

# The New Zealand national junior doctors' strike: implications for the provision of acute hospital medical services

Geoffrey Robinson, Kieran McCann, Peter Freeman and Richard Beasley

**Geoffrey Robinson**<sup>1,2</sup>

MBChB FRACP,  
Consultant  
Physician, Chief  
Medical Officer

**Kieran McCann**<sup>1</sup>

Divisional Manager  
for Internal  
Medicine

**Peter Freeman**<sup>1</sup>

MBChB FRCS FACEM,  
Emergency  
Medicine Physician;  
Clinical Leader

**Richard Beasley**<sup>1,2</sup>

MBChB FRACP FRCP,  
Consultant  
Physician

<sup>1</sup>Capital and Coast  
District Health  
Board, Wellington,  
New Zealand

<sup>2</sup>Medical Research  
Institute of New  
Zealand, Wellington,  
New Zealand

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**ABSTRACT** – The New Zealand junior doctors' strike provided an opportunity to consider strategies that might be employed to overcome the international shortage of junior doctors. This article reports the experience of the emergency department (ED) and internal medicine (IM) services at Wellington Hospital during the national strike, in which medical services were primarily provided by specialist consultants in addition to, or as part of, their routine work. During the strike, elective admissions and outpatient clinics were mostly cancelled. In the ED, the waiting times and length of stay were markedly reduced. In IM, the proportion of patients admitted to the short stay unit rather than the general medical wards increased. Notwithstanding the different work circumstances, in both services one senior doctor carried the workload of at least two junior doctors. The deployment of additional senior medical staff to acute hospital services could greatly reduce the total number of doctors required. This strategy would have implications in terms of supporting acute medicine specialty initiatives, training, quality of care and funding.

**KEY WORDS:** acute services, hospital, junior doctor, specialist, workforce

## The problem

Radical revision of working hours has resulted in an unprecedented demand for junior medical staff worldwide. The greatest impact has come from the European Working Time Directive which was implemented in 2004. To fulfil the requirements of the directive, it was predicted that the UK required up to 12,500 more doctors, Germany required between 15,000 and 27,000 more doctors, and the Netherlands 10,000 more healthcare staff.<sup>1,2</sup> Currently in New Zealand there is a 5% shortage of junior doctors, despite a greater than 20% increase in positions during the last five years. It is simply not possible to supply the vast numbers of junior doctors required by increasing the number of graduating doctors due to

the huge investment, and the inevitable delay while new medical schools are established and students graduate. As a result, it is necessary for alternative strategies to be employed, in particular changes to the scope of practice and training of junior doctors, as part of a 'creative redesign' of working patterns, including changes to the role of senior doctors and other health professionals.<sup>3</sup>

## The opportunity

The nationwide strike of junior doctors in New Zealand in 2006 provided an opportunity to assess the effectiveness of alternative strategies that might be employed in the situation of a relative shortage of junior doctors. This article reports the experience of the emergency department (ED) and internal medicine (IM) services at Wellington Hospital, the publicly funded tertiary hospital within the Capital and Coast District Health Board (CCDHB).

## The strike

In 2006, there was a breakdown in employment negotiations between the New Zealand Resident Doctors' Association (RDA) and employing district health boards over salaries, conditions and the introduction of a 'variation clause' to trial new rosters. The RDA voted to withdraw all members, comprising most hospital-based junior doctors (house surgeons, senior house officers, registrars) from their rostered work for five days between 0700 on Thursday 15 June until 0700 on Tuesday 20 June 2006. About 80% of all junior doctors complied with the strike. As a result, medical services had to be provided by specialist consultants, together with the minority of junior doctors not on strike and senior nurses for selected duties. During the strike, specialist consultants provided medical services that were in addition to, or as part of, their normal work. Other strategies were developed including cancelling most elective surgery and outpatients, closing a peripheral hospital, and expanding the scope of practice of the senior nursing service.

