Royal College of Physicians

Guidance on safe medical staffing: executive summary

Report of a working party

July 2018

The Royal College of Physicians

The Royal College of Physicians (RCP) plays a leading role in the delivery of high-quality patient care by setting standards of medical practice and promoting clinical excellence. The RCP provides physicians in over 30 medical specialties with education, training and support throughout their careers. As an independent charity representing 35,000 fellows and members worldwide, the RCP advises and works with government, patients, allied healthcare professionals and the public to improve health and healthcare.

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Royal College of Physicians
11 St Andrews Place
Regent's Park
London NW1 4LE

www.rcplondon.ac.uk

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Introduction

Patients have a right to expect safe, timely and effective medical care.[1] It is the role of the NHS to provide this care and adequate staffing is a primary factor in its provision.

Within the medical profession there is widespread concern that levels of medical staffing have fallen dangerously low. Annual census data from the Federation of the Royal Colleges of Physicians of the UK paint a worrying picture. From 2013 to 2018, more than one in five census respondents reported that gaps in trainees' rotas occurred so frequently as to cause significant problems in patient safety. Half of all advertised consultant appointments in acute internal medicine and geriatric medicine went unfilled due to a shortage of suitable applicants.[2]

The Francis Report into incidents at the Mid Staffordshire NHS Foundation Trust highlighted the importance of adequate numbers of staff in assuring safe patient care. The Royal College of Nursing (RCN) has since undertaken much work on staffing in relation to nursing.[3,4]

But staffing problems are not confined to nursing alone. There is evidence that higher levels of medical staffing are associated with reduced mortality for medical patients.[5] There are, however, no current benchmarks against which to judge safe medical staffing levels, particularly with regard to out-of-hours work.

> *The RCP should work with the NHS to provide guidance on acceptable staffing levels for a given workload, including the optimum number and appropriate grade of junior doctors necessary for a given volume of admissions, case mix, number of inpatients covered and support provided for other specialties.*
>
> (*The medical registrar*, Royal College of Physicians, 2013)[6]

Following this statement by the Royal College of Physicians (RCP) in 2013, and echoed by others including the Royal College of Physicians of Edinburgh and the National Institute for Health Research,[7,8] this working party was tasked with defining benchmarks for staffing levels for a variety of clinical situations.

For further information on the background to safe medical staffing, please see Appendix 1 (the appendices to the report are available on the RCP website).

Membership of the RCP working party on safe medical staffing

The working party includes representation from:

- RCP Council and senior officers
- RCP New Consultants Committee
- RCP Trainees Committee
- RCP Patient and Carer Network
- core medical trainees (via RCP associate college tutors)
- Society for Acute Medicine
- Royal College of Nursing
- Faculty of Physician Associates
- WayWard Project of the University of Nottingham.

Individual members

- Dr Rhid Dowdle OBE, physician and cardiologist, Royal Glamorgan Hospital, Rhondda-Cynon-Taf; working party chair
- Dr John Firth, physician and nephrologist, Addenbrooke's Hospital, Cambridge; working party vice-chair
- Dr Nichola Ashby, professional lead for emergency, acute and critical care, Royal College of Nursing
- Dr Michael Azad, specialty registrar in medicine for older people, Nottingham University Hospitals NHS Trust; RCP Trainees Committee
- Dr Druin Burch, physician, John Radcliffe Hospital, Oxford; RCP New Consultants Committee
- Dr Mohsin Choudry, core surgical trainee; RCP national medical director's clinical fellow
- Dr Aveen Connolly, core medical trainee, Norfolk and Norwich University Hospital; RCP associate college tutor
- Dr Tom Cozens, acute physician, Royal Gwent Hospital, Newport; RCP New Consultants Committee
- Teresa Dowsing, past president, Faculty of Physician Associates
- Jean Gaffin OBE, representative, RCP Patient and Carer Network
- Dr Andrew Goddard, physician and gastroenterologist, Royal Derby Hospital; RCP registrar (now president-elect)
- Dr Harriet Gordon, physician and gastroenterologist, Royal Hampshire County Hospital, Winchester; director, RCP Medical Workforce Unit
- Suzie Hughes, lay chair, RCP Patient and Carer Network
- Professor Frank Joseph, consultant physician in diabetes, endocrinology and general internal medicine, Countess of Chester Hospital; RCP acute care fellow and Future Hospital officer

