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48-hour maximum working week (without averaging) for Junior Doctors in Scotland

Expert Working Group - Final report

Professor Philip Cachia

January 2020

Executive Summary:

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

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1. Introduction and Background

The Scottish Government is committed to make NHS Scotland attractive for Junior Doctors to work and train in, whilst ensuring they have safe and sustainable work patterns. Junior Doctor rotas must comply with the EU Working Time Regulations and the New Deal contract for Junior Doctors (2002). Additional measures introduced by the Scottish Government to improve Junior Doctors' working lives include reducing the maximum number of consecutive working days to 7, abolishing 7 consecutive night shifts, and ensuring a minimum of 46 hours recovery time after night shifts (*Scottish Government Director's Letter (2018) 16*).

Scottish Government Health Workforce, is implementing a quality improvement (QI) framework that examines the working patterns of doctors-in-training: the Professional Compliance Analysis Tool (PCAT) (Please see conclusion 7 on page 32). PCAT evaluates the rota templates and the supporting professional environment across three interdependent domains: Patient Safety, Quality of Training and Trainee Health and Wellbeing.

Working Time Regulations limit the working week to 48 hours but permit the hours to be averaged over a 26 week period. As a result many Junior Doctor rotas in Scotland still include individual weeks with very long hours of work and the associated risks of fatigue. A further commitment from the Scottish Government is the introduction of a 48 hour maximum working week - without averaging - which would mean that no Junior Doctor in Scotland worked more than 48 hours in a seven day period.

In March 2018 the Cabinet Secretary for Health and Sport commissioned an independent Expert Working Group (EWG) to explore the options and changes that would be required to achieve this objective. A chair for the EWG (Philip Cachia) was appointed in March 2018. The Chair worked with Scottish Government advisors to agree on a membership of the EWG that both ensured representation of all relevant stakeholders, and proposed appropriate terms of reference for the group.

An informal workshop was held in September 2018 at which the agreed stakeholders were invited to present key issues, benefits and barriers to achieving the 48 hour objective.

The stakeholders who contributed to this workshop were:

- The Academy of Royal Medical Colleges and Faculties of Scotland (consultant and junior representatives)
- BMA Scotland (two representatives)
- NHS Scotland Management Executive Group (two representatives)
- NHS Education for Scotland (two representatives)
- Health Board Directors of Medical Education (one representative)

Building on the workshop outcomes, the membership was finalised to include the above stakeholder organisations and a public partner, recruited through the Healthcare Improvement Scotland Public Partner programme.

Terms of Reference for the EWG were developed and signed off by the Cabinet Secretary in January 2019 (Appendix 1).

Formal EWG meetings were held in November 2018, March, May, June, September and November 2019 to take forward an agreed programme of work which makes up the substance of this report. External presentations provided information and evidence on the use of e-rostering and the Professional Analysis Compliance Tool (PCAT) as examples of best practice in rota design in NHS Scotland.

All stakeholders agreed to support the EWG programme of work while noting the following:

1. The EWG programme should initially explore options for best practice rota design to achieve the 48 hour maximum working week (without averaging) objective within existing service and educational models, and with the current Junior Doctor staffing establishments.
2. **[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]**
3. The relationships between rota design and hours of work for Junior Doctors are intimately linked to other key issues, including the substantial evidence base on the impact of fatigue on patient and staff safety, staff wellbeing and quality of life. There are established UK- and Scotland- wide initiatives that will report on these broader areas. The work of the EWG should be focused on the 48 hour maximum working week (without averaging), taking cognisance of implications for fatigue and wellbeing, while avoiding replicating the work of other initiatives in this area.
4. In making recommendations, the EWG would consider and prioritise the whole system consequences of Junior Doctor rota changes, including the impact on other NHS staff groups, service continuity and patient safety.

It was therefore agreed that the EWG programme of work would consist of the following stages:

1. Design 48 hour rotas with no averaging for a variety of Junior Doctor grades and specialties using current best practice and Doctors Rostering System (DRS) computer software
2. Consider the educational implications of the rota changes through the EWG NES representatives (as per current practice in the NHS where proposed rota changes require educational approval from the relevant Postgraduate Dean before implementation)
3. Undertake a site visit to explore in depth the potential impact of 48 hour rotas on: i) Service Impact; ii) Staff and Patient Safety; iii) Employee experience and iv) Educational Quality. Evidence would be gathered from a variety of staff groups through facilitated focus groups
4. Pilot potentially viable 48 hour rotas in the workplace with the agreement of local NHS management teams. (The EWG did not proceed with this after analysis of evidence from stages 1-3 and our review of the evidence of the impact of fatigue on staff and patient safety)

NHS Lanarkshire kindly agreed that University Hospital Hairmyres would be the pilot site for this work through their Management Executive representative on the EWG.

