

ORIGINAL ARTICLE

## Juggling Between Paperwork and Patient Care: How Residents View Their Time Division in Clinical Training?

Faezah Siddiqui<sup>1</sup>, Ali Awais Malik<sup>2</sup>

1: Pak Red Crescent Medical and Dental College, Kasur, Pakistan.

2: King Fahad Armed Forces Hospital, Jeddah, Saudi Arabia.

**Correspondence to:** Dr. Faezah Siddiqui, Email: [faeexahsiddiqui8@gmail.com](mailto:faeexahsiddiqui8@gmail.com), ORCID: [0000-0003-2583-8064](https://orcid.org/0000-0003-2583-8064)

### ABSTRACT

**Objective:** The objective of this study was to explore residents' perception of time they spend on clinical data and patient care.

**Methods:** A cross-sectional study, utilizing a validated questionnaire was conducted in July 2019 at the King Fahad Armed Forces Hospital, Jeddah after gaining ethical approval. Link to the online survey designed on Google forms was shared through Facebook, WhatsApp, and Email. The questionnaire consisted of 21 items to assess different variables like direct patient care, documentation requirements, and complete patient interaction.

**Results:** Out of 150 participants, the response rate was 111 (74%). Of 111 participants, regarding clinical documentation, 105 (95%) felt that it has become excessive, and 93 (84%) agreed that it compromises patient time. In addition, 87 (78%) residents felt rushed all the time and 82 (74%) said that they are frustrated with data entry. On the educational value of clinical documentation, 90 (81%) of residents agreed that it has little or no influence. Furthermore, 92 (83%) agreed that it negatively impacts the time available for teaching other junior residents.

**Conclusion:** We conclude that although residents wish to provide quality care to their patients, many of them felt that data entry has become excessive and it is negatively affecting their clinical training.

**Keywords:** Clinical documentation, Patient care, Stress, Residents, Hospital record systems, Teaching and learning.

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### INTRODUCTION

Both residents and physicians frequently complain about the time wasted on data entry.<sup>1</sup> This is a common complaint highlighted in multiple studies e.g. a survey of 2000 Austrian hospital physicians indicated a downward trend in job satisfaction compared to earlier years.<sup>2</sup> Another similar study summarized the fact that 53% of the physicians felt burnt out at some point and 52% of them considered the excessive documentation as one of the main reasons.<sup>3</sup>

Modern information technologies (IT) are introduced in healthcare to ensure patient safety and facilitate communication amongst medical professionals. But, due to the growing mass of clinical data with no foreseeable decline in the future, many residents do not have time to perform what would be most useful for their patients. Residents are the primary link to healthcare as the patient comes first to their contact. In a recent study on residents, faculty members showed their concern about resident education due to limited

clinical exposure. However, the residents felt the need to reorganize their clinical training in terms of supervised content and quality rather than quantity of duty hours.<sup>4</sup> Long duty hours, clinical rotations, examinations and data entry further leads to burnout in residents as they have to do so many things at once.<sup>5,6</sup> Another concern is the educational value that the data has for the residents.<sup>7</sup>

Thus, we intend to explore residents' perception of time they spend on clinical data and patient care. It is hypothesized that the descriptive information acquired through this study will provide insight into how residents view their residency training program in terms of learning and satisfaction and help in identifying some of the main issues that are compromising patient care.

### METHODS

This cross-sectional study was conducted in July 2019 at the King Fahad Armed Forces Hospital, Jeddah which is a 410 bed hospital. After gaining approval from the

“Research Committee” of King Fahad Armed Forces Hospital Institutional Review Board (IRB; study no.0800-12), a pilot study was done. A group of six residents representing all medical departments were approached to address any issue related to “item language and its understanding” and “time took to complete the questionnaire”.

An approximate of 211 residents at the hospital, from year 1 to year 5 formed the target population. A sample size of 150 residents was calculated through OpenEpi online software, using a confidence interval of 95% and margin of error of 5%. The source of data was a reliable and validated 21-item Questionnaire developed in 2013 by Waren Alpert Medical School of Brown University. In Waren Alpert Medical School of Brown University who developed the questionnaire, the sample size was 1515 residents in 24 specialties.<sup>8</sup> The residents were briefed on the purpose of the study. They were assured of confidentiality and had an option of refusal to participate in the study. A checklist for giving consent as “I agree” or “I do not agree” was created in the Google form. Participants can only go to the next section after giving consent.

Link to an online survey designed on Google forms was shared through Facebook, WhatsApp and Email.

The Questionnaire was designed to identify three components.

1. Time duration spent on patient care and clinical documentation by physicians.
2. Record training level and practice information of participants details, and
3. Analyze participants' understandings of the obligatory clinical documentation.

Majority of questions applied a 5 point Likert rating scale; ordered responses were also collected. Direct patient care was defined as the amount of time directly spent on a patient's history, physical examination, counseling, and treatment by the physician. Documentation requirements included all written or electronic patient's documents, including notes, problem lists, medication reconciliation, disability forms, reports or test results, and discharge paperwork. And lastly, complete patient interaction was summarized as the total time devoted to patient care, inclusive of direct patient care and related clinical documentation.

