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40 Sleep in the Emergency Department: How Shifts Affect Sleep Quality and Quantity

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Background: Optimal sleep hygiene represents a critical component of a healthy lifestyle. Physicians who advocate for comprehensive health in their patients still find quality sleep elusive. Long calls and rotating shifts leads to sacrificing sleep quality. Unknown is to what detriment of physician wellness.

Objectives: This study explores the effect of shift work on quality and quantity of sleep. We analyzed sleep patterns in emergency medicine residents and attending physicians during their assigned time in the emergency department. We hypothesized that participants with sleep onset in the daytime hours would have suboptimal sleep duration and quality.

Methods: Twenty-nine participants (twenty-six residents and three attendings) volunteered to participate in this study, wearing a fitness tracker to monitor sleep and activity level for three months. Time of sleep onset was categorized into three interval groups: interval 1 (0600-1400hrs), interval 2 (1400-2200hrs), or interval 3 (2200-0600hrs). Mean length of sleep for each interval group, sleep latency, and proportion of time spent in light and deep sleep, were analyzed.

Results: Sleep sessions with onset in interval 1, had mean total sleep duration of 5.26 hours, significantly less than 7.31h for interval 2, and 7.06h for interval 3. There was no significant difference in proportion of light sleep versus deep sleep amongst interval groups. Sleep latency was greatest for sessions with onset in interval 2, at a median of 36.54 minutes, in contrast with interval 1(24.87 m), and interval 3 (22.09).

Conclusions: Sleep onset in the morning hours (0600-1400) was correlated with a 23.5% decrease in overall sleep duration. Proportions of light and deep sleep appear to be unaffected by interval time of sleep onset. Participants had a 61% increase in sleep latency from the median when sleep onset occurred during the afternoon/evening hours (1400-2200).

41 Social Media and Other Sources of Information Used During the Emergency Medicine Residency Application Process

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Background: During the residency selection process, applicants gather information from a variety of sources, including medical student colleagues, residents and faculty at their home institutions, flyers, websites, and social media.

The world of social media is rapidly changing and little has been published recently on how emergency medicine applicants are using social media to follow residency programs that they are applying to.

Objectives: The objective of this study was to describe the impact of social media on the resident application and selection process.

Methods: We conducted a survey of the applicants who interviewed at our emergency medicine residency program. We reported the use of online tools, including social media, to research potential residency programs. We used proportions and 95% confidence intervals to report our results.

Results: Out of 181 emergency medicine applicants who were sent the survey, 96 students responded, resulting in a 53% response rate. Survey results confirmed that a program's website is almost universally used as 94% (87-97%) reported accessing the website for information when applying to a program. Furthermore, 74% (64-82%) of students cite faculty advisors as having a substantial influence, as well as other medical students at a rate of 58% (48-68%). Nearly half of applicants or 45% (36-55%) used Student Doctor Network. Only 7% (4-14%) used FREIDA, and only 3% (1-9%) of applicants used the EMRA site. Finally, 21% (14-30%) of applicants follow EM programs on social media. Specifically, of these applicants who use social media, 60% (36-80%) follow programs on Twitter and 40% (13-64%) follow programs on Facebook.

Conclusions: Our study finds that many applicants are using Student Doctor Network and engage in social media to learn about residency programs in addition to more traditional sources such as the program website and word-of-mouth from their immediate peers and medical school faculty. Our results suggest that the percentage of applicants using social media to follow programs is still modest, but this number may change as the social media sphere continues to evolve and users adopt new technologies.

42 Survey of Emergency Medicine Residency Quality and Patient Safety Curricula

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Background: Long required by the American Council of Graduate Medical Education (ACGME) Emergency Medicine Program Requirements, the importance of resident training in quality improvement and patient safety (QIPS) has been highlighted by the ACGME: Milestones and CLER initiatives, and recently proposed revisions to the Common Program Requirements.

Objectives: Describe current QIPS curricula of Emergency Medicine Residency Programs.

Methods: A 32 question survey (SurveyMonkey®) was distributed to CORD members (February to August, 2016). Surveys were voluntary, anonymous, and results analyzed using descriptive statistics. The project was reviewed by the IRB and found to be exempt.

