Workload Policies across Canadian Medical Schools

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Type of Paper: Position Paper

Approved:

Revised: 2019/04/12





Briefing Note

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Date 2019/04/12 POSITION PAPER

Medical student workload plays a significant role in student wellness and capacity to deliver high quality patient care. Currently, there is no consensus amongst Canadian medical schools with regards to workload policies, and the ones that do exist offer insufficient protection. This paper outlines existing policies at schools across Canada and provides recommendations to improve the policies currently in place. The recommendations include explicitly defining call days, setting maximum daily and weekly hours, scheduling students for ≤12 out of 14 days, considering formal teaching sessions in overnight shift scheduling, setting travel accommodations for rural rotations and granting individual accommodations to pregnant learners. The paper also outlines recommendations for the dissemination and interpretation of policies to ensure their proper enforcement. Lastly, it is acknowledged that a workload policy is required partially because of an existing and persistent culture in medicine, but a clear policy is nonetheless an important tool for advocacy.

PRINCIPLES AND STANCE

- Canadian medical students need clear and comprehensive policies, specifying the number of hours worked per week and per day, as well as different maximums based on call vs. no call.
- Medical students play an important role in providing health care services for Canadians; however, they are also primarily learners who must complete other mandatory academic requirements outside the clinical settings;
- The policies put in place need to allow for appropriate patient hand-over and adequate clinical exposure to ensure students are attaining Medical Council of Canada (MCC) objectives;
- 4. A clear workload policy can be used as a tool to empower students to take the necessary time to protect themselves from burnout, while maximizing the educational experience of clerkship.

CONCERNS

- 1. Existing workload policies are often unclear, not comprehensive and too permissive;
- There is a lack of clear workload policies to protect students and to ensure they have appropriate personal time, while completing their academic requirements.
- 3. The existing policies for medical trainees and physicians are not universally respected;
- Even with appropriate policies in place, students may face difficulty related to their implementation and interpretation with clinical preceptors and administrators.

Introduction/Background

Over the last several years, medical students' mental health has become increasingly relevant. Medical students must cope with significant clinical duties, on top of study-related responsibilities and long shifts. The overwhelming stress created by this lifestyle, often presenting as cynicism, depersonalization, and exhaustion, can lead to burnout [1]. Recent studies have shown a high prevalence of burnout among medical students and have noted that 40% of medical students before residency were emotionally exhausted [2]. Many aspects of medical school contribute to a high level of distress among students, such as information overload, pressure of career choices, financial indebtedness, and lack of leisure time [3]. It has been suggested that being overworked leads to burnout, which may in turn be a precursor for depression [4]. It has also been shown that not having time to seek medical care for their own mental health is a contributing factor to medical students' distress [3]. Moreover, an increase in self-perceived medical errors made by learners were associated with lower measures in all domains of the Maslach Burnout Inventory (MBI), a 22-item inventory assessing occupational burnout [5]. Burnout has also been shown to affect medical students' professional conduct [6]. Thus, environments which do not make the mental health of medical students a priority constitute a direct threat to patient safety. With this growing collection of evidence, measures must be taken to address this issue.

Seeing as a shortage of time and being overworked are recurrent risk factors, duty hours and their limitations are important factors in countering medical student burnout. Schools outside of Canada, such as Vanderbilt University Medical Center, have successfully faced these struggles by implementing duty hour restrictions. Indeed, the 16-hour shift length restriction in their internal medicine program has increased the number of patients seen by interns and the quality of their notes. Interns had more time to attend the weekly chief resident conferences, and still had the same level of clinical exposure [7]. Landrigan *et al.* also showed that improving students and residents' opportunities to sleep daily and reducing the number of hours worked weekly – while simultaneously minimizing errors of patient handoffs or cross-coverage – reduced medical errors significantly [8]. These results show the importance of having policies in place to protect students from working too many hours.

