Context:

- A 16-hour workday restriction has been in effect in the Province of Québec (Canada) since 2012 and night calls are limited to 12 hours.
- Due to mandatory pre- and post-call absence, most scheduling models led to 50% workday attendance and a catastrophic discontinuity in clinical and educational activities.
- A new model of interdisciplinary night-float rotation was created at Université de Montréal and adapted at Université Laval.
- 4 to 6 residents from most programs collaborated for after-hour cross-coverage of most adult hospitalised patients as part of a Faculty-led rotation.

Objective:

To measure residents’ perception of the patient safety climate during implementation of night-float rotations in five tertiary hospitals.

Methods:

- We surveyed by email, with two reminders, all 267 residents who had completed the night-float from August 2015 to November 2016.
- We adapted in French the short form of the Safety Attitudes Questionnaire (SAQ).
- The goal of the SAQ is to elicit a snapshot of the safety culture through surveys of frontline worker perceptions. It was benchmarked in multiple care units and was studied in association with patient outcomes.

Safety-related climate factors in the Safety Attitudes Questionnaire

<table>
<thead>
<tr>
<th>Safety-related climate factors</th>
<th>Examples taken from the 34 questions of the SAQ adapted for a night-float rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teamwork climate</td>
<td>Resident input is well received in this clinical area</td>
</tr>
<tr>
<td>Gross recognition</td>
<td>I am more likely to make errors in tense or hostile situations</td>
</tr>
<tr>
<td>Safety climate</td>
<td>I would feel safe being treated here as a patient during the night float rotation</td>
</tr>
<tr>
<td>Perception of management</td>
<td>My residency supervisor and the on-call physician support my daily efforts</td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>Working here is like being part of a large family</td>
</tr>
<tr>
<td>Working condition</td>
<td>The number of residents during this rotation was sufficient to handle the number of patients</td>
</tr>
</tbody>
</table>

Results:

- 130 residents voluntarily participated in this study (48%), 44.6% from internal medicine.
- The scores on the SAQ-FR did not vary across training levels and sites.
- Provided for indicative purposes, Figure 1 illustrates our mean results along with mean SAQ scores of American intensive care units, where health professionals are also working at night in stressful environments.

Figure 1: Radar chart of SAQ means scores from night float rotations (n=130, 5 sites) and intensive care units in the USA (results from Sexton et al., n=3029, 53 sites)

Take-home message:

- Simultaneous implementation in five tertiary hospitals of a Faculty-led interdisciplinary night-float rotation for most junior residents proved to be logistically feasible and showed similar and reassuring patient safety climate scores.

Limitations:

- Response rate of 48% should be interpreted as residents’ opinion regarding the safety climate. Response rates over 60% in each night-float teams would be needed for definitive cultural assessment.
- We didn’t include response from the supervisors or health professionals who worked directly with the team during the night-float rotation.
- This study does not aim to compare this new scheduling model with previous ones.