

READY-JET-GO: SPLIT FLOW ACCELERATES ED THROUGHPUT

Authors: Peter A. Bish, MSN, RN, Mary A. McCormick, MSN, RN, and Mojisola Otegbeye, PhD, Voorhees and Marlton, NJ

CE Earn Up to 9.5 CE Hours. See page 189.

Problem: Struggling to keep up with The Centers for Medicare and Medicaid Services out-patient throughput metrics, an adult emergency department serving Burlington and Camden Counties, New Jersey, sought to redefine its care delivery model by adopting the patient segmentation initiatives of the split-flow process of patient care.

Methods: A multidisciplinary team of ED clinicians collaboratively defined the patient segmentation criteria. A joint assessment team approach to patient care was instituted. A 3-pronged approach was adopted to prepare staff for the patient care changes in line with an existing framework specified by the Institute of Medicine. Simulation and queuing analyses were used to estimate the accompanying resource needs.

Results: Since implementing split flow, the emergency department has witnessed significant improvements in patient

throughput and patient satisfaction, despite a sustained 10% increase in patient volumes after split-flow implementation. The median length of stay for discharged patients and the door-to-diagnostic evaluation time are now down to 112 minutes and 30 minutes, respectively, compared with pre-split-flow values of 192 minutes and 72 minutes, respectively.

Implications for practice: Working collaboratively with all stakeholders to define the right patient care delivery model, combined with an understanding of the right resource assignments to optimally support that care delivery model, an emergency department can institute cost-effective changes to realize and sustain significant patient throughput improvements.

Key words: Patient throughput; Split flow; Patient satisfaction; Joint evaluation treatment; Rapid care.

Introduction

Over the past decade, emergency departments across the United States have witnessed an unprecedented increase in the demand for emergency services.¹⁻⁵ The surge in demand for ED services has served to worsen the overcrowding challenges faced by ED practitioners and managers, leading to many unfavorable consequences. These include pronounced delays in how soon a patient

can be attended to by a licensed ED provider from the time of the patient's arrival to the emergency department. Other fallouts include the increased ED length of stay, the increased rates of patients who leave the emergency department without being seen by a licensed ED provider, and the dwindling satisfaction of patients regarding their ED visit experience. These metrics are reportable data to The Centers for Medicare and Medicaid Services (CMS).⁶

The growing pressure faced by emergency departments across the US to design care delivery processes and infrastructures that can keep pace with their rapidly shifting patient demands has led to an explosion of remediation proposals from ED practitioners and researchers alike.⁷ Some of the most widely embraced ED patient care delivery improvement initiatives have been those designed around the concept of patient segmentation.^{7,8} One of the most prominent of such patient segmentation initiatives is Banner Health's Door-to-Doc (D2D) split-flow design (Banner Health, Phoenix, AZ).⁹ Under Banner Health's D2D design, patients are classified as 1 of 2 types: the "less sick" patients who only need a brief treatment and can be kept dressed and ambulatory, thereby freeing up the much needed bed space for the "more sick" patients who are more

Peter Bish, *Member, ENA South Jersey Chapter 025*, is Advanced Nurse Clinician-Unit Based Educator, Virtua Voorhees Emergency Department, Voorhees, NJ.

Mary McCormick, *Member, ENA South Jersey Chapter 025*, is Nursing Director, Virtua Voorhees Emergency Department, Voorhees, NJ.

Mojisola Otegbeye is Management Engineer, Virtua, Marlton, NJ.

For correspondence, write: Peter Bish, MSN, RN, Virtua Voorhees Emergency Department, 100 Bowman Dr, Voorhees, NJ 08043; E-mail: pbish@virtua.org.

J Emerg Nurs 2016;42:114-9.

Available online 8 August 2015
0099-1767

Copyright © 2016 Emergency Nurses Association. Published by Elsevier Inc. All rights reserved.

<http://dx.doi.org/10.1016/j.jen.2015.06.003>

likely to be admitted to the hospital. Banner Health reported that since implementing the split-flow design, there has been significant positive impact on the throughput times for patients who were treated and released.