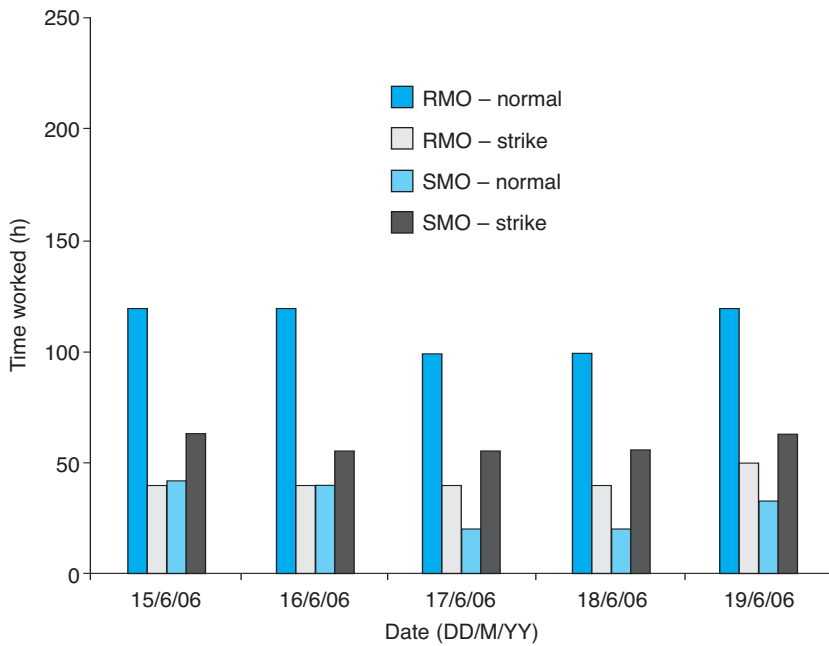


Fig 1. The hours worked by junior doctors (RMO) and consultants (SMO) in the emergency department prior to and during the strike.

### The emergency department

In the Wellington Hospital ED, the total number of clinical hours worked by junior and senior doctors during the strike was 210 and 288 hours respectively. By comparison, the standard number of clinical hours worked during this period would have been 560 and 151 respectively (Fig 1). Notwithstanding differing work circumstances, it can be calculated from these figures that one senior doctor covered the workload of around 2.6 junior doctors.

During the strike, both the waiting times and length of stay at the ED were markedly reduced, compared with the previous two months (Table 1). Indeed, it was the first occasion at Wellington Hospital that the Australasian College for Emergency Medicine recommended ED triage times were met. This improved perfor-

Table 1. The emergency department patient waiting time and length of stay in the two month period before and five day period during the strike.

| Triage code | Waiting time (min) |        | Length of stay (hours) |        |
|-------------|--------------------|--------|------------------------|--------|
|             | Before             | During | Before                 | During |
| 1           | 0                  | 0      | 4                      | 2      |
| 2           | 7                  | 6      | 5                      | 4      |
| 3           | 29                 | 21     | 4                      | 3      |
| 4           | 61                 | 30     | 3                      | 2      |
| 5           | 67                 | 30     | 2                      | 1      |

mance could be partly accounted for by differences in the number of patients attending, which were reduced by 13% compared with the average number expected. It needs to be acknowledged that hospital bed occupancy was between 63% to 68% during the strike, which meant that the frequent problem of 'bed-block' for ED patients requiring admission did not occur.

### Internal medicine

In IM, the 24 hour on-call and inpatient medical service during the strike was covered primarily by consultants. The system involves patients requiring inpatient medical care to be admitted to the short stay unit (SSU) if they are likely to be discharged within 24 hours, and to a general medical ward if a longer admission was anticipated. Overall, during the strike, the total number of hours worked by junior and senior doctors was 72 and 449 hours respectively (Fig 2). By comparison, the standard number of hours worked by junior and senior doctors would have been 878 and 184 hours respectively.

Notwithstanding differing work circumstances, it can be calculated from these figures that one senior doctor covered the workload of three junior doctors. During the strike, the number of admissions was similar to that of the corresponding five day periods in the previous four weeks (Table 2). The proportion of patients admitted to the SSU increased during the strike, and the average length of stay in the SSU during the strike was reduced from 1.07 to 0.88 days.

Common to both services it was evident that there were advantages in terms of consultants being able to make quicker decisions, nurses felt empowered to work autonomously within their scope of practice, and consultants felt communication and collegiality improved.

### Interpretations and implications

What does this experience tell us about the provision of acute medical services in hospitals in the situation of a pre-existing shortage of junior doctors? The first is that consultants can considerably improve productivity and it would be possible, if additional senior medical staff were deployed to acute frontline services, to greatly reduce the total number of doctors required. Indeed, the experience at Wellington Hospital would suggest that each senior doctor employed could accomplish the assessment and management throughputs of at least two junior doctors. An adjustment in the proportion of junior and senior doctors would have a number of workforce implications, including the effect on the training of junior doctors and the personal and professional impact on senior doctors deployed to rostered acute services such as emergency medicine, acute medicine, paediatrics, and

intensive care. Marked differences already exist within Europe, where the ratio of junior doctors to senior doctors is 1.4:1 in the UK, compared with the EU average of 1:4.<sup>2</sup>

Greater specialist involvement in the initial medical care of acutely ill patients presenting and being admitted to hospital has the potential to improve outcomes. This has led to the development of the emerging specialty of acute medicine, based on the US model of ‘hospitalists’ and supported in the UK by the Joint Committee on Higher Medical Training and the Royal College of Physicians.<sup>4</sup> Evidence of improved outcomes and efficiencies under this model of care is limited, but has been reported in terms of ED waiting times, length of stay, mortality and readmission rates.<sup>5-7</sup> Data from the ED and IM services during the strike provide further evidence of the potential benefits of senior doctor assessment and their greater involvement in the medical care during the initial period of hospital admission.

