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Through doctors' eyes: A qualitative study of hospital doctor perspectives on their working conditions

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Background. Hospital doctors face significant challenges in the current health care environment, working with staff shortages and cutbacks to health care expenditure, alongside increased demand for health care and increased public expectations.

Objective. This article analyses challenges faced by junior hospital doctors, providing insight into the experiences of these frontline staff in delivering health services in recessionary times.

Design. A qualitative methodology was chosen.

Methods. Semi-structured in-depth interviews were conducted with 20 doctors from urban Irish hospitals. Interviews were recorded via note taking. Full transcripts were analysed thematically using NVivo software.

Results. Dominant themes included the following: (1) unrealistic workloads: characterised by staff shortages, extended working hours, irregular and frequently interrupted breaks; (2) fatigue and its impact: the quality of care provided to patients while doctors were sleep-deprived was questioned; however, little reflection was given to any impact this may have had on junior doctors own health; (3) undervalued and disillusioned: insufficient training, intensive workloads and a perceived lack of power to influence change resulted in a sense of detachment among junior doctors. They appeared immune to their surroundings.

Conclusion. Respondents ascribed little importance to the impact of current working conditions on their own health. They felt their roles were underappreciated and undervalued by policy makers and hospital management. Respondents were concerned with the lack of time and opportunity for training. This study highlighted several 'red flags', which need to be addressed in order to increase retention and sustain a motivated junior medical workforce.

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Statement of contribution

What is already known on this subject?
- Loss of public funding in Ireland has led to large numbers of Irish trained doctors emigrating.
- Research indicates the likelihood of medical graduates returning depends on improvements to working conditions.
- Good working conditions are likely to encourage doctor retention yet little research has been conducted in this area.

What does this study add?
- Intense workplace demands reduce confidence and productivity among doctors.
- Junior doctors were reluctant to reflect on the impact current working conditions had on their own health.
- Early warning signs of burnout appear to resonate with many of the issues raised by junior doctors in this study.

In recent decades, our capacity to treat illness has expanded exponentially. Doctors can now administer more than 6,000 medications and 4,000 medical and surgical interventions, for more than 13,000 diagnoses (Gawande, 2009). With these improvements in health care, patients are living longer, albeit with more complex conditions (Institute of Medicine, 2001). This results in greater acuity among patient populations and a heavier and more challenging workload for hospital doctors.

Doctors also face increasing external accountability for their work. It is estimated that between 180,000 and 195,000 patients die each year in the United States due to medical error (Kohn, Corrigan & Donaldson, 2000; Levinson, 2010). The problem of suboptimal care extends beyond the United States with several countries reporting unacceptable levels of care (Bartlett, Blais, Tamblyn, Clermont & MacGibbon, 2008; Collins & Joyce, 2008; Health Service Executive, 2011; Ovretveit, 2000). Increased media reporting of medical error, alongside the greater availability of medical knowledge via the Internet, has impacted on public trust and satisfaction with the health care they receive (Kohn *et al.*, 2000). As a result, patient expectations of the medical profession have shifted. They demand greater quality and accountability from their health care providers. These expectancies place health providers under increased pressure to meet these demands (Institute of Medicine, 2001; Watt, Nettleton & Burrows, 2008).

These changes have taken place in an international economic climate characterised by significant and continuing cuts to health care spending. This has resulted in staff shortages, increased pressure on hospitals and health worker migration (Garland, 2011; Kearns, 2010; Shannon, 2010). In Ireland, €2 billion (3.2%) has been cut from the health budget since 2008, and a further €1.5 billion (2.4%) in cuts has been proposed for the next 3 years (Condron, 2011). Given the extremely labour intensive nature of the health system (approximately 50% of health care expenditure is allocated to staff), the bulk of these cuts are likely to be salary cuts (Brick & Nolan, 2010).

Doctors in training [Non-Consultant Hospital Doctors (NCHDs) – called 'junior doctors' in this article] are crucial to the provision of frontline care to patients, and Ireland is currently experiencing a shortage of these doctors. Irish doctors are said to be experiencing a 'crisis of morale' and electing to work abroad (Garland, 2011). The challenges faced by junior doctors in Ireland are outlined here as an illustration of the

problems faced by junior doctors in many jurisdictions where health finances are shrinking at the same time as demand for care is increasing.

