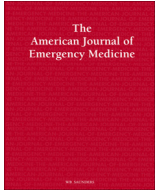




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To-go medications as a means to treat discharged emergency department patients during COVID-19



Keywords:
COVID-19
Prepackaged medications

The Coronavirus Disease 2019 (COVID-19) pandemic has created unique challenges for emergency care providers and patients alike. While the rise in COVID-19 patients requiring inpatient care has led to overcrowding in some emergency departments (ED), discharging stable patients from the ED has also become more complicated in the COVID-19 era [1]. Prior to COVID-19, patients often used EDs for low acuity conditions (e.g., asthma, cellulitis, urinary tract infection) that are treatable with short courses of outpatient medications. While many patients with COVID-19 can be treated as outpatients, they are strongly advised to self-isolate, making access to outpatient resources – including medications – more challenging.

Common barriers to filling prescriptions include cost, transportation, and pharmacy wait times [2] [3] [4] [5]. These are now compounded by pharmacy closures, widespread illness, and social distancing. Furthermore, the COVID-19 pandemic spurred an increased demand for many medications used to treat respiratory disease and infection [6]. Failure to obtain prescribed medications can lead to prolonged disease course, worsening conditions that prompt subsequent ED visits, and/or hospital admissions. However, asking patients to visit a public pharmacy to obtain medications raises the risk of increased contact and transmission of COVID-19 in the general population [7], particularly given the high prevalence of asymptomatic COVID-19 cases [8]. Providing patients with full courses of pre-packaged medications for simple conditions has the potential not only to improve medication access and prevent return ED visits [9], but also to minimize risk of COVID-19 transmission within the general population.

In this work, we present a potential solution to enhance patients' access to medications during the COVID-19 pandemic, while eliminating the need for patients to collect medications at public pharmacies, thus reducing risk of infection transmission.

In a large, urban, academic medical center ED, we implemented a “to-go” medications program to discharge patients home safely with prescribed medications in hand, based on an earlier program at another institution [9]. This project was undertaken as a Quality Improvement Initiative at our hospital, and as such, was not formally supervised by the Institutional Review Board per their policies. Through this program, providers identified patients with the following common conditions who were clinically appropriate for discharge:

- Asthma
- Cellulitis
- COPD

- Pneumonia
- Urinary tract infection

Patients with these conditions received pre-packaged to-go medications in the ED prior to discharge. Before COVID-19, only patients felt to be at increased risk for being unable to obtain medications were eligible for the to-go medications program. However, during the COVID-19 pandemic, all patients being discharged with the above conditions were deemed eligible to receive to-go medications.

In February 2020, prescribing and dispensing providers received in-person training and informational emails about the to-go medications program. From March 16, 2020 to April 30, 2020, a period leading up to and including the peak of COVID-19 presentations in our ED, patients with the above conditions deemed clinically appropriate for discharge received prepackaged to-go medications while in the ED. Medication ordering was facilitated by a specific order set in the electronic medical record. The medications were stored in the ED's automated medication dispensing system, obtained by nurses, and provided free of charge to patients. Those who received the pre-packaged medications also received individually tailored discharge instructions written by their prescribers. For all visits in which patients received to-go medications, the above conditions were recorded as the discharge diagnoses using the International Classification of Diseases, Tenth Revision (ICD-10). Monthly to-go medication reports were generated through the electronic medical record and linked to patient visits.

Patients receiving to-go medications were not routinely tested for COVID-19, as the availability of testing and institutional testing criteria were evolving over the period of the intervention.

A total of 63 patients from March 16 to April 30, 2020, were discharged with to-go medications during the first six weeks of the COVID-19 pandemic surge in our ED. This also coincided with initial implementation of the program. The specific medications dispensed are listed in Table 1, which largely covered pneumonia-like illness common during the pandemic.

The COVID-19 pandemic is likely to exacerbate existing barriers to accessing prescribed medications after ED visits, especially for vulnerable populations. We therefore expanded an established protocol to discharge patients safely with medications in hand. Not only does this process have the potential to improve medication adherence, reduce ED visits, and decrease indirect economic costs associated with patients waiting for medications, it may also help reduce infection transmission by preventing patients from needing to visit pharmacies where they might contract or spread COVID-19. We recommend that other EDs consider this model to promote social distancing and help protect both patients and the public during the COVID-19 pandemic.

Author contributions

MFM, ANC, JJB and BDH developed the paper concept and drafted the manuscript. SL, FZD, PG, JES, MSK developed the program and provided critical revisions of the manuscript. ASR supported the program and provided a critical revision of the manuscript.

Table 1
To-go medications administered.

Time period	Medications administered	N (%)
March 16–April 30	Azithromycin	12 (19%)
	Cefuroxime	20 (32%)
	Doxycycline	23 (37%)
	Ibuprofen	1 (2%)
	Prednisone	2 (3%)
	Nitrofurantoin	2 (3%)
	Sulfamethoxazole/trimethoprim	3 (5%)
Total		63 (100%)

Financial support

None.

Conflicts of interest

None.

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12 May 2020

Available online xxxx

<https://doi.org/10.1016/j.ajem.2020.05.095>

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