Currently, there is no consensus amongst Canadian medical schools with regards to weekly and daily maximum duty hours. Moreover, the workload policies that do exist are not always protective, as definitions are often unclear and their application is left to interpretation. This paper will present the existing workload policies at CFMS Member Schools and provide recommendations to improve the policies currently in place.

Principles/Stance

- 1. Canadian medical students need clear and comprehensive policies, specifying the number of hours worked per week and per day, as well as different maximums based on call vs. no call;
- 2. Medical students play an important role in providing health care services for Canadians; however, they are also primarily learners who must complete other mandatory academic requirements outside the clinical settings;

- 3. The policies put in place need to allow for appropriate patient hand-over and adequate clinical exposure to ensure students are attaining Medical Council of Canada (MCC) objectives;
- 4. A clear workload policy can be used as a tool to empower students to take the necessary time to protect themselves from burnout, while maximizing the educational experience of clerkship.

Concerns

- 1. Existing workload policies are often unclear, not comprehensive and too permissive;
- 2. There is a lack of clear workload policies to protect students and to ensure they have appropriate personal time, while completing their academic requirements.
- 3. The existing culture in medicine is often not conducive to respecting existing workload policies for medical trainees and physicians Existing policies for medical trainees are not universally respected;
- 4. Even with appropriate policies in place, students may face difficulty related to their implementation and interpretation with clinical preceptors and administrators;

Recommendations

Please see Appendix A for methodology and Appendix B for complete overview of existing workload policies across Canada.

Definition of call days

In the current workload policies across Canada, there are often different maximum hours for days with call and days without call. We recommend that there be an explicit definition of services with call, as well as those with shift work. Otherwise, the interpretation may be that all shift-work schedules are subject to the daily maximum with call, resulting in every day being treated as a call shift. This definition may vary between universities and clinical sites, and we recommend that each school have their own definitions for their core clerkship curriculum.

- Recommendation: There should be an explicit definition of services with call vs. those with shift work.

Daily maximum hours

Daily maximum hours when students are not on call are specified by ten out of seventeen Canadian medical schools. These caps do not range significantly (10 to 12 hours). Half of the schools provide daily maximum hours as guidelines, which can vary based on service and patient load. Fewer schools (Alberta, Calgary, Manitoba, McGill) enforce a strict daily maximum for days with call. A policy paper by Resident Doctors of Canada (RDoC) in 2012 recommended a maximum of 16 hours of continuous work hours per day including call [9].

Three schools have 24-hour maximum call days. Since 2012, residents in Quebec have been limited to 16 hours per day, with Fédération des médecins résidents du Québec (FMRQ) and the provincial government forming a collective agreement stating that a 24-hour duty period is a violation of the Canadian Charter of Rights and Freedoms [11]. A 2016 study done after this province-wide change reported that surgical residents had a self-reported reduced quality of life and decreased ownership of patient care [12]. Some limiting factors of this study include the ages of the residents, differences in salaries (lower in Quebec), and the inclusion of only one specialty (general surgery). We hypothesize that this impact may be due to the lack of a post-call day after shifts shorter than 24 hours. Though residents and medical students undoubtedly play different roles in the healthcare hierarchy, more investigation needs to be done before recommending that 24 hour calls should be removed from practice.

We recommend that each school have a guideline of maximum hours per day both for days with call and for days without call. All scheduled academic activities should be included in this daily maximum, including but not limited to lectures, tutorials, and handovers. Schools which have no maximum hours for days without call should comply with current Canadian practices of 10-12 hours per day. Maximum daily hours with call should comply to at least the most up-to-date resident groups' (RDoC, FMRQ) recommendations [9,11]. If the particular institution has 24 hour call, a post-call day is recommended.

- Recommendation 1: A guideline of maximum hours per day for days with call and days without call should be made by each school;
- Recommendation 2: These guidelines should include all scheduled academic activities, including lectures, tutorials, and handovers;
- Recommendation 3: Schools with no maximum hours for days without call should comply with the current Canadian practices of 10-12 hours per day;
- Recommendation 4: Maximum daily hours with call should comply to at least the most up-todate resident groups' (RDoC, FMRQ) recommendations, with a post-call day included when call is 24 hours.