Ireland has struggled to implement the European Working Time Directive (EWTD), which limits the working hours of doctors to 48 hr per week. The shortage of junior doctors in Ireland along with the failure to implement health care reforms, particularly the move from consultant-led to consultant-delivered care (Lynch, 2011), means there is insufficient doctors to successfully implement the EWTD. Its limited implementation means that junior doctors continue to work in excess of the maximum 48 hr per week, according to the recent Irish Medical Organisation survey of NCHDs (N = 709; Irish Medical Organisation, 2011). More than half (55%) of NCHDs do not get paid for all hours worked. The majority (79%) felt that sufficient locum cover is not provided, which results in non-granting of educational leave (Irish Medical Organisation, 2011). The survey also revealed two-thirds of NCHDs described their morale levels as low (Irish Medical Organisation, 2011). Training grants, to cover continued training for doctors, have also been removed (Kearns, 2010). Excessive workloads and poor training opportunities make the role of junior doctor less attractive for medical graduates, and better working conditions overseas will continue to attract Irish medical graduates unless these issues are tackled (Irish Medical Organisation, 2011).

Junior doctors are temporary employees, and their careers are typically characterised by rotation on a 3-, 6- or 12-month basis through hospitals across the country (Irish Medical Organisation, 2011). The typical career pathway through medicine in Ireland comprises the following (Figure 1):

Many junior doctors remain at registrar grade for extended periods because of a shortage of consultant posts (Irish Medical Organisation, 2011). There are approximately 4,660 NCHD posts in Ireland, and roughly 1,000 of these are non-training posts (Irish Medical Organisation, 2011). Currently, the majority of unfilled junior doctor posts are these non-training posts, and a recent survey of junior doctors found that a third of those
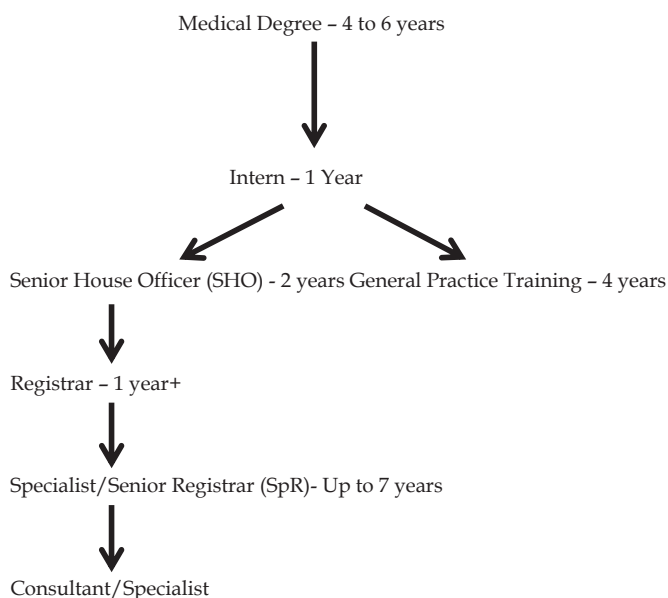
Figure 1. Typical training path through medicine – summary.

not on a training scheme are not confident of being accepted for higher specialist training in future (Irish Medical Organisation, 2011). This is due mainly to the level of competition within the system. Even for those who have completed higher specialist training, it is estimated that 60% will have to emigrate to secure employment as a consultant due to the limited availability of consultant posts (Irish Medical Organisation, 2011).

The aim of medical workforce planning in any health system is to train and retain sufficient health professionals to meet the health needs of that country (Humphries, Brugha & McGee, 2009). While educating adequate numbers of doctors to graduation, Ireland is currently short of junior doctors. The health service is actively recruiting doctors from other countries to fill hospital vacancies (Department of Health, 2011). Research has shown that the current solution of international recruitment of doctors may provide an effective response in the short term, but will not offer the best long-term solution to addressing shortages (Teljeur, Thomas, O'Kelly & O'Dowd, 2010). The long-term success of such a strategy depends on Ireland's ability to retain these staff after recruitment (Humphries *et al.*, 2009).

International research shows that poor working conditions are a major factor for medical emigration and that the likelihood of returning is also heavily dependent on improvements in working conditions (Sharma, Lambert & Goldacre, 2012). In Ireland, the loss of public funding has had direct effects on the working conditions of doctors, for example, training funding cuts, increased working hours and limited availability of consultant posts. The impact of these changes is best exemplified by the current junior doctor recruitment difficulties (Garland, 2011). Gaining insights from doctors into the challenges currently faced is vitally important to improve the working environment for junior doctors in Ireland and to ultimately improve retention.

