FIVE TIPS TO SURVIVE Overnight Calls

Text by Dr Isaac Ng, Dr Arturo Neo, Dr Gaurav Deep Singh, Dr Peter Daniel, Dr Thanawin Pramotedham and Dr Kei Jun Poon

Dr Ng is a residency Year 3 (R3) internal medicine resident in the National University Health System (NUHS). In his free time, he likes to watch K-drama, play board games with friends, and occasionally over-indulge in ice cream.

Dr Neo is currently an R3 internal medicine resident in NUHS. He enjoys the challenge of doing calls.

Dr Singh is currently an R3 internal medicine resident in NUHS. In his free time, he likes to sing and travel.

Dr Daniel is currently an R3 internal medicine resident in NUHS. In his free time, he enjoys grilling meat on his barbecue and doing Brazilian jiujitsu.

Dr Pramotedham is currently an R3 internal medicine resident in NUHS. In his free time, he spends time with his wife and young kid, and does music on the side.

Dr Poon is currently an R3 internal medicine resident in NUHS. He values education for the next generation of young doctors.

The time has once again come to welcome our newly minted house officers (HOs) as fellow colleagues working in the public hospitals. During the adjustment to their lives as junior doctors, going on call will probably be one of their most dreaded and potentially nerve-wracking experiences. Depending on the hospital, night calls in Singapore may take either the form of a traditional 24-hour full-day work plus overnight call (with an additional six hours for morning ward rounds and handovers the following day) or the night float system of 12- to 14-hour consecutive night shifts over a week.[1]

Preparing for night calls

Regardless of the call system, being on call is arguably the ultimate barometer of resilience and competency for foundational year doctors. They often need to manage numerous concurrent clinical tasks, ranging from clerking new admissions (known as "actives") and reviewing "called to see patients" (CTSPs, known as "passives"), to doing simple procedures (eg, performing difficult venipuncture, setting intravenous plugs or indwelling urinary catheter insertion), tracing of handovers from primary care teams (eg, of pending investigations or subspecialty blue-letter referral replies) and the occasional overnight updates

to families of actively deteriorating or demised patients.[2] The difficulty of clinical decision-making on overnight calls is further accentuated by limited manpower (high doctor-to-patient ratio on call), frequent interruptions, mental/physical fatigue and lack of familiarity with the patients' conditions.

In the interest of ensuring patient safety, the ability to triage and prioritise clinical tasks under these circumstances cannot be overstated. Therefore, to help our incoming batch of HO colleagues prepare for their upcoming night call duties, we share below our perspectives as seasoned medical officers (MOs) who have, in the not-so-distant past, undertaken our housemanship and first-ever night call duties.

Know your medical emergencies

Before going for calls, it is important to familiarise yourself with common on-call medical and surgical emergencies, such as acute coronary syndrome, respiratory failure, hyperglycaemic crises or acute abdomen. Most local healthcare institutions have their own in-house on-call survival guides to help HOs in this regard – be sure to ask for and read through them. In particular, SMA organises an annual CTSP workshop for HOs to attend prior to starting housemanship, and also provides the handy SMA House Officer's Handbook that can be accessed for free on the SMA DIT 101 app (available at https://smadit101.glide.page/).

For the on-call junior doctor, it is important to be familiar with the key differentials for common clinical presentations in order to adopt a hypothetico-deductive reasoning approach to targeted history-taking and physical examination (ie, generation of differentials followed by finding clinical clues to rule in or rule out these possibilities), while ensuring that worst-case scenarios and red flag signs/symptoms are ruled out.[3] To manage common medical emergencies, hospital protocols and clinical workflows are often available on the respective institutional intranet systems, so take the time to familiarise yourself with accessing these resources before going on call.

Learn how to prioritise clinical tasks

Given the significant time, manpower and resource constraints while on call, a lot of "decision-satisficing" is required (ie, ensuring patient safety, not missing dangerous or urgent diagnoses),[3] rather than trying to address all of the patient's clinical issues, including non-urgent or academic ones (eg, investigations that can be done the next working day or those that would not change one's patient management/clinical trajectory), at the expense of attending to other urgent tasks. In general, but subject to clinical discretion, CTSPs for actively deteriorating patients with unstable haemodynamics (especially "full active" patients) should be attended to immediately, followed by clerking new admissions who have not yet been reviewed by inpatient teams, less urgent CTSPs (eg, asymptomatic high blood pressure, a new rash without respiratory symptoms, or haemodynamic instability), and performing bedside procedures (eg, taking blood cultures) or ordering non-urgent medications (eg, lactulose).

Learn when and how to escalate clinical cases to your seniors

In general, you should escalate all patients who are actively deteriorating or clinically "unwell" (eg, unstable haemodynamics, or drop in consciousness status) as well as all newly admitted patients whom you have clerked to your seniors on call for their review. Importantly, for all urgent cases, you should call your seniors and not just leave them a text message. In addition, if you are unsure of how to manage certain CTSPs, order certain investigations/drugs, or have failed after repeated attempts at bedside procedures, it is perfectly alright to escalate to your seniors for help. While the MOs and registrars you meet on call may have different working styles, it is never wrong to escalate a patient or clinical task you are not confident in managing yourself in the name of patient safety.

To facilitate a clear and concise verbal escalation of a "sick" patient or difficult clinical case to a senior (usually an MO), we suggest using the SBAR handover tool,[4] which we outline and illustrate with examples below.

1. **Situation:** Start off by outlining the clinical situation and reason for escalating the case.

   Example: "I'm escalating a case of a full-code patient admitted for pneumonia who has just desaturated to requiring non-rebreather mask (NRM) for oxygen support."

