

YOU SHOULD TRY THIS!

Assessment of call scheduling for family medicine residents in Saskatchewan

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Implication Statement

Is your resident call schedule fairly distributed between your residents? We thought so for Family Medicine in Saskatchewan, but an analysis of two years of schedule data indicated otherwise. Over the two-year program, the average per-resident call burden ranged from 0.44 to 1.2 shifts per week. Using the ratio of total shifts to total weeks to consistently quantify resident call burden across sites, we highlight the value of longer-term metrics and demonstrate how other institutions may also develop more equitable call schedules.

Évaluation de la répartition des gardes chez les résidents en médecine familiale en Saskatchewan

Énoncé des implications de la recherche

La répartition des gardes est-elle équitable entre vos résidents ? C'est ce que nous pensions pour la médecine familiale en Saskatchewan, mais une analyse de deux années de données d'horaire a révélé le contraire. Au cours de ce programme de deux ans, la charge moyenne de gardes par résident variait entre 0,44 et 1,2 garde par semaine. En utilisant le rapport entre le nombre total de gardes et le nombre total de semaines pour quantifier de manière cohérente la charge de gardes des résidents sur l'ensemble des sites, nous soulignons l'intérêt des indicateurs à plus long terme et montrons comment d'autres établissements pourraient également mettre en place des horaires de gardes plus équitables.

Introduction

Burnout and fatigue are primary resident wellness indicators.^{1,2} An evenly distributed workload may help mitigate burnout and fatigue by preventing disproportionate impacts on resident wellness. Recent studies on burnout have found that a change in call schedule resulted in improved self-reported wellness or fatigue reduction.^{3,4} More equitable scheduling may also improve program satisfaction, promoted by a greater sense of fairness among residents.⁵ While previous publications include comparison of single-person and automated call scheduling processes⁶, no prior work compares month-to-month call scheduling to a cumulative monitoring approach, leaving a gap in the current literature.

Family medicine residents in Saskatchewan, Canada, provide 24/7 call coverage during their months of core family medicine training each year. Residents or administrative staff create schedules on a month-to-month basis, divided among residents currently rotating through the academic family medicine clinics. The above approach distributes call shifts relatively evenly within each month, but schedulers were not tracking the average number of shifts per week per resident across the program. We sought to determine if the average number of call shifts per week, per resident, over the course of the 2-year residency program was distributed evenly.

Innovation

We approached this problem from a quality improvement perspective following the questions of the Model for Improvement: 1) “What are we aiming to accomplish?” (ensure call is equally distributed across our residents); 2) “How will we know that a change is an improvement?” (resident schedules will show equal distribution); and 3) “What changes can we make that will result in improvement?”⁷ Regarding the third question, we undertook an initial evaluation of previous scheduling as part of the “planning” stage from which we could further design, initiate, and evaluate a future Plan-Do-Study-Act cycle.⁷ To do so, we obtained call-schedule data for two academic years (2021-2023) for Saskatoon

and Regina. For each resident, we calculated the average number of call shifts per week (total shifts/total weeks). The University of Saskatchewan’s Behavioural Research Ethics Board approved this study (Beh-REB, ID No. 4645).

Outcomes

Residents received unevenly distributed call schedules; some worked a low of 0.44 shifts per week, and others up to 1.2 shifts per week. Underlying reasons for this are likely multifactorial; some might include differing scheduling requests driven by family status or vacation timing, statutory holiday or week-end coverage treated differently, or variation in the number of residents on family medicine rotation at the time.

In Saskatoon and Regina, the average shifts per week (standard deviation) was 0.72 (0.16) and 0.76 (0.20), respectively. Residency year appeared to contribute to this variability, although variation remained upon stratification (first year = 0.87 [0.14]; second year = 0.70 [0.23]). There was no statistically significant difference between the average call shifts worked at each site ($p = 0.35$, 95% CI: [-0.05, 0.13]), indicating that variability in call burden over the two-year program appears to arise largely from differences within sites rather than between sites. We assume no overall variation in vacation and no shift swaps between residents.

Both sites use human-driven (resident-created schedules in Saskatoon and administrative scheduling in Regina) rather than algorithm-driven approaches, which may introduce different sources of bias.⁶ Program policymakers should revise procedures given that a month-to-month call scheduling approach leads to an unequal distribution of duties.

Next steps

In addition to tracking shifts over the program length, we recommend that institutions monitor a running average of call shifts per weeks worked for each resident that is updated prior to the creation of the next schedule. This approach would allow ad-

justments to maintain an average number of shifts per week that is consistent across peers. To generate this improvement, schedulers will require access to accurate scheduling records, leadership buy-in and administrative capacity to track and modify call schedules over time.

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Conflict of Interest:

The authors declare no conflicts of interest.

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