Given such structural, cultural and situational factors impacting on doctors working conditions, it is perhaps unsurprising that both cross-sectional and longitudinal research has shown that doctors display consistently higher levels of stress than the general working population (Firth-Cozens, 2003; Ochsmann, Zier, Drexler & Schmid, 2011; Piko, 2006). While doctor performance has been subjected to much scrutiny in recent years, along with health care restructuring and patient experiences, far less attention has been afforded to the experiences of doctors as workers in the system and to their working conditions (Watt *et al.*, 2008).

Previous works in Ireland have examined medical students career choices (McHugh *et al.*, 2011), NCHD training posts and opportunities (Royal College of Physicians Ireland, 2007) and nurse perceptions of their work environment and levels of burnout (Scott *et al.*, 2012). Given the current difficulties surrounding the retention of Irish doctors to Irish hospitals, this study was undertaken to describe junior doctor experiences within the hospital setting as frontline staff and to highlight their major work and career concerns. It is the first to examine such experiences among junior doctors working in Irish hospitals and contributes to a growing body of work in the health workforce-planning arena in Ireland.

Method

This study was conducted as part of a wider FP7 funded project improving quality and safety in the hospital: the link between organizational culture, burnout and quality of care (ORCAB).[1] This project aims to identify the individual and organizational factors

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[1] *http://orcab.web.auth.gr/.*

impacting on quality of care (QoC) and patient safety. It further aims to design interventions to improve both the quality of patient care and physician well-being. Ethical approval for the study was obtained from the Institutional Research Ethics Committee.

Data collection method

Qualitative interviewing was seen as the most suitable method for this study, given the study aimed to explore an area about which relatively little research has been conducted (Morse & Field, 2002). The study sought to capture respondents' opinions, feelings and experiences within the complex system they work, and qualitative interviewing provides the framework to gather rich sources of data (May, 1993). Interviews 'can reach aspects of complex behaviours, attitudes and interactions which quantitative methods cannot' (Pope & Mays, 1995, p. 44) and have been used by others to explore health professionals' opinions on their working lives (Chen *et al.*, 2011; Humphries *et al.*, 2009; Watt *et al.*, 2008).

Participants

Twenty newly appointed clinical tutors from a number of Irish teaching hospitals were interviewed in July and August of 2011. Clinical tutors are junior doctors who divide their time between their clinical work and academic teaching of medical students. A minimum of 4 years of postgraduate experience is required to be eligible for a clinical tutorship; however, some specialties require further clinical experience. Those interviewed had accepted the role but had not yet commenced teaching. They comprised seven men and 13 women, with an average of 4–12 years of clinical experience each. Respondents included psychiatrists, obstetricians and gynaecologists, paediatricians, surgeons, general medical doctors, individuals on the general practitioner rotation scheme, ophthalmologists and rheumatologists.

Recruitment

Researchers anticipated the difficulty of gaining access to a sample of junior doctors early on, given difficulties experienced by other researchers in recruiting/interviewing junior doctors (Levenson, Dull, Roter, Chaumeton & Frankel, 1998; VanGeest, Johnson & Welch, 2007). The opportunity to recruit a sample of newly appointed clinical tutors to an Irish medical college arose in early July 2011. Up to the point of interview, these junior doctors had not officially undertaken their teaching roles and would therefore be similar to the wider junior doctor population. This purposive sampling was deemed appropriate given the goal of the study was to obtain insights into junior doctor experiences specifically within the hospital setting. The study was less concerned with specific details of the subspecialties doctors belonged to and more concerned with their general experiences as junior doctors in Ireland (Onwuegbuzie & Leech, 2007).

Information about the study and its purpose was provided to all potential respondents in attendance at a clinical tutor induction programme by two researchers (YMcG & HB), and individuals were invited to participate. Contact details of all those who expressed an interest in participating were taken on the day. YMcG and HB followed up with individuals by email or phone, providing more detailed study information, responding to individuals' concerns about participation and arranging suitable interview times and locations.

Data collection

In-depth interviews were conducted with 20 junior doctors working in eight different Irish hospitals. Doctors were of varying specialties, age, gender, nationality and seniority. Interviews were conducted by YMcG, and interview notes were taken by HB. Sample size guidelines suggested a range between 20 and 30 interviews to be adequate (Creswell, 1998). Interviewer and note taker agreed that thematic saturation, the point at which no new concepts emerge from subsequent interviews (Patton, 2002), was achieved following completion of 20 interviews. Prior to interviews, respondents were required to provide written consent and were assured of their anonymity.