- Dr Mike Jones, acute physician, University Hospital of North Durham; director of training, Royal College of Physicians of Edinburgh; GIRFT national clinical lead for acute and general medicine
- Dr Abigail Moore, specialty registrar in respiratory medicine, London; clinical fellow to the RCP president
- Mr JP Nolan, head of nursing, Royal College of Nursing
- Dr James Pinchin, assistant professor, University of Nottingham; the WayWard Project
- Dr Jodie Sabin, clinical fellow in endocrinology and general medicine, Ysbyty Gwynedd, Bangor
- Suman Shrestha, professional lead for acute, emergency and critical care, Royal College of Nursing
- Dr Chris Subbe, acute physician and intensivist, Ysbyty Gwynedd, Bangor; Society for Acute Medicine
- Dr Mark Temple, physician and nephrologist, Birmingham Heartlands Hospital; RCP Future Hospital officer
- Dr Nigel Trudgill, physician and gastroenterologist, Sandwell and West Birmingham Hospitals NHS Trust; deputy director, RCP Medical Workforce Unit (now director)

Roles are given as at the point when members joined the working party.

Other individuals were invited to participate in areas where they have specific expertise.

Declaration of members' interests

Dr Andrew Goddard is a member of the British Society of Gastroenterology and was previously chair of the gastroduodenal section.

Dr John Firth is a member of the Renal Association and a member of the Association of Physicians. He is also editor-in-chief of the Medical Masterclass series (1st, 2nd and 3rd editions) which is published by the RCP, and editor of the *Oxford Textbook of Medicine* (4th, 5th and 6th editions).

Dr Rhid Dowdle has undertaken paid consultancy work for the University of South Wales in their evaluation of community cardiology projects in Wales. He is also a member and honorary fellow of the Society for Acute Medicine and the European Federation of Internal Medicine, and he is a fellow of the Royal College of Physicians of Edinburgh.

Dr Michael Azad is the Trent British Geriatrics Society regional chair.

Dr Mark Temple commenced the post of clinical ambassador (West Midlands), Getting It Right First Time (GIRFT), NHS Improvement in May 2018.

Dr Mike Jones is the Getting It Right First Time (GIRFT) national clinical lead for acute and general medicine, and he is director of training at the Royal College of Physicians of Edinburgh.

Acknowledgements

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Foreword

At the RCP, we are very proud of and committed to the NHS. Our fellows and members want to work in a health service that is as safe as possible for patients.

Since its inception, there have always been challenges in delivering safe medical care. But recently, recruitment of doctors has become one of the most pressing: our number has not kept pace with the number of patients needing care.

Patient care is now jeopardised by staff shortages and low morale. The RCP census shows that 45% of posts are going unfilled. Over half of consultants report frequent or often gaps in trainees' on-call rotas, with one in five saying that these vacancies lead to problems with patient safety. Almost a third of higher specialty trainees are now being asked to cover gaps in the core medical trainees' rota, and the same number say they would take a job outside medicine if they could turn back time.

The current situation can be traced back to events that took place shortly after the turn of the millennium:

- Modernising Medical Careers shortened the length of time that doctors spent in training, effectively reducing the number of trainees
- an increase in shift working led to lower staffing levels, especially out of hours
- changes to immigration rules removed the ability to make good any shortfall in staffing by recruiting from outside the UK.

All were doubtless well intentioned – particularly safeguards to protect doctors and patients from dangerously long hours – and any one might have been accommodated by the system if it had been implemented in isolation. But, coupled with inadequate increases in medical student numbers, they created a perfect storm that had a negative impact on the numbers of doctors in the medical workforce.

We established the safe medical staffing working party because we were concerned that these reductions in medical staff posed threats to patient care. The guidance in this report explores how the various core medical services of a hospital should be staffed to enable safe patient care.

The RCP recognises that the complex issue of safe medical staffing will not be resolved at a stroke, but this guidance is a significant step towards that objective. It will be useful for individual hospitals in calculating and continuously monitoring their needs. And it will help us to better understand the scale of the problem at a national level, and communicate it to policy makers.

Professor Dame Jane Dacre DBE
President of the Royal College of Physicians

Executive summary

There is much evidence that medical staffing to care for patients who attend or are admitted to hospital with medical problems is spread very thinly, and notably that the workload of the medical registrar on-call is inappropriately onerous, with implications for patient safety.