2. Membership of the Junior Doctors 48 hour Expert Working Group

Professor Philip Cachia, Chair

Professor Derek Bell, Scottish Academy of Medical Royal Colleges (Deputy Dr Michael Jones)

Dr Luke Yates, Scottish Academy of Medical Royal Colleges

Mr Sean Gallimore, BMA

Dr Lewis Hughes, BMA

Dr Simon Edgar, Chair, Scottish Directors of Medical Education Group

Mr Daniel McQueen, Healthcare Improvement Scotland, Public Partner

Dr Jane Burns, Management Steering Group (Deputy Dr John Keaney)

Dr Annie Ingram, Management Steering Group

Professor Clare McKenzie, NHS Education for Scotland

Ms Anne Dickson, NHS Education for Scotland

Scottish Government/NHS Education for Scotland Clinical Leadership Fellows

Dr Alex Rice

Dr Chris Sheridan

Dr Katie Ritchie (From August 2019)

Dr Michelle Currie (From August 2019)

Scottish Government Advisors

Dr John Colvin, Professional Adviser and Senior Medical Officer

Mr Daniel MacDonald, Medical Workforce Adviser

3. EWG programme of work

3.1 Design 48 Hour working week rotas with no averaging

Summary of current Junior Doctor rotas in Scotland:

There are over 800 different Junior Doctor rotas in operation across NHS Scotland, covering all grades and specialties, and in settings ranging from large urban teaching/trauma centres to rural and community healthcare.

The current approval process involves:

- Design and endorsement by territorial board Human Resources departments as meeting all applicable employment safeguards, with input from service and medical staff
- Approval for use by Junior Doctor representatives
- Educational approval by NHS Education for Scotland (NES) through the accountable Postgraduate Dean for each programme. (Detailed in section 3.2)
- Approval from the Programme Director of the New Deal Monitoring team, situated within the Scottish Government Health Workforce, Leadership & Service Reform Directorate.

Currently template rotas are prepared in Health Boards on the Doctors Rostering System (DRS), which is a computer-based system that calculates hours worked and ensure rotas meet safeguards set out within legal and contractual rules. The system also ensures compliance with the Working Time Regulations which stipulate a 48-hour maximum working week, averaged over a 26-week period.

Pilot rotas for 48 hour maximum working week:

NHS Lanarkshire agreed for University Hospital Hairmyres to be the pilot site for 48 hour maximum (without averaging) rota design and for the subsequent site visit. While no single site could be representative, nor the results predictive of every specialty rota across Scotland, Hairmyres was an ideal test site, combining busy 24/7 acute care service provision across different specialties with a significant training and education commitment. The pre-existing rotas met all local and national educational requirements, and were compliant with the Working Time Regulations, the 2002 New Deal Contract for Junior Doctors, and the Scottish Government Directive (*Ending of 7 nights, Max 7 shifts in a row, & minimum 46 hours rest following nightshifts*).

Pilot 48 hour maximum working week (without averaging) rotas were developed based on current staffing from February 2019 for 6 months to reflect as accurate a picture as possible. Rotas were selected for 3 specialties to give a broad spread and across all training levels in order fully to assess the impact.

Those included are:

- General Medicine Foundation Year 1 (FY1)
- General Medicine Junior (Foundation Year 2 (FY2), General Practice Specialty Trainees (GPST), Core Medical Trainees (CMT1-2)
- General Medicine Senior: Medical Specialty Trainees (ST3-7)
- General Surgery Foundation Year 1
- General Surgery Junior (FY2, GPST, CT1-2)
- General Surgery Senior (ST3-8)
- Emergency Medicine Junior (FY2, GPST, Acute Care Common Stem Trainees (ACCS))
- Emergency Medicine Senior (ST4-6)

Please see Appendices 2 and 3 for the current and proposed pilot rotas.

The 48 hour maximum working week (without averaging) rotas were produced using the Doctors Rostering System (DRS) as above. Some presumptions were made in the formulation of these rotas, these include:

- No change to staffing numbers
- All on call commitments should remain the same across both rotas (i.e. out of hours work – likely required to continue to provide a safe service)
- No change to other staffing within the departments (of other doctors, nurses or allied health care professionals)
- Where possible no change to the shift timings (to continue to facilitate handover)
- Loss of normal working days equate to loss of training time

The new rotas also meet all other current working hours requirements as referenced above.

Rotas were produced by Scottish Clinical Leadership Fellows working within the Scottish Government Health Workforce department. In order to allow more in-depth assessment of the impact of the proposed change, the group agreed to focus analysis within one site so as to allow more accuracy in modelling. Rotas were produced to maximise the protection of service delivery and training time by retaining as much working time as possible within the confines of all mandatory hours limits and 48 hour (without averaging) limit. The analysis should be regarded as a “*best case*” scenario. Were, for example, staffing to reduce (which is common

with natural fluctuations), or a department have specific additional clinical needs when rostering staff, the resulting changes required is likely to reduce overall hours, training time and possible daytime service cover further, which could have a direct impact on front line patient care.