Interviews took place in respondents' place of work and lasted an average of 40 min. For comparability across respondents, a semi-structured interview schedule, which had been developed by the ORCAB project team and used in several other country contexts, was used to guide the interviews. The interview schedule covered four broad themes: current work; relationships with colleagues, patients and hospital management; stressful aspects of work; and opportunities available for further training and career development (See Appendix A).

Data collection method

Note taking was used in place of digitally recording interviews. It was felt that junior doctors newly appointed to the clinical tutor role would be concerned about anonymity, and researchers perceived audio recordings as a possible barrier to recruitment. Note taking was deemed a less obtrusive method of data collection. Second, many of the topics discussed during interviews centred on potentially sensitive topics such as personal clinical competency, the competency of colleagues and the QoC provided within hospitals. It has previously been noted that the audio recording of interviews depends on 'the culture, the position of the respondent within the organization and the sensitivity of the issue' (Varvasovsky & Brugha, 2000, p. 342). Researchers wished to facilitate an open and honest discussion regarding these issues, and it was felt that respondents would be more comfortable without audio recording of interviews.

Every effort was made during the interview to capture respondents' information accurately. A note taker with extensive experience interviewing health professionals across several European countries (Morgan, Burke & McGee, 2012) was appointed to complete this task to the highest level. The interviewer, where possible, also took field notes, and both sets of notes were combined to produce an extensive transcript of the interview. The interviewer in this study (YMcG) had been involved in earlier research on the ORCAB project and had previous experience conducting face-to-face and telephone interviews as part of other health services research projects.

Analysis

Initially, both the interviewer and note taker independently coded three interviews and discussed the major emerging themes relevant to the study. Codes were then developed to classify data inductively within each theme. This inductive approach to analysis allows for 'an understanding of meaning in complex data through the development of summary themes or categories from the raw data' (Thomas, 2003). The interviewer (YMcG) then proceeded to code the remaining interviews, and emerging themes were discussed and reviewed by the two senior members of the research team. Data management was facilitated by the use of the NVivo qualitative data analysis package. The extracts from the interviews presented below, while not verbatim quotes, are drawn from transcripts and are as accurate as possible.

Results

The analysis revealed three recurrent themes, which reflect the perspectives of junior doctors in this study regarding their working conditions: unrealistic workloads, fatigue and its impact and undervalued and disillusioned.

The unrealistic workload

All respondents felt their workloads were unrealistic. While the increasing acuity and multimorbidity of their patients were acknowledged as a contributing factor, respondents felt that their unrealistic workloads were predominantly due to staffing shortages. All spoke of working excessively long hours, the frequent interruptions during breaks, the unpredictability and the time urgency for task completion that characterised their working day. Along with the undesirable impact on their day-to-day working lives, there was a consensus among respondents that their current workloads would negatively impact career progression given weak opportunities for training. While respondents viewed colleagues overwhelmingly as a source of support, administrative staff were often perceived as less supportive, disrupting workflow, adding additional workload to respondents and ultimately impacting on time with patients.

Staff shortages

Staff shortages was an issue raised by most respondents. Since 2007, a public sector recruitment ban on health service staff has been in place in Ireland, and the effects of this ban on the working conditions of respondent doctors was evident.

> There's always one person missing from a team. Sometimes there is no Registrar on a team, so we have to make decisions on our own without more senior input (*Respondent 15*).

Staff shortages also meant that training days and mandatory study leave, which had previously been available to junior doctors, were often overlooked by the hospital. Respondents felt that the lack of training would have a negative impact on their careers in future, as continued training was deemed essential for career advancement.

Respondents associated understaffing with longer hospital stays for patients as patient issues were not noticed as quickly as they should be. Longer hospital stays have implications for the patients in terms of a timely response to their condition and the doctor in terms of additional workload. There are also the economic costs to the health system with patients spending longer in hospital. In the United States, research shows that suboptimal care leads to patients spending an average 1.9 extra days in hospital, which involved an additional cost of $2,262 per patient (Ovretveit, 2000).

The length and unpredictability of the working day

Respondents typically worked 80/90 hr a week and regularly worked several unpaid hours after their shift officially ended. Respondents were aware of only one hospital where the EWTD had been implemented, and in all other hospitals, respondents routinely worked over the mandated 48 hr a week. Periods of rest were very short and irregular during their working day and characterised by frequent interruptions from their bleepers.