The third observation is that a number of traditional junior doctor tasks could be undertaken by other members of the health workforce. Examples include phlebotomy, patient assessment, and clerical and administrative duties such as booking

investigations. Clinical skills need to be used appropriately and economically. It is crucial that scarce human resources are used wisely.<sup>8</sup>

On a broader perspective, it is evident that in addition to their primary service role, junior doctors’ work is also a training studentship, with an apprenticeship/teacher relationship with more senior medical staff. The requirement to work under supervision and ongoing formal training requirements reduces productivity of the junior doctors, in terms of their service function. This raises the issue, in the New Zealand model at least, how the funding of this ongoing training should be apportioned between the service and educational components of the junior doctors’ work.

A contribution to the lower productivity of junior doctors may result from medical students not graduating with adequate skills to undertake many of their clinical duties. In New Zealand, the gap between expected and actual clinical and procedural skills is considerable, and indicates that many junior doctors may not have the clinical competencies to undertake their jobs.<sup>9,10</sup>

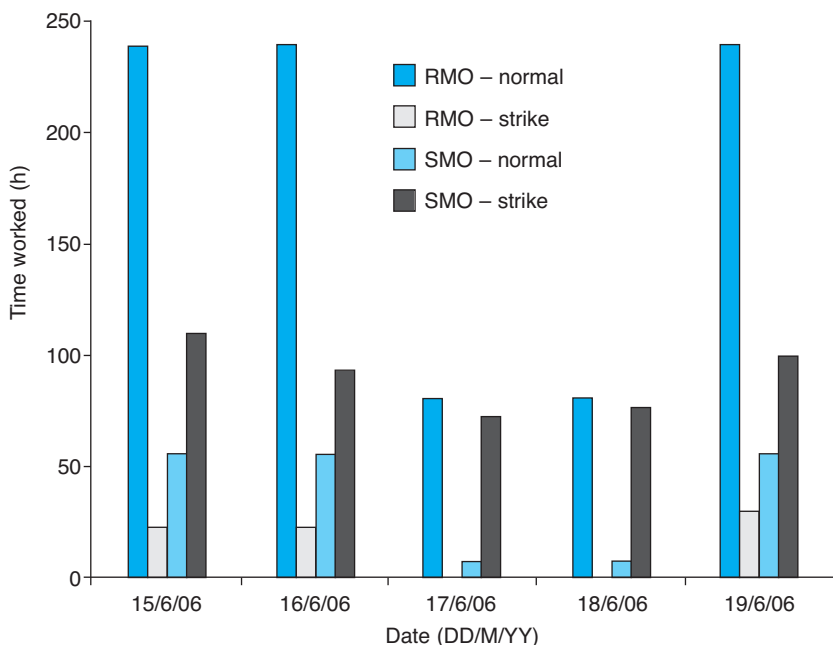
Finally, when considering different models of care, such as specialist delivered acute services, the resulting changes to the terms and conditions of the work of specialists has the potential to markedly affect their professional and personal lives. While hospital doctors in New Zealand have enviable job satisfaction, at least in comparison with the UK,<sup>11</sup> this status is fragile,<sup>12</sup> and any changes in practice will need to be carefully considered and resourced.

**Conclusion**

In summary, the first New Zealand nationwide junior doctors’ strike provided some insight into, and experience of, the strategies that might be employed to improve the delivery of acute medical care, in the face of the international shortage of junior doctors. It is likely that a greater proportion of senior doctors may need to be deployed in acute service roles and that many of the current duties of junior doctors may need to be undertaken by other health professionals and administration staff.

**Competing interests**

Geoffrey Robinson is Chief Medical Officer at CCDHB and was involved in the RMO salary negotiations. Kieran McCann is Divisional Manager for Internal Medicine at CCDHB. Peter Freeman is Clinical Leader of the Emergency Department, CCDHB. Richard Beasley is a Consultant Physician at CCDHB. Geoffrey Robinson and Richard Beasley have co-authored the StudentBMJ series *Transition from medical student to junior doctor*.



**Fig 2. The hours worked by junior doctors (RMO) and consultants (SMO) in the internal medicine service prior to and during the strike.**

**Table 2. The number of admissions to the medical wards and short stay unit (SSU) during the strike and the equivalent five day period in the previous four weeks.**

|                 | Week -4 | Week -3 | Week -2 | Week -1 | Strike |
|-----------------|---------|---------|---------|---------|--------|
| SSU admissions  | 33      | 43      | 32      | 32      | 66     |
| Ward admissions | 57      | 62      | 62      | 54      | 39     |
| Total           | 90      | 105     | 94      | 86      | 105    |

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