This report aims to help those planning and organising core hospital medical services to answer the question: 'How many doctors or their alternatives, with what capabilities, do we need to provide safe, timely and effective care for patients with medical problems?'.

Inadequate levels of staffing may be indicated by the frequent implementation of escalation protocols, frequent exception reporting, and by reporting of clinical incidents. Such events should trigger a review of staffing, which can be aided by the various audit topics that are recommended at the end of each section of the main report.

We consider the following National Institute for Health and Care Excellence (NICE) definition of safe nursing care to be equally applicable to safe medical care:

> *When reliable systems, processes and practices are in place to meet required care needs and protect people from missed care and avoidable harm.*[9]

We consider that the core medical services of a hospital comprise four distinct areas of activity, each with its own staffing needs:

- the medical assessment and admission team
- the medical ward team
- the weekend medical ward team
- the medical team on-call (providing out-of-hours cover for inpatients with medical problems).

Some tasks and duties that were previously considered to be the domain of consultants and doctors in training are now being undertaken by non-training medical staff, and in some cases by non-medical personnel. It is therefore no longer appropriate to speak of work being done only by specific grades of doctors. To reflect this change, we have described clinical work as being undertaken by clinicians in three tiers:

Tier 1: Competent clinical decision makers – clinicians who are capable of making an initial assessment of a patient

Tier 2: Senior clinical decision makers – the 'medical registrars' – clinicians who are capable of making a prompt clinical diagnosis and deciding the need for specific investigations and treatment

Tier 3: Expert clinical decision makers – clinicians who have overall responsibility for patient care.

The three Tiers are explained more fully in the 'Precepts and methodology' section of the main report.

Key points

The results of the RCP Medical Registrar Survey (Appendix 2) and feedback from RCP members and fellows suggest that the out-of-hours workload of the medical registrar on-call is inappropriately onerous, with implications for patient safety.

The practice of a single medical registrar both leading the medical intake and providing on-call medical cover for the hospital is unlikely to be successful and contributes to the heavy out-of-hours workload of the medical registrar on-call.

It is essential that as much patient care as possible is delivered during the normal working day, rather than out of hours. We think that this is a key issue for patient safety, and the daytime staffing of wards should be such as to minimise 'legacy' work.*

Service must always support training and we have concerns that the significant increase in consultant-delivered care may limit the opportunities for trainees to acquire experience in decision making. We urge trusts to recognise trainees' educational needs when implementing consultant-delivered services.

There must always be sufficient time available to speak with patients and their families and carers to ensure that all the relevant issues are known to the medical team who are caring for that patient. This is particularly important when a patient is unable to represent themselves adequately.

Aspects of modelling

The objective of this report is to describe the staffing that is needed to ensure safe, timely and effective medical care for patients in hospital. We have accepted the recommendations made in a

* 'Legacy' work includes tasks that, for a variety of reasons, are not completed during the working day but are left for the out-of-hours on-call team. They include many tasks that are predictable and that all patients will require to ensure a safe episode of care in hospital.

number of reports from authoritative bodies regarding both weekend working and consultant involvement in direct patient care.

In the interests of safety, staffing calculations should be based on 80% of maximum activity.

We recognise that it has been estimated that 30–70% of medical staff time is spent on indirect patient care, including activities such as coordination, leadership and management of care. Our modelling assumptions take account of this indirect care either explicitly, as in our recommendations for ward staffing or implicitly, as in our recommendations for staffing the admission service and the urgent care service.

Effective mechanisms should be in place to continuously monitor for surges in activity that compromise safe patient care. It is essential that all hospitals should have agreed and effective escalation protocols for responding to such surges in activity.

Routine staffing requirements should be reviewed if escalation protocols are activated more than once a week on average.

Recommendations

We have presented our recommendations for staffing in the following formats.

1. We have estimated the number of hours that clinicians need to be present in a given situation.
2. Where practicable, we have offered examples of the staff needed to work these hours.
3. We have provided estimates of the workforce (ie the number of posts) needed to ensure that the staffing we have recommended can be available constantly for staff in Tiers 1 and 2. The workforce numbers take account of periods of leave and thus avoid predictable rota gaps and absences from the ward or admission teams.
4. We have not suggested workforce numbers for consultants, considering their more complex working arrangements.