> I work 80–90 hours a week…9 to 5 in the clinic and over the last month three or four 12 hour weekend shifts in X hospital, three or four 24 hour shifts in Y hospital (*Respondent 22*).

It was also apparent that their working day did not end once they left the hospital. Paperwork was usually carried out at home as respondents prioritised patient time above paperwork during the day.

> The job is not one that can be forgotten about when you get home; further administrative work needs to be done at home (*Respondent 13*).

All respondents spoke about the unpredictability of their working day and the challenge of managing their ward, clinic duties and administrative duties. Bringing home additional work interfered with the limited personal time respondents had.

> It is the not knowing. I have missed christenings and birthdays and let people down (*Respondent 22*).

Administrative staff

While colleagues, for the most part, seemed to be a major source of support for respondents, many spoke negatively about their experiences of working alongside hospital administration staff. Respondents often felt that administrative staff resisted scheduling certain clinical tests that were clearly warranted. Their attitude, it was felt, often provided barriers to delivering prompt care and disrupted workflow.

> The resistance of the system to my giving the care I would like to give to patients. You have a plan for treating the patient, but admin doesn't allow you to put it into action. The attitude is 'can't do, won't do' all the time……70 to 80 percent of the time, you're confronted with negativity. It wears you down (*Respondent 21*).

Time urgency

All respondents felt that their face-to-face time with patients was rushed and that they were constantly working against the clock. Respondents spoke about patients having to wait for hours before being seen by a doctor in the clinic, and they felt that these waits negatively affected the QoC provided.

> I have a sense of dissatisfaction with being able to give each patient on a round just 90 seconds on average. Time pressure means I can't deliver on bringing a patient through the process (*Respondent 20*).

In the context of long working days, infrequent breaks and staff shortages, it is unsurprising that respondents referred to their workloads as unrealistic. There appears to be a mismatch between what doctors were trained to do and what is actually required of them in their clinical roles. With respondents emphasizing an increased focus on administrative management, time management and communication skills, it is evident that respondents struggled to incorporate these additional roles into their already busy

workloads. However, it was unclear whether this struggle stemmed from a genuine lack of training (as undergraduate medical programmes routinely provide training on these skills) or from the chronic staffing shortages and sheer volume of patients respondents had to deal with as frontline staff.

Fatigue and its impact

Despite excessive working hours, an intensive workload, infrequent breaks and sleep deprivation, respondents were reluctant to label themselves as 'stressed', when directly asked by researchers. They were however forthcoming in discussing the fatigue they experience at work. They were concerned about the implications fatigue may have on the quality of patient care but did not appear concerned about any impact it may have on their own well-being.

Impact on the patient

While most respondents felt they could cope with tiredness, they were concerned that it could lead to mistakes. Respondents mentioned that the combination of having to make major decisions after working so many hours together and the responsibility for that was very challenging. These respondents felt that when tired, they were more likely to question their judgement and to check something several times, which slowed them down.

The interpersonal aspects of quality care such as a lack of time to spend with patients were of concern to respondents along with the technical aspects (Donabedian, 1988). These include the burden of responsibility for clinical decisions made when sleep-deprived, which often led respondents to question their clinical skills. Respondents felt this led to inefficiencies such as poor time management and, as mentioned earlier, an inability to pick up on initial patient symptoms.

> When you do something wrong, not out of malice or incompetence, because you're too tired, then you have to live with it. You're chronically sleep-deprived….we can miss problems (*Respondent 11*).

Impact on the doctor

Interestingly, respondents acknowledged that their working conditions might affect their work performance, on occasion. However, they did not appear to be concerned about the impact of these conditions on their own well-being.

> I absorb a lot of it (challenging aspects of job) I suppose, which is not a long-term solution (*Respondent 20*).

Several respondents spoke about working on after their shift if they had admitted a patient earlier to ensure that the patient was adequately followed up. While this may be an admirable effort for doctors to provide continuity of care and therefore a better experience for patients, it further lengthens their working day.

> There's an indeterminate end to the day, but I can't leave when there's work not done (*Respondent 20*).

Stress can result when pressure exceeds one's perceived ability to cope or from an imbalance between demands and resources (Lazarus & Folkman, 1984). Doctors are accustomed to identifying stress or illness in their patients and may see this as something that happens to other people and are therefore reluctant to seek help for themselves (Wong, 2008). This may in part be due to the highly competitive nature of medical training, which may leave some doctors regarding illness, especially of a psychological nature, as a sign of weakness. There is also the possibility of fear of discrimination by colleagues in terms of career progression (Wong, 2008).