There are important educational implications of rostering Junior Doctors to work in 'normal working hours' (weekdays 8am to 6pm) and 'out of hours' (weekends, and from 6pm through to 8am). During 'normal working hours' the full range of hospital support services are operational and most planned, elective clinical care and essential clinical and managerial meetings take place. In addition, most of the formal educational activities take place during normal working hours. All these activities and experiences are essential to fulfil the bulk of the GMC approved curricular requirements that enable Junior Doctors to progress and successfully complete their training programmes within the 'indicative training time' approved by the GMC for each specialty. Out of hours experience is also an essential component of training for specified areas of emergency care in each specialty curriculum.

However, many essential curriculum educational outcomes cannot be delivered out of hours, even if there were to be increased consultant time and educational supervision, because elective and planned care does not take place then. The balance of rostered time in 'normal working time' (predominately) and 'out of hours' is therefore essential to deliver specialty curricula within the required indicative training time.

The 48 hour maximum (without averaging) rotas developed for Hairmyres University Hospital with the underpinning analyses and comparisons with pre-existing rotas are detailed in appendices 2 and 3.

Limitations of Analysis:

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Conclusions:

From this exercise, there are a number of generic conclusions that can be applied to 48 hour maximum (without averaging) working week rotas utilising existing service and education models and current Junior Doctor staffing establishments. These are likely to be applicable to all specialties providing 24/7 acute care services across the spectrum of geographies in Scotland:

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Alex Rice and Chris Sheridan

3.2 Educational Implications of proposed 48 hour rotas

In considering rota changes, in addition to taking account of compliance with legal requirements and service delivery, it is also essential that the rota ensures that the doctor in training has the opportunity to achieve the educational outcomes of their training programmes. **[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]**. Within NHS Scotland, NES, as the GMC approved Deanery, approves rotas from an educational perspective. **[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]**

Current Processes

To date, there has been no standardised way that rotas are checked across NHS Scotland nor was there consistency in how approval was sought from the Deanery. Each of the four Postgraduate Deans approached the request for educational approval in a different way although there was commonality in the need for detailed educational information. Information gathering will vary according to the curricular requirements, detail of the provision of formal teaching on site and other factors specific to the specialty location and service. It is important to recognise that educational approval is for doctors in formal training programmes and that many rotas contain non-training grade doctors for which the Deanery has no role in approving their rota contribution.

Proposed Processes

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Educational Approval of 48 hour maximum working week (without averaging) pilot rotas for Hairmyres University Hospital

As part of the desktop exercise, the Postgraduate Deans within NES reviewed the template 48hour rotas for the EWG.

Educational approval is primarily based on the ability for doctors in training to be able to access training opportunities described in their respective curricula which includes both on the job training and formal teaching. Added to that is the need for supervision appropriate to the trainee level. Consideration is also given to the other aspects of rota design in considering appropriate learning. For doctors in training, rota structure (shift lengths and breaks) as well as the frequency of unsocial work should be considered (which impacts on work-life balance, family and

relationships). Both of these are important and can influence the attractiveness of posts.

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Clare McKenzie and Anne Dickson

3.3. Site visit to Hairmyres University Hospital to explore the impact of proposed 48 hour rotas

Having modelled potential 48 hour maximum (without averaging) rotas for different specialties at Hairmyres University Hospital, the EWG conducted a visit to the site to meet with different staff groups. The purpose of the visit was to obtain qualitative data and staff feedback on the global impact of introducing these rotas.

The visit team was led by the EWG Public Partner (Daniel McQueen) and included Scottish Government/NES Clinical Leadership fellows (all junior doctors with in depth understanding of rota design software) and volunteer quality assurance managers from NES.

NHS Lanarkshire staff were recruited by local management and consisted of four different groups: Junior Doctors; Medical Consultants; Nursing and Allied Healthcare Professions staff and medical managers. All participating staff were sent the pilot 48 hour maximum working week (without averaging) rotas in advance of the visit.

Daniel McQueen (on behalf of the EWG) and Dr John Keaney, Medical Director, Acute Division, NHS Lanarkshire hosted the event.

Qualitative data and feedback was obtained through 4 separate focus groups. Each group was facilitated by an EWG member/clinical leadership fellow and a NES QA manager to encourage open discussion and feedback within each staff group who would be affected were these 48 hour maximum rotas to be introduced. The discussion was structured to ask each staff group in confidence about the potential impact of the rotas on: Service Impact; Staff and Patient Safety; Employee Experience and Educational quality.

Feedback from the four focus groups is detailed in appendices 6 and 7. There was strong concordance from all the focus groups in spite of the different staff groups represented. There are some consistent, high level conclusions that can be drawn from the exercise:

1. Service impact

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

2. Staff and patient safety

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

3. Employee experience
[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

4. Educational Quality
[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Alex Rice, Chris Sheridan and Daniel McQueen

3.4. Evidence on Fatigue and relationship to hours of work and rota design

Whilst the EWG programme of work was focussed on the changes required to implement a 48 hour maximum working week (without averaging) for Junior Doctors, there was agreement that recommendations for change could not be effective or safe without considering the impact proposed changes may have on fatigue.

