

A Novel, Resident-Led Curriculum for Night Float Rotations

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Setting and Problem

In 2011, the internal medicine (IM) training program at the Hospital of the University of Pennsylvania (HUP) implemented night float rotations on most of its inpatient teaching services. There were no formal educational offerings for night float rotations because all teaching conferences were held during daytime hours. Residents identified this lack of formal education on night float as an area for improvement. A group of IM residents developed a resident-led night float curriculum. The curriculum had 2 objectives: (1) to provide regular overnight conferences for interns, and (2) to provide junior and senior residents with formal opportunities to teach interns.

Intervention

HUP is a 776-bed, university-affiliated, urban tertiary care center. At implementation, night float residents covered general medicine, oncology, and subspecialty services in teams of 1 intern and 1 resident, or 2 interns and 1 resident, with some services covered by a single resident. Residents rotating in intensive care units did not participate in the curriculum.

The new curriculum consisted of a morning intake report and an overnight conference. The morning intake report was designed to provide residents with formative, real-time feedback on clinical management. It was attended by all night float residents who were not staying on the floor to present patients on rounds, a volunteer faculty member, and, 1 day a week, a resident on a short-call admitting day rotation. Morning report occurred 3 mornings a week, after the night teams had signed out to their daytime counterparts. The report consisted of a brief presentation of a challenging admission or decompensating patient from the previous night's shift. Residents rotated responsibility for presenting cases. The goal of the conference was to discuss patient management with the volunteer faculty member.

The overnight conference was a 21-topic lecture series focusing on common clinical scenarios (BOX); topics were selected to improve postgraduate year (PGY)-1 residents'

BOX LIST OF TEACHING SCRIPTS^a

- Sepsis
- Hypoxia^b
- SVT vs. VT
- Oncologic Emergencies—Tumor Lysis Syndrome
- Hypotension^b
- The Actively Dying Patient
- Unstable Angina/NSTEMI^b
- Acute Leukemia^b
- Fever Including Neutropenic Fever
- Complications of Cirrhosis
- Altered Mental Status^b
- Acute Renal Failure^b
- Hypertensive Urgency and Emergency
- GI Bleeding^b
- GI Bleeding—Advanced^b
- Seizure^b
- Electrolytes^b
- Chest Pain^b
- Stroke
- Oncologic Emergencies—Cord Compression
- Delirium

Abbreviations: SVT, supraventricular tachycardia; VT, ventricular tachycardia; NSTEMI, non-ST elevation myocardial infarction; GI, gastrointestinal.

^a List of topics for teaching scripts presented in descending order of relevance as determined by the intern class.

^b The topic was rated as helpful as the topic above it.

ability to recognize and manage clinical emergencies at night. The participants were PGY-1s (learners) and PGY-2s/PGY-3s (teachers). Teachers led a 30-minute lesson held between 11 PM and 2 AM. Flexibility was built into the design to accommodate variations in clinical responsibilities. The conference was scheduled 4 nights per week (rotation switch days and weekends were excluded). To maximize resident buy-in and minimize teacher preparation, prepared teaching scripts were created for each topic by a group of volunteer PGY-2s/PGY-3s. We asked that scripts include 3 to 4 clear learning objectives and 1 or 2 literature references. Most scripts were case based, with questions designed to actively involve learners in discussion. To encourage PGY-1 attendance and minimize distractions, nonteaching PGY-2s/PGY-3s were asked to hold their interns' cell phones during conference.

Outcomes to Date

The night float curriculum was implemented on June 21, 2013, and was studied from March 5, 2014, through May

6, 2014. Evaluation of the overnight conference was approved by the Institutional Review Board and conducted via an anonymous online survey (Qualtrics LLC) at the end of the study period. Separate surveys were sent to PGY-1s and PGY-2s/PGY-3s, with questions addressing feasibility, attitudes, and perceived effect of the curriculum.

The overall response rate for interns was 47% (29 of 62). Overnight conference occurred a mean of 2.4 times per week ($SD = 0.99$) and usually lasted no longer than 30 minutes. Nearly half of PGY-1s surveyed stated they were able to attend a conference “most of the time,” with 50% (13 of 26) of respondents reporting attending occasionally and only 1 of 26 reporting never attending. When a conference did not occur, or PGY-1s did not attend, it was almost always secondary to a clinical emergency. PGY-2/PGY-3 feedback suggested that more preparation on the part of teachers may be required than anticipated, particularly later in the academic year as PGY-1s become more knowledgeable and request more advanced topics.

Despite some limitations, the overnight conference curriculum is feasible and remains implemented at this time. A resident committee, formed after the first year of implementation, works with residency program leadership on curriculum improvement and sustainability.

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