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Spring 5-28-2022

# Forestalling: Decreasing Super-Utilizers in the Emergency Department Using Case Management Strategies

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### Digital USD Citation

Chambers, Kelly; Gilmartin, Megan; and Narasimhan-Narayanan, Martha, "Forestalling: Decreasing Super-Utilizers in the Emergency Department Using Case Management Strategies" (2022). *Doctor of Nursing Practice Final Manuscripts*. 206.

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UNIVERSITY OF SAN DIEGO

Hahn School of Nursing and Health Science

DOCTOR OF NURSING PRACTICE

FORESTALLING: DECREASING SUPER-UTILIZERS IN THE EMERGENCY

DEPARTMENT USING CASE MANAGEMENT STRATEGIES

by

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A Doctor of Nursing Practice Portfolio presented to the

FACULTY OF THE HAHN SCHOOL OF NURSING AND HEALTH SCIENCE

UNIVERSITY OF SAN DIEGO

In partial fulfillment of the

requirements for the degree

DOCTOR OF NURSING PRACTICE

May 2022

## Abstract

In 2019, it was estimated there were 18 million avoidable emergency department (ED) visits, totaling \$32 billion in unnecessary healthcare spending. Super-utilizers (SU), individuals that seek care in the ED 3 or more times per year, account for a disproportionately large segment of healthcare consumption and costs. These patients inefficiently access the healthcare system and often fail to get the follow-up care that could prevent them from repeat ED visits.

This evidence-based project aimed to reduce unnecessary ED visits by at least 25% annually and have no use of the ED during the intervention period, by implementing social and medical care coordination case management strategies. The intent was to provide follow-up, support, and empower patients to manage their health and keep them out of the ED.

This project was designed using the Blueprint for Complex Care and the IOWA model to promote quality care. The 5 A's framework was utilized for post-discharge phone calls. The interventions included follow-up phone calls at designated intervals to ensure understanding of ED stay, confirm a post-discharge appointment with their primary care provider or specialist, evaluate comprehension of their plan of care and medications, and to assist them in identifying and accessing social or community resources.

Of the ten patients enrolled for the project, two of the patients returned to the ED for care during the intervention. Both patients ended up having psychiatric issues that proved to be significant barriers for comprehension of their medical diagnoses, plan of care, and ability to manage their health. The data did elucidate reductions in ED use is possible among superutilizers, without significant psychiatric issues, using the case management interventions.

Primary care providers should be aware of SU patients in their practice and arrange frequent follow-up to decrease their reliance on the ED for care.

**Key Words:** Super-utilizers, case management, emergency department, emergency services, health services misuse, hospitalization, and medical overuse

Forestalling: Decreasing Super-utilizers in the Emergency Department  
using Case Management Strategies

In 2019, there were an estimated 18 million avoidable emergency department (ED) visits, totaling \$32 billion in unnecessary healthcare spending (UnitedHealthcare Group, 2019). Addressing issues in the ED that could be handled in a primary care setting costs \$1800 more per chief complaint (UnitedHealthcare Group, 2019). Any ED provider can identify patients they encounter who are labeled as frequent fliers or more appropriately as super-utilizers (SU). This category of patients can have different definitions depending on the source, but in general they are people who visit the ED 4 or more times in a calendar year (Hunt, Weber, Showstack, Colby, & Callahan, 2006). These SU patients can often be a source of frustration for healthcare providers because these visits are commonly not emergent in nature and should be handled in a primary care provider's office. It presents an issue to healthcare organizations as well due to ED overcrowding and increased wait times, leading to decreased patient satisfaction.

The question that needed to be addressed is, why do these patients choose to use the ED as if it were a primary care clinic and fail to seek preventative care in a timely fashion? The answer is complicated, multi-factorial, and in some part, a failure of both social support and the healthcare system in general. There are common characteristics identified in this category of patients including those with low socioeconomic status, poor health and chronic illness, and complex physical, behavioral, and social needs (Blumenthal & Russell, 2015; Lin, Blanchfield, Kakoza et al., 2017).

Much research has been done to try and figure out how to avoid repeat ED visits in the SU population. A systematic review done by Di Mauro, Di Silvio, and Laquintana et al. (2019), demonstrated that individualized care plans, with particular emphasis on structured phone

follow-up were effective interventions. Other possible approaches included home visits, scheduling and accompanying patients to their post-ED follow-up visits, medication reconciliation and management, coaching patients in disease-specific self-care, and helping patients apply for social services (Finkelstein, Zhou, Taubman et al., 2020; Lin, Blanchfield, Kakoza et al., 2017).

### **PICOT Question and Search Strategy**

The PICOT (i.e., patient population, intervention, comparison group, outcome, and timeframe) question that guided this EBP initiative was given as: (P) In emergency department patients identified as super-utilizers, who are 18 years of age and older without a psychiatric diagnosis as their primary diagnosis, (I) do follow-up phone calls at designated intervals to ensure understanding of ED stay, ensure follow-up with primary care provider or specialist, confirm understanding of the plan of care and medications, and assist the patient in identifying and accessing social or community resources (C) compared to normal discharge instructions and teaching, (O) result in decreased ED visits by at least 25% (T) annually and no visits during the intervention period.