In the absence of robust evidence of the impact of the rota changes necessary to achieve a 48 hour maximum working week (without averaging) Lewis Hughes and Luke Yates undertook a literature search and critical review of the available evidence on behalf of the EWG:

Fatigue: What it is and why Junior Doctors are at greater risk

Definitions of fatigue vary in the literature, and the terms tiredness and drowsiness are used interchangeably in a number of publications^[1]. We offer two widely accepted definitions:

“A state of feeling tired, weary, or sleepy that results from prolonged mental and physical work, extended periods of anxiety, exposure to harsh environment, or loss of sleep.”^[1]

“Fatigue is the decline in mental and/or physical performance that results from prolonged exertion, lack of quality sleep or disruption of the internal body clock. The degree to which a worker is prone to fatigue is also related to workload. For example, work that requires constant attention, is machine paced, complex or monotonous will increase the risk of fatigue.”^[2]

Doctors (and other clinical staff) are at an increased risk of fatigue because they routinely, and increasingly, work long hours and variable shift patterns, and are exposed to excessive and high-intensity workloads. In the GMC National Training Survey 2019 (response rate 95% of all UK Doctors in Training) about one in four reported feeling ‘burnt out’ by their work with 56% reporting that they always or often feel ‘worn out’ at the end of the day. 45% of trainees report working beyond their rostered hours on a daily or weekly basis; 39% rated their workload as heavy or very heavy^[3]. Fatigue and shift working are recognised risk factors for wellbeing and clinical errors. Employers have a legal duty to consider the risks to safety presented by shift work^[4].

How fatigue and its contributors impact on Doctor-Patient safety

Fatigue and Working Hours

Longer working hours are associated with greater risk of fatigue^[5]. We are not aware of any evidence that directly addresses the relative risks to a doctor's safety working above or below a threshold of 48 hours in a given seven-day (168-hour) period. Acute fatigue (resulting from extended time on a single shift or time awake without rest) impairs attention, performance and working memory capacity^[6]. While it is difficult to accurately determine how the level of risk changes over the period of time worked, there is some consensus from studies of shift workers that longer shifts (defined as shifts at least 10 or 12 hours long in the literature)^[7] are associated with a 25-30% higher risk of accidents and injuries than an eight-hour shift^[8-10]. Research specifically in physicians demonstrates an increased risk of road traffic accidents after extended shifts over 24 hours^[11], and a higher risk of needlestick injury during extended shifts over 20 hours^[12]. An individual who experiences moderate sleep deprivation (equivalent to being awake for 17-19 hours) can have the same reaction time as being at a blood alcohol level of 50mg/100ml (the legal limit for safe driving in many countries including Scotland).^[13] In addition, evidence from across shift-working industries shows that working long shifts in succession (eg blocks of seven nights) increases the risk of fatigue and errors, with the risk increasing the more shifts worked consecutively.^[8,14]

Junior Doctors in Scotland are currently required to not exceed 48 hours per week averaged over a 26 week reference period. The 48 hour figure takes account of annual and study leave. This requirement relates to the European Working Time Directive and is separate to the contractual limits provided in the New Deal. There is some evidence that the reduction of hours worked to this average is likely to have contributed to improved patient safety, with 33% fewer medical errors in one (relatively small) study.^[15] This study assessed the intervention of a 48 hour average working week alongside a number of other evidence-based interventions to improve safety and reduce fatigue, suggesting that reducing working hours alone does not provide the solution. Although the study did not explore this issue, trainees reported a reduction in Educational Opportunities.^[5] Studies from the US appear to indicate improved safety with reduced working hours, but this was in the context of reducing working hours from 85 to 65 per week.^[16-18] Interventions which reduce the working hours of Doctors in Training have not been shown to adversely affect patient mortality, cost of care or the rate of readmission to hospital.^[19] Overall the available evidence is limited by variable definitions of "long hours" and differing methods of assessing fatigue levels. The optimal duration of a working week for doctors is unknown.

Personal Health Effects of Fatigue

Over the long term, working long hours, shift work and night work adversely affect the health of workers^[20,21]. Specific effects include increased risk of cardiovascular disease^[22,23], primary sleep disorders^[24], becoming overweight or obese^[25], and developing type 2 diabetes^[26–28]. Other studies which have included hospital workers have found an increased risk to shift-working women of miscarriage and pre-term birth.^[29] Fatigue is a risk factor for burnout^[6], and working long hours may increase the risk of depression and anxiety. Female night-shift workers appear to be at an increased risk of breast cancer^[30,31], and night shift work is linked to an elevated risk for prostate^[32] and colorectal cancer^[33], as well as dementia^[34].