Data were collected at one point of time through the Likert Scale (continuous scale) and analyzed through (SPSS) version 25. Descriptive analysis included frequency distribution, percentages, mean, and standard deviation.

We converted the percentage of time spent by

physicians into ordered data as follows for analysis: 0% to 20% = 1; 21% to 40% = 2; 41% to 60% = 3; 61% to 80% = 4; 81% to 100% = 5. Additionally, Likert rating scale data were changed to numeric data as follows: strongly agree = 5; agree = 4; neither agree nor disagree = 3; disagree = 2; strongly disagree = 1.

## RESULTS

The overall response rate was 111 (74%) out of 150 participants filled in the online questionnaire. Of 111 respondents, 57 (51%) were females and 54 (49%) were males. The average age of residents was 29 years. Most of the residents belonged to first-year 52 (47%) followed by second-year 28 (25%), fourth-year 18 (16%) and third-year 13(12%). Majority of residents who responded were from the medical department 39 (36%), followed by surgery 34 (32%), Gynecology and Obstetrics 21(19%), Pediatrics 8 (7%), ENT 4 (3%), Radiology 3 (2%), and Anesthesiology 2 (1%).

On electronic medical record, 65 (59%) of residents thought it negatively impacts direct patient care, 28 (25%) indicated that it positively impacts direct patient care while 18 (16%) mentioned it has no impact on direct patient care or time available for patients.

On the educational value of clinical documentation, 90 (81%) of residents agreed that it has little or no influence. A high agreement on paperwork and patient care was observed. (Table 1) Residents’ perception about time spent on direct patient care and related activities and residents' response on the amount of time spent and ideal time on direct patient care and documentation requirements are shown in table 2 & Figure 1.

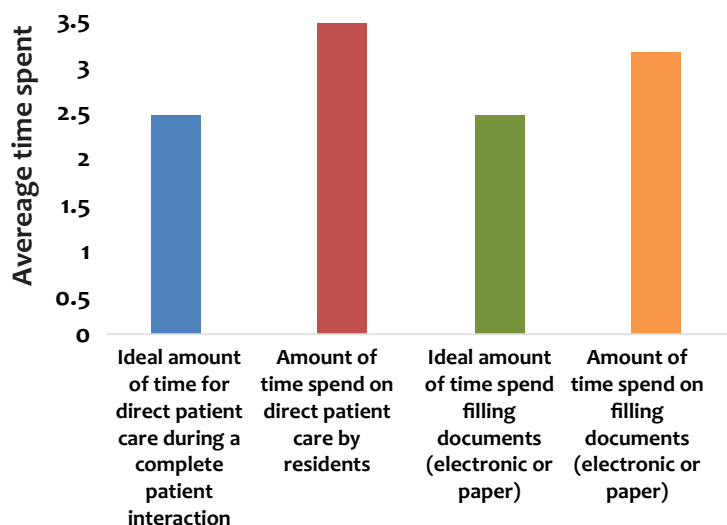


Figure 1: Residents’ response on amount of time spent and ideal time on Direct Patient Care and Documentation Requirements

**Table 1: Level of Agreement on Paperwork and Patient care**

	Strongly Disagree=1 n (%)	Disagree=2 n (%)	Neutral=3 n (%)	Agree=4 n (%)	Strongly Agree=5 n (%)
Motivation of quality care	0 (0)	0 (0)	0 (0)	23 (21)	88 (79)
Excessive paperwork	0 (0)	0 (0)	7 (6)	52 (47)	52 (47)
Time with patients restricted	0 (0)	6 (5)	12 (11)	41 (37)	52 (47)
Decreased overall patient care	0 (0)	23 (21)	11 (10)	36 (32)	41 (37)
Could provide better care with less documentation requirements	0 (0)	12 (11)	6 (5)	70 (63)	23 (21)
Feel rushed	0 (0)	6 (5)	(16)	52 (47)	36 (32)
Feel frustrated	0 (0)	6 (5)	23 (21)	41 (37)	41 (37)

**Table 2: Residents' perception about time spent on direct patient care and related activities**

Perception of Residents	Percentage of time spent in duty hours
Clinical documentation which can improve patient care.	36.8
Actual time spent on direct patient care	47.4
Ideal time for direct patient care	68.4
Patients expectation from you on complete patient care	63.2
Ideal time to be spent on clinical documentation	31.6

## DISCUSSION

Residents committed to caring for patients never signed up for a career in clinical documentation. Still, clinical documentation is an important component of patient care. Globally, a great deal of attention has been focused on the matter; many are questioning whether this is the best use of residents' training and ability? While also wasting the patient's time, as they came for the residents' medical expertise, not their data expertise.<sup>9</sup> One might have thought that applying technology can reduce the time due to the streamlining of data through an electronic health record (EHR). But in reality, the residents and attending physicians may end up spending 3 times more on electronic health records. Another issue that cannot be ignored is the increased risk of negligent behavior by doctors due to the failure to review clinical documents entirely.<sup>10,11</sup> This research shows insight into how residents view their residency training program in terms of learning and satisfaction. In our setting in Saudi Arabia, healthcare is provided by the Kingdom, and as such the insurance companies are not involved. Regardless, lots of data entry is required to keep the hospital records in terms of admissions, treatment, management, and follow up. In addition, the rising cost of healthcare also

demands short hospital stays and legal regulations.<sup>12-13</sup> This furthers the demand for timely, high-quality and patient-oriented documentation to be done by the attending residents.<sup>14</sup>