2. **Background:** Provide pertinent background of the patient, including relevant demographic information, past medical history or inpatient clinical/treatment progress.

   Example: "The patient is a 60-year-old Chinese gentleman, with background of hypertension, ischaemic heart disease with heart failure with preserved ejection fraction on baseline PO Lasix 20 mg OM, who was admitted yesterday under general medicine for multilobar, community-acquired pneumonia (CAP), treated with IV Augmentin and PO Azithromycin, and previously required 2-3L of nasal prongs."

3. **Assessment:** Provide your clinical assessment (ie, your provisional diagnoses or clinical impression).

   Example: "I have reviewed the patient, he is now on NRM, fairly tachypnoeic, febrile, although blood pressure remains stable. Clinically, he is lethargic, having chills/rigours and appears to be fluid overloaded, with bilateral lung crackles up till mid zone, elevated jugular venous pressure and pedal oedema. Collectively, this suggests severe CAP complicated by acute decompensated heart failure."

4. **Recommendation:** Provide your recommendation and state clearly what you would like the senior to help with.

   Example: "My plan is to take an arterial blood gas, send off some other laboratory works including blood cultures, repeat a chest X-ray, escalate

to triple antibiotics for severe CAP by including IV ceftazidime, and trial a dose of IV Lasix 40 mg once given that BP is fairly robust, with strict intake/output charting and fluid restriction for the fluid overload. I would like to seek your review of this patient, and consideration of escalation of care to the medical ICU. I will also keep the family updated of progress."

Reflect post-call on clinical decision-making

Going on-call, while highly stressful, can be a valuable learning opportunity. This is because you will be exposed to a wide range of clinical cases and new presentations, and you are usually expected to independently review and form initial impressions/preliminary plans before escalating cases to seniors. Therefore, clinical reasoning skills can be honed through an iterative process of generating differential diagnoses and management plans (which involve internal predictions of pre-test and post-test probabilities, and whether testing and treatment thresholds for various conditions were met).[3,5]

After the call is over, it is good to continue tracking the patient's clinical progress and read the seniors'/primary team's impressions and documentation to close the learning loop. For example, an on-call HO may learn when it might be appropriate to perform an arterial blood gas (which is painful and not without risk to patient) for a case of desaturation – such as for a full-resuscitation patient with concerns of acute decompensated hypercapnic respiratory failure, but not for a bedbound, debilitated patient with advanced lung cancer on full comfort care.

Optimise your mental and physical state

It is recommended to bring snacks and water/drinks when you go on call to ensure that you do not go hungry or dehydrated. It may be prudent to avoid eating poorly cooked, raw or overly spicy foods that may cause gastrointestinal upset while on call. Try to bring toiletries for basic personal hygiene and, if time permits, a shower at night. In addition, prior to going on call, it is important to try to get adequate sleep the night before (at least seven to eight hours), and consume an early dinner before the call starts. During the call, if you feel emotionally overwhelmed by the workload, take a few seconds to engage in deep breathing or mindfulness exercises to calm your mind down. It is also useful to create an on-call chat group with your fellow HOs so that you can support and help one another. Just like how the flight attendant reminds us to put on our own oxygen mask before we help others in an emergency, ensuring self-care and personal well-being is paramount so that we can truly attend to and care for our patients.

Conclusion

Finally, we would like to acknowledge the elephant in the room: traditional on-call superstitions that prevail to this day. For example, eating *bao* or steamed buns is often an omen for receiving the lion's share of patient admissions (invoking the Hokkien phrase *bao ka liao*, which means to cover everything), and sharing how "quiet" the on-call night duty seems to be almost certainly jinxes it.[6] Conversely, those with seemingly bad on-call luck are often advised to "bathe in the seven flowers", which supposedly carries the fragrance of good fortune. Such superstitions are so rife that a famous randomised controlled trial was published in the *Singapore Medical Journal* nearly two decades ago on the impact of consuming *baos* on inpatient admissions, mortality or amount of sleep during night call duties.[7] Spoiler alert, this superstition is not evidence-based. However, the authors did find that night calls are, across the board, challenging in workload and shift duration.

While we leave readers to decide for themselves whether these superstitions or traditions are worth following, we would like to end off by warmly welcoming our incoming HOs into our medical fraternity, and we will also do our best as seniors to help you out in this daunting but exciting clinical journey ahead. ◆

References

1. Loo BKG, Ng CL, Chin RT, et al. Nationwide survey comparing residents' perceptions of overnight duty systems in Singapore: night float versus full overnight call. Singapore Med J 2020; 61(10):559-62.

2. Ng IKS. What an aspiring medical student should know about medicine. Postgrad Med J 2023; 100(1184):437-9.

3. Ng IKS, Goh WGW, Teo DB, et al. Clinical reasoning in real-world practice: a primer for medical trainees and practitioners. Postgrad Med J 2023; 101(1191):68-75.

4. Ruhomauly Z, Betts K, Jayne-Coupe K, et al. Improving the quality of handover: implementing SBAR. Future Healthc J 2019; 6(Suppl2):54.

5. Pauker SG, Kassirer JP. The threshold approach to clinical decision making. N Eng J Med 1980; 302(20):1109-17.

6. Lim ECH, Oh VMS, Quek AML, Seet RCS. Take a Bao if You Are Not Superstitious. Ann Acad Med Singap 2007; 36(3):217-20.

7. Tan M-H, Lee Z, Ng B, et al. The Tao of Bao: A Randomised Controlled Trial Examining the Effect of Steamed Bun Consumption on Night-Call Inpatient Course and Mortality. Ann Acad Med Singap 2008; 37(3):255-7.