Weekly maximum hours

In order to better protect learners, workload policies across Canada should include both daily and weekly maximums. This should be done to protect students from long-term exhaustion and burnout. This can be better assessed through a weekly maximum, as chronic, constant stress has a great impact on a learner's health [13]. In other words, a weekly maximum reflects a more longitudinal assessment of the compliance of the workload policy in a particular rotation.

Ten out of seventeen medical schools in Canada have a weekly maximum hours excluding calls (ranging from 55 to 60 hours). Two medical schools have weekly maximum hours including calls (85h and 70h). The medical schools at the Universities of Alberta, Manitoba, Toronto, Queen's, Dalhousie and Sherbrooke do not have a weekly maximum at all.

We recommend that each school have clear weekly maximum for hours, including *and* excluding call, as part of their workload policy. All scheduled academic activities should be included in this weekly maximum. There is no pan-Canadian limitation of duty hours for Canadian residents as duty hours are negotiated individually by province [9]. The Accreditation Council for Graduate Medical Education in the United States recommended to cap the work-week for residents to 80 hours a week including call in 2018 [10]. We would recommend that, at minimum, these guidelines are followed. While most schools already have a weekly maximum excluding call, we would recommend that the remaining schools institute a similar policy as well to ensure students' longitudinal protection.

- Recommendation 1: Each school should have clear weekly maximum hours including and excluding call;
- Recommendation 2: These guidelines should include all scheduled academic activities, including lectures, tutorials, and handovers;
- Recommendation 3: At minimum, the 80 hour work-week cap mandated for residents in the United States should be used as a guideline.

Consecutive days

As clinical duties often require students to work on weekends, explicit policies for consecutive days must be clear. Otherwise, the daily and weekly maximum hours could theoretically be applied seven days a week to a maximum of 10-12 hours a day without breaking any recommendations. Additionally, if schools follow month-long block rotations with two weekends of call per block, it is possible that students can be scheduled for up to four weekends in a row if there is insufficient communication between clinical departments. While RDoC did not discuss consecutive days worked in their 2012 position paper, the FMRQ limits Quebec residents to up to 19 days consecutively (two full weekends).

As the reality of residents and students is not identical, we recommend that students should not be scheduled for more than 12 out of 14 days, limiting the number of weekend calls to two days every two weeks. Given that this policy applies across clerkship, measures should be taken to ensure that it is applied even during the transition between different rotations.

- Recommendation 1: Students should not be scheduled for more than 12 out of 14 days;
- Recommendation 2: Appropriate attempts should be made to avoid more than 12 out of 14 days across two rotations.

Formal teaching sessions and overnight clinical duties

Teaching sessions can be defined as non-clinical teaching without patient contact. They often take place in auditoriums, lecture halls, tutorial-style small groups, or in simulation-based settings. This may require extra travel time, or may be scheduled outside of the normal shifts. Queen's University and University of Ottawa are the only schools to specify policies for teaching sessions after overnight call shifts. In the event that the student is scheduled for night shifts, and the teaching session occurs during the day, the student's clinical schedule should be modified to account for the teaching session. While travel time between the student's home and teaching site is not included in workload maxima, we recommend that travel time between the teaching session and the site of clinical duties be included in the maximum hours per day. A student should not be expected to complete an overnight shift before or after a daytime teaching. We recommend that specific policies be informed by the schedules of their own curricula, with the goal of allowing the student to attend these day-time teaching sessions while minimizing impact on sleep.

- Recommendation 1: Clinical schedules should be modified to account for teaching sessions when the student is scheduled for both a night shift and a daytime teaching session;
- Recommendation 2: Travel time between the teaching session and the site of clinical duties should be included in the maximum number of hours per day;
- Recommendation 3: A student should not be expected to complete an overnight shift before or after daytime teaching.