Since Banner Health's results were publicized, emergency departments across the country have adopted different variations of the split-flow model to fit their unique patient flow needs.¹⁰ Our extensive literature search on the split-flow patient care process did not yield any peer-reviewed article that completely spells out the behind-the-scenes details that went into the successful planning, implementation, and sustenance of the split-flow design. Filling this void in the literature is what we seek to accomplish by sharing our split-flow journey from conception through the preparation and implementation stages, leading up to the significant improvement outcomes we have realized since going live with the split-flow process.

Virtua Health System is composed of 5 campuses. Our emergency department is located in Voorhees and is a non-teaching, community-based facility. Before implementing split flow, our emergency department was configured as a 47-bed unit that included 12 beds in a fast-track area that treated patients with an Emergency Severity Index (ESI) rating of 4 or 5 between 11 AM and 1 AM, 7 days per week. The remaining 35 beds in the main area of the emergency department were for the treatment of patients with an ESI rating of 1, 2, or 3 for 24 hours per day, 7 days per week. The Voorhees Emergency Department has a separate Pediatric Emergency Department that was not included in this process. At the time before our implementation of split flow, the adult emergency department typically saw an average of 133 patients per day, or 48,000 patients per year.

Our emergency department struggled to keep up with The CMS metrics of "median arrival-to-departure time for discharged patients" of 135 minutes and "door-to-diagnostic evaluation time" of 28 minutes.⁶ Team Health, the employer for the emergency department's physicians and physician's assistants, approached us with the split-flow concept at that time. Our ED leadership team is composed of the nursing director, the medical director, 3 assistant nurse managers, the assistant medical director, and the advanced nurse clinician. We decided to introduce the concepts of the split-flow throughput process to the ED staff in the fall of 2013 with the goal of transitioning from the traditional triage practice to the split-flow process by the second quarter of 2014. The task of preparing the education and ensuing change in culture was conducted according to an existing framework that we obtained from the Institute of Medicine (IOM) and includes 6 quality domains.¹¹

Methods

DEFINING SPLIT-FLOW PROCESS

In the split-flow process, ambulatory patients are seen by a triage nurse who performs a modified version of traditional triage. The nurse obtains vital signs and a chief complaint and asks the patient about associated symptoms and comorbidities. Recently, we added additional, mandatory questions to this abbreviated interview about recent travel to West Africa for Ebola screening purposes. The goal of the abbreviated triage interview is for the nurse to separate patients who are "sick" from those who are "not sick." The ESI is a 5-level tool that prioritizes patients according to acuity and the number of resources that will be needed for the patient care process.¹² Patients with conditions that are categorized as priority 4, such as simple orthopedic injuries, or priority 5, such as simple rashes, are sent to a Rapid Care treatment area, formerly known as fast track. Patients who are deemed sick, such as those with chest pain or who will likely be admitted to the hospital, are categorized as priority 1, as priority 2, or as priority 3 horizontal and go directly to open beds in the main emergency department. The care for these sick patients follows the traditional treatment process. Patients who are considered not sick but are lower-level priority 3 are categorized as priority 3 vertical² and go directly to a dedicated split-flow treatment area.¹³ The Voorhees ED leadership team named this area the Joint Evaluation Treatment (JET) area. Patients who are treated in the JET area are seen by a team composed of a physician, 2 registered nurses, and a patient care technician. Patients tell their full story once to the team while testing and treatment are initiated. Once treatment has been initiated, patients walk to an adjacent area called JET Continuing Care (CC), where they wait for results and are then discharged.¹⁴ The inclusion and exclusion criteria for the horizontal versus vertical patient were developed in line with recommendations from Team Health, and we worked with our ED medical director to customize the criteria for our patient population. Patients who were considered vertical had to be able to sit up. However, the need to lie down for a procedure, such as a vaginal examination, did not automatically exclude the patient from a vertical designation. The goal was to keep patients moving from the JET intake area to the JET CC area to discharge in an expeditious manner. The [Figure](#) details a high-level view of the split-flow process.

PREPARING FOR SPLIT-FLOW CHANGES

Once we confirmed that the split-flow process and our goals in the Voorhees Emergency Department supported IOM's 6 quality domains, we developed criteria for inclusion and exclusion and prepared education for the staff. Our first step

Download English Version:

<https://daneshyari.com/en/article/2609788>

Download Persian Version:

<https://daneshyari.com/article/2609788>

[Daneshyari.com](https://daneshyari.com)