Prioritizing patient care during the COVID-19 pandemic: A data-driven approach

Aaron Glick DDS1 | Krishna Kumar Kookal MS2 | Muhammed F. Walji MS, PhD2,3 | Sophia G. Saeed DMD1

1 Department of General Practice and Dental Public Health, UT Health School of Dentistry at Houston, Houston, Texas, USA
2 Technology Services and Informatics, UT Health School of Dentistry at Houston, Houston, Texas, USA
3 Department of Diagnostic and Biomedical Sciences, UT Health School of Dentistry at Houston, Houston, Texas, USA

Correspondence
Aaron Glick, DDS, Clinical Assistant Professor, Department of General Practice and Dental Public Health, UT Health School of Dentistry at Houston, Houston, TX, USA 77054.
Email: Aaron.R.Glick@uth.tmc.edu

1 | PROBLEM

U.S. dental schools abruptly halted clinical care in March 2020 due to the COVID-19 pandemic. As restrictions for elective care were lifted in May 2020, the problem our dental school faced was prioritizing which patients would be seen using only a limited number of clinical spaces that were deemed safe.

2 | SOLUTION

First, we implemented a “consolidated care clinic” model where providers were scheduled to deliver direct patient care in a shared, limited clinical space during the reopening. This “clinic” had 6 enclosed rooms and 22 operatories across a few different clinical spaces within the school; it was open from 8:30 am–4:30 pm 5 days a week and staffed by faculty members from all departments. In accordance with guidance from the university’s safety experts, all treatment involving a handpiece had to be completed in an enclosed room. Equipment, instruments, and supplies for all disciplines were easily available, as the pre-COVID model for faculty practice was multidisciplinary.

Next, various stakeholders helped identify key factors to consider for prioritizing which patients to schedule. The main categories included (1) medical risk, (2) urgency of need, and (3) likelihood to present for an appointment. A detailed electronic health record (EHR) query was executed for all 3 categories.

1. For medical risk, the Centers for Disease Control and Prevention (CDC)’s guidance was used to identify patients at higher risk for severe illness of COVID-19.
2. For urgency of need, the type and number of treatment codes that were “in process” or “planned” and the days since the last emergency visit were considered.
3. For likelihood to present, we considered the number of missed appointments and the date of the last missed appointment.

Additional demographic information, such as home clinic and assigned provider, were also needed. Data from these categories were extracted from the EHR and the 3 categories were rated based on priority. A list of patients was distributed by email to each department chair with further instructions on interpreting the data. The goal was to complete as much “in process” and “planned” treatment as possible for patients with low medical risk.

3 | RESULTS

The dental school clinics collectively had 11,293 patients with treatment that was “planned” or “in process” since January 2019. General practice, prosthodontics, and endodontics had a large volume of patients with “in
process” treatment, so patients with “planned” procedures were not included on the lists provided to those departments. Conversely, pediatric dentistry, oral surgery, and periodontics had few patients with “in process” treatments; they were therefore provided a list of patients who had both “planned” and “in process” treatment. The final number of patients on the lists sent to the department chairs was 3392.

After 5 weeks, significant headway was made in achieving the goal of completing “in process” treatment. Of the 3392 patients, 797 (24%) have already been seen in the “consolidated clinic.” While some “in process” treatments, such as crowns, were completed, other “in process” treatments, such as orthodontics, space maintainers, and removable prosthodontics, remain “in process” as part of a longer-term treatment plan. Some patients from the list who requested appointments were encouraged to defer care due to underlying conditions that would put them at high risk for severe illness with COVID-19. An additional 773 patients of record, not on the list provided to the department chairs, were also seen during this time period due to urgent needs. Patient care during this time period was primarily problem-focused and treatment-focused.

Through the process of patient stratification, we learned that more effective dissemination of the data through individual meetings could have further enhanced understanding by the department chairs and the scheduling team for using the data.

In addition, while the data-driven approach was useful for providers and staff to help identify patients with needs, we found that the approach must be complemented with the human aspect of patient care to have the greatest impact.

**REFERENCE**

1. Coronavirus Disease 2019 (COVID-19): People Who are at Increased Risk for Severe Illness. 2020. Centers for Disease Control and Prevention Web site. https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-at-higher-risk.html. 2020. Accessed June 22, 2020.

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