Other Risks for Fatigue

It should be noted that total working hours is not the only factor influencing fatigue. Shift work disrupts circadian rhythm and the natural sleep cycle^[35] especially early morning^[36] and night shift^[37] work. It is widely acknowledged that the effects of fatigue are more pronounced working night shifts compared to day shifts.^[38,39] Having short recovery times (<11 hours) between shifts, or rapidly rotating schedules (eg frequent transitions between day and night), also adversely impacts on sleep duration^[40]. “Forward-rotating” rota designs are recommended^[6,41]. Rota design and shift duration affect inpatient continuity of care^[42], necessitating more frequent information transfers between clinicians (introducing an increased risk of error) and reducing educational opportunities. Anecdotal evidence reported by members of this expert working group suggests physician continuity of care can also reduce workload and perceived stress through improving the doctor’s familiarity with a patient’s recent history.

Work conditions are also relevant to fatigue. Rest breaks taken during a shift reduce risk from fatigue^[4] but require adequate facilities including access to food and drink and the capacity for short naps overnight (<20 minutes to avoid impaired alertness of first awakening).^[41] The recent review “*Caring for Doctors, Caring for Patients*” commissioned by the GMC and undertaken by Prof. Michael West and Dame Denise Coia recommends all UK Healthcare Employers implement the BMA Fatigue and Facilities Charter and BMA Good Rostering Guidance.

Workload must also be considered. Excessive workload may prevent doctors from taking breaks and also increases the risk of interruptions. Decision fatigue is a recognised acute consequence of high-intensity work.^[6] Finally, a junior

doctor is expected to maintain administrative and education documentation as part of their training which should nominally be completed during working hours: where workload prevents this these required tasks must be completed on the doctor's unpaid/non-work time, effectively extending working hours beyond those rostered.

Conclusion

Section 29(1)(a) – Formulation Or Development Of Government Policy

For references, see Appendix 8.

Lewis Hughes and Luke Yates

4. GMC Report - ‘Caring for Doctors Caring for Patients: How to transform UK healthcare environments to support doctors and medical students caring for patients’ (November 2019)

In recent years, the evolving crises in medical recruitment and retention, poor job satisfaction and increasing evidence of burnout in the medical profession have been widely recognised as a cause for concern. In response, the GMC commissioned Professor Michael West and Dame Denise Coia to undertake a UK wide review to identify the causes of poor wellbeing in doctors and medical students and help provide solutions that can be actioned in the NHS.

Their report ‘Caring for Doctors Caring for Patients: How to transform UK healthcare environments to support doctors and medical students to care for patients’ was published by the GMC in November 2019.

The report makes eight key recommendations focussed on delivering safe, supportive and inclusive environments and compassionate cultures. The authors challenge health service leaders to implement all recommendations in order to improve the wellbeing and sustainability of the medical workforce – an outcome known to correlate with higher quality patient care and higher levels of patient satisfaction.

The GMC report has a much wider scope than the specific focus of the EWG to make recommendations on achieving a 48 hour maximum working week (without averaging) for Junior Doctors. However, two of the key recommendations in ‘Caring for Doctors Caring for Patients’ are pertinent to Junior Doctor working hours:

Key recommendation two (*Caring for Doctors Caring for Patients, November 2019*)

Work conditions

To introduce UK-wide minimum standards for basic facilities in healthcare organisations.

- *All healthcare employers should provide all doctors with places and time to rest and sleep, access to nutritious food and drink, the tools needed to do their job and should implement the BMA’s Fatigue and Facilities charter.*
- *The leadership and boards of every organisation employing doctors should review facilities to ensure compliance with the BMA’s Fatigue and Facilities charter.*
- *Systems regulators, improvement bodies and partners listed should check that employers have implemented the BMA’s Fatigue and Facilities charter in all working environments.*

- *The GMC should continue to work with partners via the insights and data obtained through their NTS to monitor, assess and support implementation. Where issues are identified, the GMC should work with postgraduate deans, medical royal colleges and employers to ensure they are promptly and fairly addressed.*

Key recommendation three (*Caring for Doctors Caring for Patients*, November 2019)

Work schedule and rotas

To introduce UK-wide standards for the development and maintenance of work schedules and rotas based on realistic forecasting that supports safe shift swapping, enables breaks, takes account of fatigue and involves doctors with knowledge of the specialty to consider the demands that will be placed on them.

- *NHS England, NHS Wales, NHS Boards in Scotland and the Department of Health (Northern Ireland) should fully implement the BMA's and NHS Employers' Good Rostering Guide (see new deal monitoring guidance in Scotland) in all healthcare environments*
- *Healthcare organisations across the UK should develop and maintain mechanisms to enable doctors to report rotas that are not compliant with the BMA's and NHS Employers' Good Rostering Guide (see new deal monitoring guidance in Scotland). Guardians of safe working hours in England should encourage doctors in training to raise exception reports about rostering issues and should monitor such exception reports and take steps to address the issues raised*
- *Systems regulators, improvement bodies and partners listed vi should check employers have implemented the BMA's and NHS Employers' Good Rostering Guide (see new deal monitoring guidance in Scotland)*
 - *The GMC should work with partners listed above to monitor implementation of the BMA's*

The EWG programme of work had been completed when '*Caring for Doctors Caring for Patients*' was published. We did, nonetheless, re-visit the EWG report section '*Evidence of Fatigue and relationship to hours of work and rota design*' and compare our conclusions with the relevant recommendations in the GMC report. The outcome of this confirms great synergy between the findings and recommendations on quality of experience as work and rota design in relation to Junior Doctors fatigue and wellbeing.

