Assessing Residents’ Confidence Perception in Their Medical Knowledge and Skills Development. During a COVID-19 elective rotation.

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Introduction

Background: The COVID-19 pandemic presents many challenges for medical education (1). Particularly, the need for self-quarantine after an expositional risk, to prevent further disease transmission. Many residency programs were forced to develop creative strategies to continue the educational activities in those who needed to quarantine (1,2). The Learning in the Time of COVID-19 (LTOC) Rotation was a 2-week rotation created by the Texas Tech University Health Sciences Center at El Paso (TTUHSC-EP) Pediatrics Residency, for quarantined residents. The elective allowed them to continue their training using diverse resources, including journal clubs, multimedia (e.g., podcasts), topic reviews, and board prep material (Fig 1). These resources focused on the main topics of the rotation they were supposed to be. Given that the SARS-COV-2 transmission has not been halted and further transmission peaks are expected (3), it becomes necessary to assess the quality of the rotation, as more residents might have to self-quarantine moving forward. Purpose: To assess if the LTOC rotation is satisfactory for the residents in place of a traditional rotation and if its inherent lack of patient exposure has a negative effect on the resident’s learning confidence and skills development.

Methods

Participants: Quarantined Residents due to COVID-19 exposure during their Wards rotation were chosen and compared to a group of residents that completed their Wards rotation before the COVID-19 pandemic. A survey (Fig 2) asking about their perceptions of the confidence gained in developing medical knowledge and skills while attending Wards or the LTOC rotation was given to the participants with their personal information remaining confidential. The resident satisfaction with the learning objectives of the rotation was also assessed. Analysis: A self-response questionnaire was developed that included questions using a Likert scale with answers from 1 to 5. The questionnaire was intended to determine the acceptability of the questions. The COVID and Wards groups were compared using an t-test. Meanwhile, differences in confidence level before and after each rotation were analyzed using a paired t-test. Statistical analyses and graphs were made using GraphPad Prism 8.0 software (GraphPad Software, San Diego, CA).

Abstract

Assuring quality medical education of residents is a challenge during the COVID-19 pandemic, as residents need to self-quarantine in response to COVID-19 transmission. To this end, an elective called LTOC that allowed the residents to continue their academic training while quarantined was introduced in our residency program. This study examined the residents’ confidence perception in their medical and professional skills development, doing the LTOC rotation when compared to residents that did a regular rotation, before the pandemic. We found a significantly higher level of satisfaction and confidence in their medical knowledge in the residents that took the LTOC rotation. There were no significant differences in the confidence on their communication and treating patients skills or professional habits. Our study indicates that it is possible to provide residents in quarantine with a successful academic experience with structured learning. Participants: Quarantined Residents due to COVID-19 exposure during their Wards rotation were chosen and compared to a group of residents that completed their Wards rotation before the COVID-19 pandemic. A survey (Fig 2) asking about their perceptions of the confidence gained in developing medical knowledge and skills while attending Wards or the LTOC rotation was given to the participants with their personal information remaining confidential. The resident satisfaction with the learning objectives of the rotation was also assessed. Analysis: A self-response questionnaire was developed that included questions using a Likert scale with answers from 1 to 5. The questionnaire was intended to determine the acceptability of the questions. The COVID and Wards groups were compared using an t-test. Meanwhile, differences in confidence level before and after each rotation were analyzed using a paired t-test. Statistical analyses and graphs were made using GraphPad Prism 8.0 software (GraphPad Software, San Diego, CA).

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Conclusions

The significantly higher satisfaction with and confidence in medical knowledge in the LTOC rotation highlights the need to emphasize structured academic activities. The higher satisfaction with learning and board preparation could be explained as the LTOC rotation only comprises academic activities. At the same time, regular rotators have to do patient care and administrative activities, which might explain the decreased confidence in treating patients and communication skills. There were no changes regarding professional skills, and there were no changes induced by the rotations, indicating that these could be intrinsic characteristics of the residents.

Our study indicates that it is possible to provide residents with a successful academic experience if they need to be self-quarantined with a structured elective that focuses on their learning needs.

References