

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.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. determined that continued DBP fellow training was a priority. The hospital system provided no guidance about maintaining teaching in the TH environment where faculty and fellow were not co-located. Extant literature offered limited information about evaluated supervision of medical trainees during TH visits, focusing on medical students¹ or intensive care environments.^{2,3}

APPROACH

Our innovative fellow training model began with a challenge: faculty had to engage simultaneously, in learning and teaching TH. We utilized an educational framework rooted in experiential learning, quickly identifying 3 predominant strategies: 1) faculty and fellow paired for entire TH visit; fellow led the visit, faculty observed; 2) for each TH visit, we added time for focused "pre-brief" and "de-brief" discussions; and 3) during visits, we capitalized on observation of patients at home. An additional challenge was that the existing TH platform did not support multiparty functionality. Therefore, we experimented with other video communication strategies to ensure that multiple individuals (eg, fellow, faculty, interpreters) could simultaneously participate in TH visits.

Outcome measures. To assess maintenance of fellow clinical experience, we calculated number of remote TH visits conducted by faculty and the proportion of those visits led by fellows. We gathered fellow and faculty perspectives regarding advantages and disadvantages of "tele-training." End of April, 2 focus groups were conducted (Group 1 faculty n = 7; Group 2 fellows n = 4). The semistructured discussions were audio recorded, transcribed, and analyzed using inductive content analysis.

OUTCOMES TO DATE

After 1 month, 324 remote TH physician visits were completed, with 101 visits led by fellows and supervised by faculty (31%). Visit number was comparable to the same period in 2019.

Results of qualitative analyses. Three themes represented shared beliefs of fellows and faculty:

- (1) The nature of supervision changed. Faculty observed fellows intensively, without interrupting. The new format spotlighted fellow skills in communication, organization, and transitions.
- (2) Feedback was enriched. New opportunities emerged

for confidential feedback during the visit (using chat features) and after the visit (using planned de-brief time). Feedback content was informed by faculty's ability to take notes unobtrusively.

(3) Unexpected opportunities for fellows to observe and practice skills have emerged: leadership, flexibility, timeliness prompted by technological demands, and problem-solving.

Two themes highlighted <u>differing perceptions</u> of fellows and faculty:

- (1) Faculty expressed concerns, not endorsed by fellows, about possible disadvantages of tele-training, including fellow perceptions of lost autonomy, heightened scrutiny, decreased collegiality.
- (2) Fellows had increased awareness of clinical advantages of TH visits (eg, seeing patient's home environment, concentrating attention to clinical priorities), not mentioned by faculty.

NEXT STEPS/PLANNED CURRICULAR ADAPTATIONS

We will re-assess faculty and fellows after extended experience with remote TH and tele-training, to determine the degree to which important themes continue or change. Based on this experience, we will include ongoing TH in clinical care and a robust training in TH for future fellows, even as in-clinic visits resume.

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Patient and Family Centered (Tele)rounds: The Use of Video Conferencing to Maintain Family and Resident Involvement in Rounds



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PATIENT AND FAMILY Centered Rounds (PFCR) is an invaluable element of the care of a hospitalized child that has been shown to improve patient outcomes and trainee education.^{1,2} The COVID-19 pandemic has led to social distancing requirements and personal protective equipment (PPE) shortages that caused many institutions to modify rounds. Initial modifications within our institution included a movement away from bedside PFCR and toward table rounds with asynchronous discussions. There was a concern these modifications excluded patients/families and decreased resident involvement in clinical management/communication which could negatively impact patient care and resident education. There was therefore a need to identify ways to maintain core PFCR principles within the COVID-19 limitations.

APPROACH

Core principles of PFCR that we sought to maintain included: 1) engaging with patient/family, 2) promoting resident autonomy and involvement in clinical management/communication, and 3) preserving efficiency. We implemented Patient and Family Centered Telerounds (PFCT) using video conferencing to conduct secure virtual meetings with the family and interprofessional team. One team member joined the patient/family in the patient room using an iPad to virtually meet with other team members including other residents, nurses, and consultants who joined from various distant locations on and off campus. Traditional PFCR presentations occurred which were resident led, allowed all team members to see the patient and relevant exam findings, and provided an opportunity for real-time discussion with team members and family. An iterative process was used to adapt the workflow based on feedback to most closely mimic normal state PFCR and optimize efficiency while social distancing and preserving PPE.

Outcomes were assessed using structured interviews of families by a trained rounds coach to determine: 1) the frequency of PFCT, 2) family preferences regarding rounds format, and 3) qualitative feedback about PFCT.

OUTCOMES TO DATE

A trained rounds coach conducted fifteen family interviews following rounds. Of those patients, 80% (n = 12) experienced PFCT. Thirteen percent (n = 2) involved table rounds and 7% (n = 1) were rounds that occurred in the hall separate from the patient. Families reported it was extremely important they be included on rounds (median 10 on 10-point Likert scale, interquartile range (IQR) 0) and that it was important for the family and team to see one another on rounds (median 8 on 10-point Likert scale, IQR 5). Families rated their overall PFCT experience as outstanding (median 10 on 10-point Likert scale, IQR 0). Strengths included making the experience feel more personal, the ability to see familiar faces and assess body language, and the opportunity for residents to present directly to families.

Modifications made based on feedback included ensuring teams were comfortable using technology, utilizing headphones to overcome difficulty hearing when wearing PPE helmets, and scripting that informed families about PFCT.

NEXT STEPS/PLANNED CURRICULAR ADAPTATIONS

Next steps include additional assessments of PFCT including comparing the educational effectiveness and length of PFCT to in-person PFCR. We are also identifying ways PFCT could be utilized in the post COVID era including involving off-site team members and families who are not able to physically join rounds.

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