'Caring for Doctors Caring for Patients' does not make specific reference to Junior Doctors' hours of work so there are no conclusions or recommendations about a desired or optimum maximum working week.

5. Public Partner Reflections

The primary role of a public partner on the EWG was to ensure the EWG adhered to the Terms of Reference and to provide objective scrutiny of the EWG processes. This section contains Danny McQueen's observations in respect of these. In addition, Danny has added some thoughtful insights and suggestions on the content discussed at EWG meetings which should inform NHS leaders in taking forward the recommendations of the EWG.

Observations from Lay Representative (HIS Public Partner) Daniel McQueen

Summary concerning procedure and outcome

1. The EWG worked in accord with its Terms of Reference.
2. The other members made me very welcome and encouraged me to contribute to the discussions.
3. I was impressed by the positive attitude and active engagement of the various parties represented on the EWG. The Chairman has been excellent in facilitating focused discussions.
4. There was thorough and detailed evidence gathering and discussion of possible benefits and risks associated with the probable changes needed to achieve a 48-hour working week, without averaging, for Junior Doctors (JDs). The desk-top rota exercise undertaken at Hairmyres Hospital involving medical, nursing and administrative staff from North Lanarkshire Health Board, and EWG and NES facilitators, **[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]**
5. **[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]**JD education is under the auspices of the GMC, not devolved, and so cannot easily be altered in Scotland.
6. **[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]**.

Personal comments as Public Partner, highlighting some of the evidence considered

1. Working week.

One surprise to me as a layperson is that much of the NHS hospital system generally works a five-day week, with reduced activities at weekends. Exceptions are the acute services, such as A&E, Obstetric, Acute Medicine, Lab services and Radiology, which run 24/7, and some special elective "catch-up" medical and surgical initiatives

at weekends to reduce waiting lists. **[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]**

2. Shift duration and actual hours worked by JDs.

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

3. Fatigue and rest.

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

4. Facilities.

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

5. Patient safety and Information Technology (IT)

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

6. Supervision and team communication.

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

7. Conclusion.

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Daniel McQueen

6. Conclusions and recommendations:

The EWG conclusions and recommendations will be presented in the following sections:

1. Section 29(1)(a) – Formulation Or Development Of Government Policy
2. Section 29(1)(a) – Formulation Or Development Of Government Policy
3. Recommendations for improving Junior Doctor wellbeing and minimising fatigue in the workplace
4. Implementation and next steps

Section 29(1)(a) – Formulation Or Development Of Government Policy

Outcome:

Section 29(1)(a) – Formulation Or Development Of Government Policy

Principle Conclusions:

Section 29(1)(a) – Formulation Or Development Of Government Policy

Section 3: Recommendations for improving junior doctor wellbeing and minimising fatigue

Section 29(1)(a) – Formulation Or Development Of Government Policy

There are, however, evidence-based interventions known to combat and prevent fatigue and the consequent risks to patient and staff safety that could be implemented in NHS Scotland (NHSS) in more realistic timescales.

Section 29(1)(a) – Formulation Or Development Of Government Policy

Recommendations (in addition to current policies complying with the Working Time Directive) that could be implemented across all Health Boards, training centres and specialties with an established evidence base:

Principle Conclusions:

Section 29(1)(a) – Formulation Or Development Of Government Policy

Implementation and Next Steps:

Section 29(1)(a) – Formulation Or Development Of Government Policy

The publication of the GMC Report *Caring for Doctors Caring for Patients* (November 2019) and the *Scottish Government Health and Care (Staffing) (Scotland) Bill* (May 2019) provide timely catalysts for developing a national approach to improve standards and outcomes in relation to staff wellbeing and combating fatigue in all staff groups. **Section 29(1)(a) – Formulation Or Development Of Government Policy**

Section 29(1)(a) – Formulation Or Development Of Government Policy

7. Acknowledgements:

I would like to thank all members of the working group for their diligence and commitment in taking forward this programme of work and for their willingness to explore different options for achieving the objectives set out in the Terms of Reference.

I would particularly like to thank Danny McQueen as the public partner on the group, for his many thoughtful observations and suggestions and for helping to keep us focussed on the core purpose.

Luke Yates and Lewis Hughes jointly undertook the literature review on evidence based interventions to reduce the risks associated with fatigue.

In addition, I would like to thank Alex Rice and Chris Sheridan, the Scottish Government/NES Clinical Leadership Fellows who participated in the work of the group from the beginning and who spent many hours developing and writing up different rota options for the group.

