

Appendix 6: Work ‘out-of-hours’

In all hospitals the medical assessment and admission team will be responsible for providing the care described in Section 1 of the main report (‘Patients presenting acutely to hospital with medical problems’). In most hospitals (80%), the medical assessment and admission team will also be responsible for providing the additional care that is described in Section 4 of the main report (‘Medical staffing for hospital inpatients who need urgent medical care by day and by night’). In other, usually larger, hospitals this may be provided by an independent medical team. In either situation, the teams providing the care described in Section 4 of the main report may include clinicians from non-medical specialties, ie ‘Hospital at Night’ (H@N) teams.

1 Background

Responding to emergencies

- 1.1 The discussion that follows is designed to consider the emergency medical needs of inpatients, irrespective of their location within the hospital, and how to staff the on-call team designated to meet those needs safely.

Terminology

- 1.2 The title of the team that is tasked with providing this care may vary from hospital to hospital, as may its composition. In larger hospitals a clinical team may have the provision of emergency care as its sole task: medical emergency teams (MET teams) are an example of this. In smaller hospitals members of that same team may also be required to manage the acute medical intake. Some on-call teams, such as the H@N teams, may have non-medical doctors as members and may respond to non-medical emergencies.

For the purpose of this appendix we will consider only the medical problems of hospital patients and the management of these medical problems by medical staff on-call. We will use the term ‘medical team on-call’ for this team, irrespective of that

team's possible involvement with the acute medical intake or whether it is part of a more complex working group.

On medical wards, most emergency situations that arise during the working day will be managed by that ward's own medical team. However, similar problems that arise on non-medical wards, even during the working day, may trigger a request for urgent medical assistance. For example, patients may suffer cardiac arrest anywhere in the hospital and members of the medical team on-call will be part of the cardiac arrest team. Thus, while the concept of the medical team on-call is mainly associated with work out-of-hours, its input may in fact be required at any time of day and at any location within the hospital.

There is no way in which the number of staff needed to provide this service can be calculated from first principals, as much of this activity comprises overflow from daytime work or replaces routine care that, for whatever reason, is not currently provided by day.

2 Scope

In scope

- 2.1 The staffing requirements for maintaining the safe and timely care of adult patients who have unexpected urgent medical problems that are beyond the capacity of the patients' own available team to manage safely, at any time of day or night and in any ward of an acute hospital. This will include requests for assistance from non-medical wards and other parts of the hospital and needs to be flexible enough to react to surges in demands for care.

Out of scope

- 2.2 The following patient groups are not included in this work:
- Patients who are still undergoing initial assessment by the on-call team, including those on short stay units who remain under the care of the on-call team. Staffing the acute medical intake is considered in Section 1 of the main report.

- The routine daytime staffing of medical wards, during the traditional working week is discussed in Section 2 of the main report. We recognise that the vast majority of emergencies that occur on medical wards during the normal working day will be managed by the medical staff of the ward with only limited need for outside help.
- The routine care of stable medical inpatients on weekends and national holidays, which is addressed specifically in Section 3 of the main report.
- Patients admitted to hospital not primarily under the care of the medical team, unless the primary specialty specifically asks for medical assistance.

3 Aim

- 3.1 A systematic attempt to analyse the inpatient workload out of hours in a major Australian centre in 1998 concluded:

Medical staffing of the night shift is probably no different from many other systems in acute hospitals. It has developed in an ad hoc fashion, often based on what has always been done. In these times of economic restraint and accountability for quality of care, we will increasingly need to examine issues such as the nature of the workload and the appropriateness of staffing to match that workload.¹

Little appears to have changed since then. Our aim therefore is to provide advice to enable those planning and organising medical services to answer the question ‘how many doctors or their alternatives do we need to provide safe, timely and effective care for the urgent medical problems of patients already admitted to hospital?’.

4 Approach

From the patient’s perspective

- 4.1 The patient’s perspective is the starting point for the design of all care; for example, what mix of which staff, with what level of capability and seniority is necessary to provide safe, timely and effective urgent care in hospital and thus to serve the needs of patients?