Rural rotation accommodations for travel

Spending time in a rural setting is a required aspect of the curricula at most medical schools across Canada. While some medical schools offer this as an optional experience, most mandate some rural rotations, with NOSM having a more extensive rural curriculum (see Appendix B, Table 2 for summary of mandated rural rotations and travel distances).

Despite the oftentimes large distances travelled by students to reach these destinations, the University of Saskatchewan's workload policy is the only one that formally acknowledges the fact that students require more time off prior to a rural rotation than they would prior to beginning any other clinical rotation. They allow their students a 36-hour period to pack, travel, and sleep [14]. Without a formal policy in place, students can try to request time off through an informal and individualized process, but no protective measures are in place to ensure that they will receive this time. We therefore recommend that every school across Canada mandate a 24h 'travel day' for students either on the last Sunday of their previous rotation or on the first Monday of any rural rotation. We recommend that students are granted this same travel day at the end of any rural experience to allow them sufficient time to return home prior to their next local rotation. Although this may already be done informally at some institutions, it should be formalized in order to best protect students.

- Recommendation 1: Every school should mandate a 24-hour travel day prior to a rural rotation either on the last Sunday of their previous rotation or the first Monday of the rural rotation;
- Recommendation 2: Students should be granted this same travel day at the end of their rural experience.

Pregnancy and workload policies

The CFMS has previously adopted a position paper in support of parents in undergraduate medical education, acknowledging that being a student parent is an endeavour that is increasingly common, particularly challenging, and often requires special resources or accommodations [15].

While shift hours, standing, and physical workload have not been shown to significantly increase the risk of miscarriage associated with occupational activity, the limited evidence on these matters would suggest that a more prudent approach would be to counsel women against undertaking work entailing high levels of these exposures, and to counsel women with at-risk pregnancies on an individual basis [16].

We recommend that pregnant learners, especially those with at-risk pregnancies, be granted individual accommodations during their clinical rotations, which may include being excused from overnight call and overnight shift work, as well as being allowed to rest after 2 hours of prolonged standing. The policies currently in place in Canadian medical schools are presented in the CFMS *Support of Parents in Undergraduate Medical Education* position paper [15].

- Recommendation: Pregnant learners should be granted individual accommodations during clinical rotations.

Dissemination and interpretation of policies

These policies and guidelines should be made clear to all educators as well as administrators who design schedules for each rotation. Policies should be enforced at two levels: firstly, educators should ensure reasonable hours to respect the student's daily maximum (including handover) and secondly, administrators should design schedules in order to respect the weekly maximum. However, we acknowledge the unpredictability of medicine and that exact times may sometimes vary. Furthermore, educators and administrators should be held accountable by each school, with a mechanism to report events where the policy is not respected.

We acknowledge that a workload policy is required partially because of existing culture in medicine, which is difficult to change, regardless of any conceptions held by more senior medical staff. With this in mind, a clear policy with appropriate support from Undergraduate Medical Education administration still has the potential to improve the quality of education in clerkship rotations. Ideally, these types of policies would be available to and enforceable by all educators, administrative staff and trainees.

- Recommendation 1: These policies and guidelines should be made clear to all educators and administrators and be subsequently properly enforced;
- Recommendation 2: Each school should have the responsibility of holding clinical preceptors and administrators accountable;
- Recommendation 3: A mechanism should be put in place at each school to report any policy infractions.

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Appendix A:

Methodology:

The data presented in this position paper was collected from the existing workload policies at CFMS Member Schools. The written policies for each school were found by viewing each school website. When the written policies were not available on the website, access to the internal document was given by the VP Education of each respective school. Medical student authors read each school's workload policies and summarized the relevant information, including the number of hours worked per day and per week during clerkship (excluding and including call), the call limitation, and the day and time of end of rotations.