I would also like to thank Members of the Scottish Government Health Workforce Pay and Conditions team who provided support for the group, including Chris Raftery, Carolyn McKerracher, Pavel Stroeve, Sandra Neil, and Jack Ashton.

8. Appendices

1. EWG Terms of Reference
2. Hairmyres 48 hour maximum working week pilot rotas
3. Comparison of pre-existing and revised 48 hour maximum Hairmyres rotas
4. NES Educational approval analysis for revised 48 hour maximum Hairmyres rotas
5. Request for Educational Approval of Draft Hairmyres University Hospital Rotas – 48 hour maximum working week (without averaging)
6. Staff feedback from the NHS Lanarkshire pilot visit
7. NHS Education for Scotland revised rota educational approval checklist
8. References for 'Evidence of Fatigue and relationship to hours of work and rota design
9. Table: benefits and risks of options for achieving a 48 hour maximum working week (without averaging) for Junior Doctors in Scotland
10. Professional Compliance Analysis Tool - PCAT

Appendix 1: Junior Doctors' 48-hour Expert Working Group Terms of Reference

Overview

NHS Scotland is a first class health service that provides high quality care to the people of Scotland, and is a world leader in the training of Junior Doctors. By enhancing our Junior Doctors working lives, health and well-being, we can contribute to a sustainable workforce that delivers a high level of training, professionalism, clinical care, and safe working practices. To achieve this, Scotland requires:

- A high quality, motivated Junior Doctor work force which contributes to safe and effective healthcare supported by high quality postgraduate training and best employment practice.
- Best practice guidance and compliance to rota design that balances education and training requirements with medical service continuity whilst recognising and supporting the work life balance of Junior Doctors
- A safe operational level of Junior Doctor vacancies across all disciplines – an organisation the size of NHS Scotland, will always have vacancies, but within any discipline, these must be kept minimal and managed to ensure clinical safety and reduce fatigue and stress for Junior Doctors.

- To reduce the demand for temporary staff and the associated costs

Fatigue is recognised as a significant risk inherent to Junior Doctor working, with resultant effects on Junior Doctor safety and wellbeing, retention and absences and patient safety. Progress has already been achieved on improving the working lives of Junior Doctors, by ending the practice of working for seven successive nights, reducing the average maximum number of hours from 58 to 48, introducing (from August 2019) a minimum break of 46 hours following full shift night working and the provision of single employer status for Junior Doctors through the Shared Service programme.

EWG Purpose

It is proposed that the Junior Doctors' 48-hour Expert Working Group will develop risk assessed options for implementing a 48-hour working week (without averaging) taking into consideration Junior Doctor wellbeing, the effects on education and training, continuity of safe and effective service provision and the impact on other staff.

The Group will take a phased approach to how best to develop potential solutions taking into account associated risks and potential mitigation, reporting as outcomes are achieved or significant stages are reached. The initial phase will be to consider the existing rotas and how they impact on patient safety, training, resources and the effect of fatigue by:

- Evaluating available evidence on optimal rota design taking into account the priorities of continuity of excellence in patient care, training and education and the wellbeing of Junior Doctors.
- Analysing and modelling of current Junior Doctor rotas across Scotland, with the aim of identifying best practice and the reasons for variation in practice
- Liaising with other groups working on overlapping areas relating to staff wellbeing to ensure coordinated and consistent workstreams and objectives
- Working with NHS service and medical managers (across different geographies and specialties) to explore opportunities to pilot and evaluate potential rota innovations and changes that work towards the objective of a safe 48 hour maximum working week and the impact on patient care, training and education and Junior Doctor wellbeing.
- Developing recommendations for best practice in rota design and innovation with the aim of reducing Junior Doctors' hours and improving their working lives, taking into account the impact on service continuity, other staff groups and flexible bank/agency arrangements. (Recognising that different solutions will be required in different health service settings and across different specialties).
- Recommending best practice on rota design across appropriate areas of the NHS.

- Identify potential barriers to effective implementation and make risk assessed recommendations to overcome these.
- identifying the data and information required to monitor and support improvements in the working lives and conditions of Junior Doctors and recommend the processes necessary to support this.

Throughout this time the Group will keep abreast of Workforce Plans and Service Delivery and any potential impact of proposals on the work of the Group. At the end of this phase the Group will report on their findings and suggest proposals for consideration. It may be necessary to initiate further phases involving wider considerations; these will be detailed in the report and would require to be scoped out.

Membership

EWG Membership comprising:

- Independent chair, appointed by Scottish Ministers
- British Medical Association
- Academy of Royal Colleges and Faculties of Scotland
- NHS Education for Scotland
- Directors of Medical Education
- NHS Scotland Management Steering Group
- HIS Public Partner

The Group will consult with/involve other relevant organisations and individuals as appropriate.

Timings

The EWG is expected to draw preliminary conclusions and make recommendations to the Cabinet Secretary for Health and Sport from the initial phase by December 2019.