In our study, many of the residents felt that data entry has become excessive and that it is negatively affecting their clinical training. They believe that they can provide quality care if they are able to spend more time with their patients. These findings are similar to a study done in the University of Wisconsin, USA which reported primary care physicians spending practically 6 hours every day on electronic health records.<sup>15</sup> Another study was done in Austria on eighty physicians also highlighted the same issue where 27% of their time was committed to clinical and administrative documentation.<sup>2</sup> In addition, various studies have brought attention to this issue where physicians were identified as spending almost 25% to 60% percent of their daily time on documentation.<sup>16,17</sup>

Sinsky et al. found that physicians spend 43% of their time entering and abstracting information from medical data, and 29% on direct patient care.<sup>17</sup> In addition, another study noted that only 55% of physicians' time was spent on face to face patient interaction while the remaining 45% was devoted to

reviewing medical records and writing patient's notes and prescriptions.<sup>18</sup>

Recent studies have shown that patient satisfaction largely depends on the amount of time spent by their doctor on direct contact with the patient.<sup>19,21</sup> They expect their doctor to show empathy and listen to their concerns.<sup>22</sup> However, a recent study in the *Annals of Internal Medicine* identified that for every hour residents were seeing their patients, they were spending nearly an additional two hours for paperwork.<sup>23</sup> A study by the Institute of Medicine on resident duty hours concluded that 'Residents play an integral part in the development and maintenance of medical records. But we are asking too much from the residents, because of which the entire healthcare system is suffering.'<sup>24</sup> A number of studies have found that doctors spend more time on data entry, and clinical data entry comprises the highest proportion of time spent by physicians.<sup>25</sup> But due to the subjective nature of these studies reported by physicians and observers, their validity is limited.<sup>26</sup>

According to the residents, the average percentage of time spent on actual direct patient care was far less than the ideal amount of time, which has previously been reported in studies where residents were rushed, and patients were dissatisfied.<sup>27</sup> In the past two decades, a considerable amount of time was wasted on generating lengthy clinical notes, while most of them were never read.<sup>15,28</sup> An American survey on eight hundred patients who were recently hospitalized and five hundred and ten doctors strongly agreed that sympathetic care is "very important" to successful medical treatment. However, only 53% of patients and 58% of physicians agreed on the ability of the healthcare system to provide compassionate care.<sup>29</sup>

An interesting finding in our study was the lack of educational value related to documentation. Residents' main concern was the time available for self-study. A major segment of the training program is designed for teaching and learning. Residents in year 4 and year 5 are expected to teach their juniors and provide feedback. But due to the documentation responsibilities, residents often find it difficult to cope and are unable to improve their learning and teaching skills.<sup>30</sup> Similarly, a nationwide survey in the United States revealed that residents' perceptions of the time dedicated to data entry were broadly negative. They all agreed to the fact the excessive data entry was jeopardizing their clinical learning, patient care, and above all else, motivation to provide high-quality care. These findings have been linked to a decreased level of satisfaction and increased burn-out among residents.<sup>8,30</sup>

Specific measures can be adopted by the hospital administration to help residents with data entry and patient care. Hospital electronic record systems need to become user friendly and residents need to be trained on how to operate them. Hiring clerical and administrative support for residents can also amend the situation.<sup>31</sup>

Although our study has identified an important issue related to excessive data entry, it also has few limitations in its design which should be taken into consideration for future research. Firstly, due to the small sample size, a response bias is feared which might have missed the perceptions of some of the residents. It may also be a possibility that residents underestimated or overestimated the amount of time they spent on data entry. Secondly, our study only provides a glance into that of the residents' views and not the hospital administration due to its cross-sectional design. Further research with longitudinal design to gain better insight into the thoughts of the hospital administration can be enlightening. Thirdly, since the study was conducted in a single institute, its scope was limited to King Fahad Armed Forces Hospital.

## CONCLUSION

Although residents wish to provide quality care to their patients, time management is an obstacle. They believe that they can provide quality care if they are able to spend more time with their patients. Specific measures, such as turning record systems user friendly and hiring clerical and administrative support, should be adopted by the hospital administration to assist residents with data entry and patient care.

**ETHICAL APPROVAL:** The study protocol was approved by the Research Committee of King Fahad Armed Forces Hospital, Jeddah, Saudi Arabia.

**AUTHORS' CONTRIBUTION:** FS: Conceived, designed and did data collection, analysis & manuscript writing. AAM: did manuscript editing and final approval of manuscript after review.

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