Results: Of ~205 programs, 91 (44%) responded. (Table 1) A formal QI\PS curriculum was reported by 84% (74\88), 54% (54\87), implemented 2012-2016, and most commonly 5-10 didactic hours\year, 45% (39\87). The following activities were reported by > 50% of 86 responding programs: Morbidity & Mortality (M&M) conference (90%, 77), Didactic Sessions (87%, 75), Resident QI\PS project (84%, 72), Continuous Process Improvement (58%, 50), and Root Cause Analysis (58%, 50). Required resident QI\PS projects were evenly divided between team and individual projects (49%\51%) and most often completed outside of dedicated conference time or during an administrative \ QI month (54% (43\80), 33% (26\80) respectively). 58 Programs reported project abstract submissions to professional meetings: local (16), regional (9), and national (34). Factors considered critical for a successful QI\PS program included an experiential component and faculty with QI\PS experience. The top barriers identified were: lack of time within the residency, lack of resident interest, and lack of funding\support. When asked how satisfied they were with their curriculum (Likert scale 1-5, 5 highly satisfied) the largest response was 3 (43%, 39\91).

Conclusions: Most residency programs have a formal QI\PS curriculum with M&M conferences, didactic sessions, and resident QI\PS projects. Critical success factors included the resident project and faculty with QI\PS experience while barriers were: lack of time, lack of resident interest, and funding\support.

Table 1. Demographics.

Program Type			Program Length		Location				Residency Complement (total#)				
ACGME	AOA	Combined	3yr	4yr	West	Central	South	Northeast	≤20	21-30	31-40	41-50	≥51
86%	8%	6%	60%	40%	15%	35%	20%	30%	12%	25%	19%	19%	25%

43 Teaching Osteopathic Manipulative Techniques to Allopathic Emergency Medicine Residents

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Background: Osteopathic manipulative therapy (OMT) has been shown to reduce or eliminate common ED complaints, and can be performed in the ED in a time-efficient manner. These procedures significantly increase patient satisfaction and are billable through Medicare and Medicaid. As the ACGME single accreditation system is

implemented, it raises the question of how OMT will be received by Allopathic residents.

Objectives: At our dually-accredited (AOA and ACGME) EM residency program with 60 residents (30 DO, 30 MD), we held a 4 hour lab to train all of our residents in 4 specific OMT techniques easily applicable to treat common EM patient complaints. Our goal was to determine if we could effectively teach MD residents to perform these procedures with confidence and acceptance of their usefulness in their practice.

Methods: All residents were given a pre-session survey assessing their comfort with OMT and Osteopathic principles in practice (OPP) using a 1-5 Likert scale. 10 areas were assessed (eg - palpation of muscle groups, spinal motion, trigger points), and the results were averaged to provide a novel OMT/OPP comfort score. Also, residents were asked about their perception of use of OMT for treatment of common ED complaints.

All residents then participated in a 4 hour lab (2 hrs didactics, 2 hrs hands-on) including instruction on OPP, surface anatomy review and guided palpation, identification of simple somatic dysfunction, and OMT techniques. Residents were given the same survey post-session.

Results: 57 residents (27 MD, 30 DO) completed the pre-survey, and 54 (25MD, 29 DO) completed the post-survey.

As expected, the comfort with OMT/OPP was higher among DOs than MDs pre-training. However, after the lab there was significant improvement in MDs' perception of OMT/OPP among all 10 areas. The OMT/OPP comfort score significantly improved (95% CI= 1.16, 0.05; p=0.032). The role and use of OMT in the treatment of common ED complaints also resulted in significant improvement among the MDs. Specifically, they believed they can use OMT to successfully treat ED complaints of headache (95% CI= 1.31, 0.22; p=0.01), neck pain (95% CI= 1.05, 0.04; p=0.03), chest pain (95% CI= 1.28, 0.36; p=0.001), and URI (95% CI= 0.89, 0.15; p=0.01).

Conclusions: OMT education was enthusiastically received by our MD residents and resulted in confidence to use specific procedures to treat their ED patients.