APPENDIX B:

Table 1. Existing workload policies across Canadian medical schools

School	Hours excluding call		Hours including call		Call limitation	End of rotation
	Per day	Per week	Per day	Per week		
University of British Columbia	11*	55			1 in 4	Sunday 5PM
University of Alberta			24 (± 2)		1 in 4	Sunday 10PM
University of Calgary ¹	11*	55	24 (+2)		1 in 4	Sunday 11PM
University of Saskatchewan	11*	56			1 in 4	Sunday 5PM
University of Manitoba	10*		24 (+2)		1 in 4	
Northern Ontario School of Medicine		60			1 in 4	
Western University ²	12*	60*			1 in 4	
McMaster University ¹	11	55				
University of Toronto	12				1 in 4	
Queens University	12					
University of Ottawa		55				
McGill University			16	85		Sunday 8PM
Dalhousie University	12				1 in 4	
Memorial University of Newfoundland	10	50				
Université de Montréal	12	55		70		Saturday 8PM
Université Laval	10	55	12 (only in obstetrics)			
Université de Sherbrooke			16		1 in 4	Friday 5PM

* Not a strict maximum

¹ In the case of shift work, the maximum number of daily hours is 12 and the maximum number of weekly hours is 56, ² It is specified that students should spend a maximum of 12 hours per day OR a maximum of 60 hours per week.

Table 2: Summary of rural rotations across Canadian medical schools

School	Summary of rural curriculum			
University of British Columbia	 4 weeks mandatory rural family medicine in Med-3 Longest travel by plane = full day of travel, with 3-4 layovers Longest travel by car = 18h 			
University of Alberta	 4 weeks mandatory rural family medicine during clerkship Optional pre-clerkship exposures Longest travel by car = 9h 			
University of Calgary	 Currently no mandatory rural rotation For the Class of 2021's clerkship, new curriculum may mandate 4 weeks of rural family medicine 			
University of Saskatchewan	 1 week mandatory rural rotation in Med-1 4-6 weeks mandatory rural family medicine rotation in Med-3 Longest travel time = 4-5h 			
University of Manitoba	 1 week mandatory rural rotation in Med-1 Mandatory rural family medicine rotation during clerkship Longest travel time = 9h drive 			
Northern Ontario School of Medicine	 8 weeks mandatory rural family medicine in Med-2 Longest travel time = 16h drive Med-3 clerkship is longitudinal rural family medicine Longest travel time = 18h drive 			
Western University	 4 weeks mandatory in rural setting during clerkship Can choose specialty: family medicine, pediatrics, psychiatry, OBGYN Subspecialty site travel time = typically 45 minutes Longest travel time for family medicine = 3h 			
McMaster University	- No mandatory rural rotation			
University of Toronto	 No mandatory rural rotation Some optional opportunities with limited places 			
Queens University	 1 week mandatory rural rotation in Med-1 (family medicine usually, sometime specialties) At least 1 clerkship rotation mandated to be at a rural site 			
University of Ottawa	 1 week mandatory rural family medicine in Med-1 4 weeks mandatory rural rotation during clerkship (can be Med-3 or Med-4, flexibility in specialties) Shortest travel time = 1h Longest travel time = 5-6h 			
McGill University	 4 weeks mandatory rural family medicine in Med-3 Shortest travel time = 45-minute drive Longest travel time = 12h by bus 			

Dalhousie University	 No mandatory rural rotation but can be randomly assigned to a rural location for any clerkship rotation Longest travel time = 5h
Memorial University of Newfoundland	 2 weeks mandatory rural family medicine/community health pre-clerkship 8 weeks mandatory rural family medicine in Med-3 4 weeks mandatory rural selective in Med-4 (any discipline from core clerkship) Longest travel time = 9h
Université de Montréal	 No mandatory rural rotation Optional: 6 week rural family medicine in Med-3 Longest travel time = 9h
Université Laval	- 6 weeks mandatory rural family medicine during clerkship
Université de Sherbrooke	 Old curriculum (Class of 2020 and previously): 16 weeks mandatory in rural setting New curriculum (Class of 2021 onward): 8 weeks mandatory in rural setting (additional 8 weeks in Sherbrooke for those coming from Saguenay and Moncton campuses) Longest travel time = 10h