Tier 1 work on-call

- 4.2 Data from the WayWard Project and the Aneurin Bevan University Health Board (ABUHB) study can be used to derive an image of current activity in response to calls for assistance out-of-hours, anywhere in the hospital. Similar work from Sandwell General Hospital yielded figures for a weekend nightshift (see Appendix 4).
- 4.3 Such modelling reflects how a multidisciplinary team on-call currently functions. For this to be satisfactory, it must be assumed that all work is done promptly, unhurriedly and to a sufficiently high clinical standard as to ensure patient safety. Anecdotal evidence suggests that such an assumption is probably unjustified and that the true staffing needs are greater. This description of current practice should therefore probably be taken as showing a minimum standard of Tier 1 staffing.
- 4.4 Additionally, neither the WayWard Project data nor the ABUHB study capture the work of the medical registrar on-call adequately, and respondents to the RCP Medical Registrar Survey reported that, in their opinion, over half the tasks that they undertook could have been undertaken by Tier 1 clinicians. As they also reported that their workload was excessive, it would appear that the levels of Tier 1 staffing on-call described by the WayWard Project and ABUHB studies are an under-provision and that Tier 2 medical registrars are having to ‘act down’ to make good the shortfall. This information from the Medical Registrar Survey suggests, therefore, that the measurements made for current levels of Tier 1 staffing out-of-hours are documenting levels of staffing that are essentially inadequate.

Tier 2 work on-call

- 4.5 Tier 2 work on-call is not captured well by the WayWard Project data but it has recently been the subject of a survey by the RCP. Preliminary examination of these data suggests that:
- 80% of medical registrars leading the medical on-call teams were also leading the medical intake
 - only 25% thought that their workload was light or reasonable
 - 60% thought that their workload was heavy

- 15% felt that their workload was unacceptable, being a potential hazard to patient safety; this reflects similar opinions expressed by specialty registrars with regard to the consequences of gaps in their on-call rotas due to vacant posts²
- Respondents felt that only 170 out of 300 tasks described could only have been undertaken by Tier 2 doctors; it was felt that the remainder could have been undertaken by a variety of clinicians
- 46% of the work on-call originated during the working day
- 53% of the work of the medical registrar on-call involved patients who were not the responsibility of the department of medicine at the time of their involvement.

4.5 The mix of healthcare professionals in Tier 1 and their numerical relationship with the medical registrars in Tier 2 should be assessed and adjusted so that the Tier 2 medical registrars are not required to 'act down', ie doing Tier 1 work at the expense of tasks that are more appropriate to their training and experience.

Issues of staffing the emergency medical team on-call

- 4.6 There is evidence of the decline in cognitive function of an individual over the course of an on-call shift,³ but reassuringly there is also some evidence that night shifts do not pose a safety risk.⁴ On the one hand, such limited evidence as there is suggests that the concentration of expertise within one team has actually improved outcomes.⁵ On the other hand this is balanced by recurrent concerns that 'the team of doctors is stretched too thinly across large numbers of patients to respond to their needs'.⁶
- 4.7 Shift work has well-documented negative effects on a variety of long-term health outcomes. While long-term data are unavailable specifically for medical staff, there is convincing evidence from the healthcare area in general, and no reason to suspect that the consequences for the personal health of doctors and their equivalents who are working night shifts will be any different.⁷
- 4.8 How on-call shifts, especially 'ward cover', fit into the training of a junior doctor remains contentious. There are suggestions that increased availability of tasks may

aid the development of Tier 1 staff,⁸ and the General Medical Council (GMC) annually polls doctors to assess their satisfaction with their workload. The difficulties that ensue for specialty training, especially of Tier 2 doctors, has been discussed elsewhere.⁹

- 4.9 All the issues of staff shortages that are discussed in Section 1 of the main report apply equally well to on-call team working. It is particularly problematic to fill out-of-hours rota gaps by relocating existing staff, as this leaves deficits both in the service where the individual was supposed to be working, as well as in their training if they are prevented from working in their subspecialty. Short-term locums are rarely available at short notice, and are may be prohibitively expensive when they are.
- 4.10 Where Tier 1 rota gaps occur, this is often easier to resolve, as there is usually a larger pool of suitably qualified and competent clinicians to draw from. Tier 2 gaps are much more difficult. as the pool of competent individuals is smaller and predominantly doctors, but the respondents to the RCP Medical Registrar Survey were of the opinion that a significant amount of the work undertaken by the Tier 2 doctors on-call could be done equally well by Tier 1 staff if they were available.

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