Our recommended staffing numbers are intended to be indicative rather than definitive and they should always be validated or modified by the results of appropriate audit.

We consider that the timeliness of the provision of care is a good indicator of appropriate levels of medical staffing and should form part of any audit of adequate staffing.

Medical staffing for patients who present acutely to hospital with medical problems – the medical assessment and admission team

Consultant-led care, without an immediate consultant presence in the emergency department and acute medical unit (AMU) but with consultant-led post-take ward rounds
To assess 10 patients satisfactorily requires:[†]

Tier 1 time – 15 hours Tier 2 time – 9.5 hours Tier 3 time – 4.25 hours

Partly consultant-delivered care, with consultant presence and early involvement in the emergency department and AMU

To assess 10 patients satisfactorily requires:

Tier 1 time – 15 hours Tier 2 time – 7 hours Tier 3 time – 6.5 hours

Medical staffing of a 30-bed medical ward by day, Monday to Friday – the medical ward team

We have accepted the recommendations of the Academy of Medical Royal Colleges, NHS Improvement and NICE Guideline 94 regarding the routine schedule of work on medical wards.[10–13]

We found little difference between the staffing requirements of wards that have lengths of stay of 4 days and 6 days.

Tier 1

- Tier 1 clinicians need to be present on the ward for 71 hours each week.
- Two Tier 1 clinicians are needed for most of the day, every day, irrespective of whether or not a formal ward round takes place.
- A workforce of 2.2 Tier 1 posts per ward is needed to provide this staffing.

Tier 2

- Tier 2 doctors need to be present on the ward for 30 hours each week.
- One Tier 2 doctor is needed for most of the day when there is a formal ward round and for half of the day on the other days.

† For a further explanation of workforce calculations, see *Appendix 3: Detailed calculations* on the RCP website.

- A workforce of at least one Tier 2 post per ward is needed to provide this staffing, depending on the Tier 2 doctors' commitments away from their base wards.

Tier 3

- Tier 3 consultants need to be present on the ward for between 20.5 and 24.5 hours each week.
- One Tier 3 consultant is needed for most of the day when there is a consultant ward round and for 2.5 hours on the other days.

Medical staffing to maintain a 30-bed medical ward by day on weekends and public holidays – the weekend medical ward team

We have accepted the recommendations of the Academy of Medical Royal Colleges in its document *Seven Day Consultant Present Care*.[13] We found little difference in the weekend staffing requirements of wards that have either 20% or 40% of patients not needing routine clinical review over the weekend.

Tier 1

- A Tier 1 clinician needs to be present on every ward for 8 hours on each day of the weekend or public holiday.
- A workforce of 0.5 of a Tier 1 post per ward is needed to provide this staffing.

Tier 2

- A Tier 2 doctor needs to be present on every ward for 2 hours on each day of the weekend or public holiday.
- A workforce of 0.1 of a Tier 2 post per ward is needed to provide this staffing.

Tier 3

- One Tier 3 consultant is needed for 2 hours on every ward on each day of the weekend or public holiday.

Staffing for emergency medical care in the hospital by day and night – the medical team on call

Based on data from a variety of sources (Appendix 4) and modified by real-world reality checks, we estimate that to provide emergency care for inpatients who are covered by the on-call team:

Tier 1

- one medical Tier 1 clinician should be available throughout each 16-hour on-call period for every 100–120 beds covered by the on-call team
- a workforce of three Tier 1 posts is needed to provide this staffing.

Tier 2

Analysis of data from the RCP Medical Registrar Survey (Appendix 2) suggests that:

- small hospitals may be able to combine the roles of providing Tier 2 on-call medical cover of the wards and leading the medical assessment and admissions team
- most hospitals require a separate, dedicated Tier 2 medical registrar to provide on-call cover of the wards for 12 hours during the period of greatest activity every day (including the weekend), with another medical registrar leading the medical assessment and admissions team: this would require a workforce of 2.4 Tier 2 posts
- large hospitals probably need a separate dedicated Tier 2 medical registrar to provide on-call cover of the wards throughout the 24-hour period: this would require a workforce of 5 Tier 2 posts.

There needs to be significant research into this area, as there is a fundamental lack of high-quality evidence: most of what little evidence that is available is observational.

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