Twenty-six articles that had a focus on decreasing ED utilization were reviewed using the following key terms: super-utilizers, case management, emergency department, emergency services, health services misuse, hospitalization, and medical overuse within CINAHL, and PubMed.

### **Critical Appraisal of the Evidence**

Using the Rating System for the Hierarchy of Evidence for Intervention/Treatment questions as found in Evidence-Based Practice in Nursing & Healthcare by Bernadette Mazurek Melnyk, and Ellen Fineout-Overholt, all the evidence was appraised. Twelve articles provided

level I ratings, seven articles provided level II ratings, two articles provided level III ratings, one article provided level IV ratings, and two articles each provided level V and VI ratings, none of the articles were level VII. A systematic review of interventions to decrease ED use found that case management utilizing physicians, nurses, psychologists, social workers and/or housing and community resources liaisons were very effective and unsurprisingly, stable housing made a huge impact (Moe, Kirkland, Rawe et al., 2016). The evidence is very clear that a multidisciplinary approach is the most effective at addressing this issue.

### **Implementation**

A stakeholder presentation was performed as required prior to International Review Board (IRB) approval. After appraising the evidence and project plan, stakeholders at Sharp Grossmont Hospital supported the implementation of this new discharge follow-up. The project proposal then proceeded through the required health systems IRB approval prior to implementation. Additionally, IRB approval was obtained through the University of San Diego.

Using the inclusion criteria and Sharp Grossmont Hospital's electronic health record (EHR), 10 patients were identified as candidates for this project. Prior to discharge, each patient was educated on the project plans and consent was reviewed with them and signed. The interventions implemented included the following post-discharge steps: a phone call after 72 hours to determine understanding of the ED stay and ensure the patient had filled appropriate prescriptions and made an appointment with their primary care provider (PCP) or other specialist as indicated in the discharge instructions; a phone call within 1 week of discharge to identify and connect the patient with needed social and community resources. Additionally, phone calls were made after the patients' follow-up visit to their PCP or specialist to ensure understanding of the

treatment plan and purpose of medications. Monthly phone follow-ups were also conducted to assess treatment plan compliance, answer any questions, and offer support.

### **Outcomes**

Due to the unprecedented circumstances regarding the Covid-19 pandemic, this project only allowed for three months of data to be collected. Of the ten enrolled patients, one returned to the ED due to psychiatric needs, which was not the primary diagnosis used for their recruitment, and another patient returned twice and also ended up having significant psychiatric diagnoses. The other eight patients did not return to the ED during the intervention period. Nine of the ten patients were easily contacted at the designated intervals. One patient was not able to be reached after the initial 72-hour follow-up as the phone number that they provided for follow up was no longer in service. 6 out of the 9 contacted patients, followed up with either their primary care provider, or their specialist within two weeks of their visit to the ED. Three of the 10 patients declined help regarding social and community services; however, education was still given regarding the services. These challenges seem to be in line with what was experienced during other interventions. A randomized control trial performed by Finkelstein, Zhou, Taubman et al., (2020) noted patients lack of stable housing or telephone, behavioral health complexities, and lack of available appointments with healthcare providers. Despite the obstacles faced during the intervention, all of the patients who participated expressed gratitude for the increased attention and time spent with them, additional education, and advocacy efforts to help them get their needs met.

This project was only conducted at one facility. However, due to the low cost of the interventions, cost savings of decreasing ED visits, and high transferability, the project could

easily be implemented in other hospital systems and emergency departments across the United States.

Barriers identified during this project included inconsistent phone access, difficulties reaching the patient if they were living in a boarding setting, skepticism and reluctance from patients who may have had a negative experience while in the ED, and availability of appointments with their PCP or specialist.

### **Dissemination**

The findings of this evidence-based project were disseminated to faculty and peers at the University of San Diego DNP presentation day on March 3, 2022. Additionally, the results were presented at a stakeholder meeting at Sharp Grossmont Hospital on March 18, 2022. A poster presentation regarding the project and outcomes was also given at the California Association of Nurse Practitioners (CANP) conference on April 1, 2022.

Although the project was shown to have merit, the hospital is not prepared to implement the suggested changes to the discharge process for SU patients at this time. However, there was an overwhelming positive response at the CANP conference from nurse practitioners who are currently working for insurance companies and are assigned to this exact patient population and are trying to reduce their ED use. Discussing the project with these nurse practitioners provided them with additional resources they were previously unfamiliar with and could use to assist them in their care of SU patients moving forward.

### **Conclusion**

Unprecedented events and time constraints led to this small sample size. However, the data is promising that providing intense case management follow-up after a visit to the ED is helpful in decreasing SU visits to the ED. This could benefit the patients and healthcare

organizations in several ways. Patients would have regular visits with their PCPs to address any issues before they become emergent and get more confident in how to manage their health effectively. Healthcare organizations would benefit from less crowding from these patients being taken care of in the correct setting and preventing exacerbations that could lead them back to the ED, as well as increased patient satisfaction from potentially decreased wait times. There is also the cost-savings aspect of not using the ED as a primary care site.

Future projects should consider a longer follow-up period of 6-12 months to evaluate long-term effects of the interventions. Another consideration would be addressing the psychiatric population of SU patients. It was apparent from this project that significant psychiatric diagnoses present unique challenges in healthcare management. A research review regarding the best interventions specifically for this category of patients should be done and applied in a future project.

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