



JMO Rostering: Why It's so complex

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Rostering Junior Medical Officers (JMOs) isn't just about scheduling shifts. It presents one of the most complex operational challenges for roster managers, healthcare administrators and senior supervising doctors in Australian public hospitals.

It sits at the intersection of patient care, clinical training, compliance requirements and workforce wellbeing. Junior Medical Officers, also known as trainee doctors, rotate across teams and specialties, balance learning requirements with patient care, and work in fast-paced environments where clinical demands change daily.

Behind every roster are human considerations — junior doctors with changing availability, supervisors balancing clinical and teaching responsibilities, and patients needing continuity of care.

Why JMO rostering is uniquely complex

Trainee doctor rostering is complex. It requires the planning and coordination of a large, rotating workforce across multiple specialties, teams and levels of seniority, each with distinct clinical, training and supervision requirements.

In practice, this includes:

- Rotating trainees through multiple departments and teams
- Maintaining appropriate supervision and team hierarchies
- Managing leave, study requirements and training obligations
- Ensuring fair and equitable distribution of shifts
- Coordinating teams across multiple clinical areas

Overlaying this are strict compliance requirements, including fatigue rules, minimum rest periods, limits on hours worked and leave constraints.

Where traditional rostering approaches start to struggle

Many hospitals have historically relied on spreadsheets or generic workforce systems to manage JMO rostering. While this can work in smaller settings, it becomes more difficult in larger, more complex environments.

Small changes — for example, leave requests, sick leave or shift swaps — can create cascading impacts across the roster. In manual systems, this often leads to:

- Significant time spent building and rebuilding rosters
- Ongoing manual checking for fairness and compliance
- Version control issues as rosters are shared and updated
- Increased risk of inconsistencies and errors
- Difficulty managing interacting constraints

Over time, this complexity shifts onto people. In addition to the impact on roster managers, senior clinicians can spend substantial time managing rosters, reducing their time for much-needed clinical leadership, supervision and patient care.

Hospitals leading change: Toowoomba Hospital

Many hospitals are now exploring how AI-powered rostering can help manage these challenges more effectively.

Toowoomba Hospital, one of the largest public hospitals in Queensland, is a good example. It partnered with HosPortal to implement AI-powered rostering to modernise and automate its JMO rostering processes.

The regional Queensland hospital employs more than 350 staff across multiple clinical areas, including over 250 rotating junior medical officers and more than 80 consultants.

Its rosters must account for:

- Complex term structures
- Supervision requirements
- Team hierarchies
- Training obligations
- Clinical service coverage across the hospital

They must also comply with fatigue rules, leave constraints, and workforce requirements, while accommodating the day-to-day variability of the hospital environment.

This scale and complexity made manual rostering at the busy regional hospital unsustainable, prompting a move toward a more automated, AI-powered approach.

How AI-powered rostering is changing the equation

Ideally suited to trainee doctor rostering. AI-powered rostering systems automatically manage complex rules, workforce requirements, and clinical constraints. Once configured, these systems apply rules consistently, update rosters dynamically and reduce manual reconciliation.

Hospitals using AI-powered rostering often highlight several key capabilities:

Configurable rules tailored to local environments

Hospitals can configure fatigue rules, supervision requirements, local policies and training needs. Once established, these rules are applied consistently across the roster.

A single, real-time view of the roster

Changes are visible immediately, reducing version control issues and improving coordination across teams.

Supporting human oversight, not replacing it

AI-powered rostering supports roster managers and clinicians rather than replacing them, shifting effort from manual building to oversight and decision-making.

Built by clinicians, for clinical environments

For HosPortal founder Dr Chris Jones, the need for better rostering solutions emerged directly from clinical experience. As a practising anaesthetist working in Australian public hospitals, Dr Jones has seen firsthand how rostering complexity has grown over time.

"As more rules and requirements are layered into rosters, the process becomes increasingly difficult to manage manually," he explains.

He's also seen how this complexity has required senior clinicians to step away from clinical roles to manage rosters, reducing time available for supervision, teaching and patient care.

He says AI-powered rostering is helping shift that balance. By reducing the time required to build and maintain rosters, senior clinicians can spend more time supporting trainee doctors and leading clinical teams.

A turning point for trainee doctor rostering

As workforce demands continue to grow, hospitals are recognising the need for new approaches to trainee doctor rostering.

Hospitals such as Toowoomba Hospital are beginning to demonstrate what this shift looks like in practice, showing how AI-powered rostering can reduce administrative burden while strengthening clinical supervision and the human experience of junior medical officers.

As hospitals continue to balance workforce complexity with training and patient care, AI-powered rostering is emerging as an important tool in creating more sustainable clinical environments and teams.

About HosPortal

HosPortal is an Australian clinician-founded workforce planning and rostering software provider. Led by a practising senior anaesthetist, HosPortal was developed in response to firsthand experience of the clinical, operational, and human complexity of hospital rostering. HosPortal supports rostering across multiple models of care, complex shift patterns, training and supervision requirements, fatigue management, and fairness considerations. Its AI-supported, rules-based approach is designed to reflect the realities of trainee doctor or junior medical officer rostering, helping departments manage complexity at scale while maintaining transparency, equity, and clinical governance.