Appendix 2: Hairmyres 48 hour maximum (without averaging) working week pilot rotas and analysis:

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Postgraduate Training & Impact on Time to CCT

Postgraduate training is regulated by the General Medical Council (GMC) on a UK-wide basis, with medical Royal Colleges involved in producing curricula, with which all doctors must comply fully at the expected rate to complete training (gaining a Certificate of Completion of Training – CCT) and obtain work as Career Grade doctors in the NHS. Training programme lengths are fixed within curricula, with doctors in postgraduate training having to obtain certain qualifications, levels and types of clinical experience as they progress **[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]**

Appendix 3: Comparison of pre-existing and revised 48 hour maximum (without averaging) working week rotas for Hairmyres pilot study.

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Appendix 4: NES Junior Doctor rota Educational Approval Checklist, 2019

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Appendix 5. Request for Educational Approval of Draft Hairmyres University Hospital Rotas – 48 hour maximum working week (without averaging) (Professor Clare McKenzie in consultation with other Postgraduate Deans)

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Educational approval is primarily based on the ability for doctors in training to be able to access training opportunities described in their respective curricula which includes both on the job training and formal teaching. Added to that is the need for supervision appropriate to the trainee level. For doctors in training to learn appropriately, rota structure (shift lengths and breaks) as well as the frequency of unsocial work should be considered (which impacts on work-life balance, family and relationships). Both of these are important and can influence the attractiveness of posts.

Appendix 6: Staff feedback from the NHS Lanarkshire pilot visit

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Alex Rice and Chris Sheridan

Appendix 7: Rota exercise at Hairmyres Hospital

[Redacted – 30(b)(i) - The Free And Frank Provision Of Advice]

Daniel McQueen

Appendix 8. References for ‘Evidence of Fatigue and relationship to hours of work and rota design

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Lewis Hughes and Luke Yates

Appendix 9. Benefits and risks of options for achieving a 48 hour maximum (without averaging) working week for Junior Doctors in Scotland

Table summarising advantages and disadvantages change management options for achieving 48 hour working week (without averaging) for Junior Doctors in Scotland

	Benefits	Risks
Section 29(1)(a) – formulation or development of government policy	Section 29(1)(a) – formulation or development of government policy	Section 29(1)(a) – formulation or development of government policy
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Appendix 10: Professional Compliance Analysis Tool

Scottish Government Health Workforce, Leadership and Service Transformation Directorate have developed a quality improvement (QI) framework that examines the working patterns of doctors-in-training: the Professional Compliance Analysis Tool (PCAT). PCAT evaluates the rota templates and the supporting professional environment across three interdependent domains: Patient Safety, Quality of Training and Trainee Health and Wellbeing.

Contractual compliance does not guarantee quality in terms of working patterns or training experiences. A number of recent surveys have shown that poor morale is driving some doctors to leave medicine, influenced by working environments and generational factors as well as wider issues facing the medical profession. Recent UK-wide research found that while Working Time Regulations had improved prolonged excessive hours, fatigue arises not only from hours worked, but also from an unpredictable mixture of shifts, work intensity and inadequate rest. Organisational, professional and cultural drivers also play a part, including the relationship between trainees and seniors. It is important to avoid focusing exclusively on number of hours worked when addressing issues of fatigue and risk among doctors-in-training.

PCAT generates a report based on a qualitative internal survey and examination of rota data. This report is presented at a feedback meeting of the whole team (trainees, training leads and service management leads) to discuss the findings and to establish areas for improvement, ensuring that the improvement plan, accountabilities and timelines are all agreed. The process engages and empowers trainees, allowing them to see real changes being implemented as a direct result of their feedback. This in-depth and specific analysis of an individual department's strengths and opportunities informs QI conversations around working patterns and training experiences that can effect genuine improvement and greatly enhance the experiences of doctors-in-training.. As well as enhancing the health and wellbeing of doctors-in-training we are collecting evidence on additional benefits for departments and Health Boards from participation in the PCAT process.

PCAT is being successfully implemented via a number of different routes. The Royal College of Anaesthetists and Royal College of Surgeons of Edinburgh have endorsed PCAT as a means of improving the health and wellbeing of doctors-in-training. Both these Royal Colleges have committed funding and personnel to support the delivery of PCAT. A number of Health Boards are delivering PCAT through their Directors of Medical Education.

The PCAT tool has been endorsed by NHS Health Board Chairs' Group, the NHS Management Steering Group and by the BMA Junior Doctors Committee. Board Medical and HR Directors and Directors of Medical Education are also supporting this work.

By using the PCAT Framework, Boards will be able to demonstrate that they are actively working to support and improve trainee working patterns using a holistic approach. PCAT also provide assurance around supporting departments and specialties to manage

difficulties with the quality of their training environment or with recruitment and retention issues.

Recommendation

Section 29(1)(a) – Formulation Or Development Of Government Policy

John Colvin