is limited compared to acute care [1], [2]. The structure of post-acute care does not have in house overnight coverage for acute changes or escalation of chronic illness. Historically post-acute after hours' clinical concerns is managed by on-call providers [1], [2], [3]. These providers either agree to take the call or the provider understands taking rotating calls is part of the work description [3]. The provider may not be familiar with the patient panel, the facility or the staff taking care of the patient. Compounding the issue of lack of familiarity is providers may not appreciate being on-call or call may start at the end of an already long working day [3]. Provider fatigue, lack of familiarity and lack of continuity are variables that impact the quality of patient outcomes [1], [2], [3]. Not having designated providers may contribute to why more patients are sent to the emergency room in the middle of the night than during the day or delay in appropriate therapy.

## **II. METHODS:**

As a quality improvement project we piloted a program that utilized designated after-hours on-call providers. We hypothesized that an after-hours on call program with designated providers would improve continuity in care, increase provider – nursing engagement and avoid provider fatigue by not taking call after an already long work day. These providers only work responsibility was to provide protocol based medical triage and medical management over the phone.

Our groups aim was to decrease the number of patients sent to the emergency room and improve the time between the first antibiotic was given and symptoms started while avoiding an increase in clostridium difficile. The method in how after-hours call was managed was changed. Instead of the providers in the practice taking turns being on call after hours, two designated providers took call as part of the pilot program. The designated providers' on-call had access to the patient chart and did consecutive nights to provide continuity in care. The post-acute care facilities spanned over a 120-mile radius centered on a metropolitan city and into remote areas.

## **III. RESULTS:**

The pilot program lasted six months through the winter season which is also the flu season. During this time the average rate of emergency room sends was two patients per week with no patient falling into the 30-day readmission category. There was no episode of clostridium difficile. Patients in the post-acute care facilities were effectively managed for congestive heart failure exacerbation, chronic obstructive pulmonary disease, pneumonia, and urinary tract infections. Historically the four mentioned diagnoses were reasons to send patients back to the emergency room when their acute changes or change in condition. More chronic patients who had the common cold or not feeling which resulted in not wanting to eat or drink were effectively managed with intravenous hydration. Patients with acute changes related to pain were effectively managed in house. The continuity in provider over several nights meant the provider knew the patients baseline and could closely monitor improvement or acute progression.

## **IV. DISCUSSION:**

Having a program with designated providers to provide after-hours call coverage in the post-acute improved outcomes in our study. We found that designated providers eliminated the provider fatigue issues and improved provider engagement with the post-acute facilities. Nursing staff at the post-acute facility knew who was on-call and established patterns of communication. Hand off between the after-hours on call providers and day providers created fluid continuity of care and continuous monitoring of patients.

The impact of the trial was positive and although healthcare economics was not fully explored we know that preventing emergency room visits by early diagnosis saves dollars and lives [4], [5], [6]. Early diagnosis of common concerns such as urinary tract infections, pneumonia and dehydration prevented the severity of disease and negative sequelae of the disease processes [4], [5], [6]. For rehabilitation patient's early diagnosis of issues meant preventing hospital readmission.

The designated on-call provider model has another benefit which is the provider who is on-call has an expanded purpose. In the traditional on-call the provider's objective is to

manage acute changes in isolation. In the trial model of designated on-call providers the objective shifts from just managing acute changes to managing the patient within the context of quality goals. This shifts the practice to making decisions using algorithms and protocols. The approach to conditions and changes becomes standardized.

Repeatedly scholars demonstrate that a best-practice approach in healthcare results in better outcomes [4], [5], [6]. And the designated on-call provider model which is built around best-practice or protocol approach eliminates the provider bias or provider-specific approach to common conditions.

Limitations: Our trial was limited in several aspects. The trial was over a short period of time and centered around a small demographic region, however, the demographic region is similar to many cities. The pre-implementation data was limited since data was not collected prior to the start of the trial.

## **V. CONCLUSION**

Our trial demonstrated that a designated on-call provider model has the potential to improve outcomes in healthcare. The designated on-call provider model may decrease hospital readmission rates, prevent costly emergency room sends and minimize the impact of illness through early diagnosis and treatment.

**Conflict of Interest:** The authors declare that they have no conflict of interest.

## **REFERENCES**

1. Jones, C. D., Cumbler, E., Honigman, B., Burke, R. E., Boxer, R. S., Levy, C., & Wald, H. L. (2017), "Hospital to post-acute care facility transfers: identifying targets for information exchange quality improvement", *Journal of the American Medical Directors Association*, 18(1), pp. 70-73.
2. Nazir, A., Smalbrugge, M., Moser, A., Karuza, J., Crecelius, C., Hertogh, C., & Katz, P. R. (2018), "The prevalence of burnout among nursing home physicians: an international perspective", *Journal of the American Medical Directors Association*, 19(1), pp. 86-88.
3. Braslow, K. (2016), "Where do you draw the line? Caveats for after-hours call coverage", *Current Psychiatry*, 15(10), pp. 49-51.
4. Herrin, J., St. Andre, J., Kenward, K., Joshi, M. S., Audet, A. M. J., & Hines, S. C. (2015), "Community factors and hospital readmission rates", *Health services research*, 50(1), pp. 20-39.
5. Wasfy, J. H., Zigler, C. M., Choirat, C., Wang, Y., Dominici, F., & Yeh, R. W. (2017), "Readmission rates after passage of the hospital readmissions reduction program: a pre-post analysis", *Annals of internal medicine*, 166(5), pp. 324-331.
6. Boccuti, C., & Casillas, G. (2015), "Aiming for fewer hospital U-turns: The Medicare hospital readmission reduction program", *Policy Brief*.

(Received: 7/11/2019 - Accepted: 26/12/2019)