Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

American Journal of Emergency Medicine 57 (2022) 164–165

Contents lists available at ScienceDirect

American Journal of Emergency Medicine

journal homepage: www.elsevier.com/locate/ajem

'Swab and Go' impact on emergency department left without being seen rates

Coronavirus disease 2019 (COVID-19), along with its multiple viral variants, has caused significant fluctuations in volumes seen in emergency departments (ED) [1-3]. Most notably, during the spring of 2020, EDs in the United States were experiencing decreases in volumes upwards of 40% [3]. However, volumes are rapidly recovering from peak pandemic levels [4,5]. For example, in our large academic ED located in a major urban area, our 2021 volume has already exceeded that of 2020 by 11%. This has produced strains on local resources and contributed to a doubling of the left without being seen (LWBS) rate, which has historically been around 1% (1.1% in 2019 and 0.9% in 2020). As a response, our ED implemented a 'Swab and Go' system for patients who were asymptomatic or mildly symptomatic, declined a medical screening exam by a physician, and only wanted to be tested for COVID-19 (i.e., to self-quarantine, foreign travel purposes, exposure to known positive, etc.). This process, while implemented, staffed, and operated by the ED, attempts to mirror the COVID-19 screening operations being performed in the greater metropolitan area. The authors of this study sought to determine the effects of local 'Swab and Go' implementation on the LWBS rate. For reference, previous studies have suggested a national LWBS median rate of 2.4–2.6% [6,7].

This study was reviewed by our regulatory office and determined to be exempt from institutional review board oversight. The authors searched within the ED's electronic medical record (EMR) system, T-System EV™, from January 1, 2021 to August 26, 2021 and from August 27, 2021 to November 1, 2021, correlating to before and after 'Swab and Go' implementation, respectively. For each study period, we determined the total number of patients encounters, discharges, and LWBS as well as COVID-19 related visits, discharges, and LWBS. COVID-19 related visits were determined by chief complaints that included: COVID-19, fever, cough, congestion, shortness of breath, known exposure, and request for testing. Furthermore, we obtained demographic information for patients who underwent the 'Swab and Go' protocol, to include mean age, sex, and total length of stay.

For the period prior to 'Swab and Go' implementation, our ED saw 47,755 patients, of which 76.1% (36,321/47,755) were discharged, with a 2.2% (1042/47,755) LWBS rate (Table 1). During this period, 14.6% (6950/47,755) of visits were related to COVID-19, of which 84.6% resulted in discharge (5878/6950), with a 4.5% (309/6950) LWBS rate. For the period after 'Swab and Go' implementation, our ED saw 14,487 patients, of which 79.3% (11,481/14,487) were discharged, with a 2.0% (289/14,487) LWBS rate. During this period, 16.3% (2361/14,487) of visits were related to COVID-19, of which 91.6% (2162/2361) resulted in discharge, with a 2.2% (53/2361) LWBS rate. During the implementation period, 6.3% (917/14,487) of patients underwent the 'Swab and Go' protocol, of which 55.0% (504/917) were male (Table 2). The mean age of patients electing for 'Swab and Go' was 31.9 years old, and the mean length of stay was 22 min. When comparing study periods, our ED experienced an 8.6% and 49.5% relative reduction of LWBS rates in all and COVID-19 related patients, respectively. This translates to a 0.19% [95% CI -0.08–0.45] absolute reduction of the LWBS rate in all patients and 2.20% [95% CI 1.43–2.97] absolute reduction of the LWBS rate in COVID-19 related visits. We hypothesize that the smaller sample size after 'Swab and Go' implementation is contributing to underpowering in the comparison of LWBS rate in all patients.

However, this study has several limitations. Due to limitations in the EMR, the authors were unable to determine the effects of the 'Swab and Go' protocol on the mean ED length of stay for all patients and were only able to extract length of stay data on patients who underwent the protocol. Furthermore, we were unable to obtain more granular data, such as LWBS rates on specific days of the week or hours of the day, although we anticipate that the protocol implementation would likely have the largest benefit on the busiest times in the ED. Finally, though our academic ED treats civilian patients and serves as a regional trauma center, we are governed as a military treatment facility (MTF) and the implementation of similar protocols at non-MTFs may be difficult, limiting this study's generalizability. Nevertheless, our study demonstrates a successful initiative by our ED to rapidly adapt to recovering pandemic volumes and an increase in patient LWBS rates.

Table 1
Patients encounters and left without being seen (LWBS) in all ED patients and COVID-19-only associated encounters.

	Before 'Swab and Go'	After 'Swab and Go'
Total Patients	47,755	14,487
Total LWBS	2.18% (1042/47,755)	1.99% (289/14,487)
COVID-19 Related Encounters	14.55% (6950/47,755)	16.30% (2361/14,487)
COVID-19 Related LWBS	4.45% (309/6950)	2.24% (53/2361)

Table 2
Demographics of patients electing for 'Swab and Go' protocol.

Total 'Swab and Go' Patients	917
Males	504 (55%)
Females	413 (45%)
Mean Age	31.9 years old
Mean ED Length of Stay	22 min

Funding

None.

Disclaimer

The opinions reflected in this manuscript are those of the authors alone and do not reflect those of the United States Air Force, United States Army, Department of Defense, or Federal Government. All

https://doi.org/10.1016/j.ajem.2021.11.043
0735-6757/Published by Elsevier Inc.

authors equally contributed to the creation of this manuscript, have no financial disclosures, and did not receive any external funding.

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