Their reluctance to use words such as stress to characterise their well-being may also be due to maladaptive health behaviours such as a reluctance to seek health advice from other professionals. A systematic review examining doctors as patients found embarrassment was a recurrent barrier to seeking formal care from another doctor (Kay & Mitchel, 2008). It also found doctors were reluctant to seek help for 'less-defined' illnesses, such as stress (Kay & Mitchel, 2008).

Undervalued and disillusioned

While stress is an unavoidable part of a career in medicine, unmanaged stress can have damaging consequences (Wong, 2008). Stress is associated with burnout, a 'state in which individuals expect little reward and considerable punishment from work because of a lack of valued reinforcement, controllable outcomes or personal competence' (Meier, 1983, p. 316).

Respondents perceived the facilities within which they worked to be suboptimal, which contributed to their feeling undervalued as employees. Respondents also viewed their jobs as increasingly restricted to service provision with little time and opportunity for training. This appeared to be a major concern for most respondents, who perceive continued training as a major reward for the intensive work demands placed upon them. The increasing lack of training provided to respondents led to a questioning of their clinical competence and productivity at work.

The structure of the rotation system, whereby junior doctors have to move hospital every 6 months, appeared to leave respondents feeling unappreciated as employees. Respondents felt they were last to come into consideration in efforts to effect change within their organization. They felt their opinions were not deemed important given the frequency of their movement between hospitals. Coping with reduced rewards, intense work demands and limited control over their work resulted in respondents' reference to becoming immune to the many inefficiencies they encountered. While this may be protective in the short term, it emerged that respondents were experiencing a growing disillusionment with the system within which they worked and how the public perceived them.

Facilities

Respondents spoke of the suboptimal facilities in which they had to work. Not having basic supplies, such as bedding for doctors on call, was an issue for many. The lack of allotted office space within the hospital setting and no access to a telephone to answer patient-related calls also left many respondents feeling undervalued and underappreciated as employees.

> Patients to follow-up so it would be great to have a computer [for] blood tests results. [I] have to run to nurses' station computer [to check patients' test results] (*Respondent 12*).

Professional development

While respondents expected their work to be challenging and at times very difficult, high levels of training was their expected reward for this. Many expressed their concern over the lack of training available to them. In terms of future opportunities, all respondents felt that additional training was essential but that recent cutbacks were impacting greatly on training opportunities. All respondents expressed a desire to have their learning space protected.

> Training isn't the best. It's very much 'see one, do one, teach one' (*Respondent 11*).

Rotation

Respondents found the rotations very disruptive, both in terms of the disruption of moving every 6 months and in terms of leaving patients behind and having new colleagues so frequently. Respondents also felt that their ability to suggest or influence change within the system was weakened by 6 monthly rotations and constantly being the new person.

> It's like starting a new job every time and you get reactions like 'we don't do that here', which flusters you, makes you feel less of a doctor. Little things can throw you and damage your confidence (*Respondent 11*).

Doctors may have felt that developing a sense of immunity or detachment to the continual inefficiencies they had to deal with offered them a way of coping with difficult circumstances within which they had to work.

> Doctors become immune to things, you don't really notice the surroundings, we change jobs and hospitals so often (*Respondent 6*).

> You are quite removed, most people wouldn't know who the CEO is. You often feel quite divorced from management (*Respondent 22*).

However, several mentioned the criticism they felt was laid at their door for issues outside of their control. A perceived build-up of these negative feelings towards their profession may lead to reduced personal accomplishment and increased cynicism towards their medical work over time.

> Doctors face blame from hospital management for working too many hours though this is a direct result of staff shortages and we are often blamed for the system inefficiencies in the media (*Respondent 6*).

Discussion

This article has sought to provide insights into junior doctors' experiences within the hospital setting and to highlight the major concerns impeding their work. The main finding from the study was respondents' unanimous conviction that their workloads were too heavy. This resulted from increasing volumes of patients, alongside staff

shortages and growing patient acuity. Expanding workloads left respondents feeling that their time with patients was rushed. They perceived this as greatly affecting the interpersonal care they were capable of providing. Unrealistic workloads also left little time for continued training. Respondents spoke of the implications such heavy workloads had on their private lives. The length of their working day meant that time and planning for rest or other aspects of their lives were extremely difficult. Of particular concern for respondents was the responsibility for clinical decisions made while sleep-deprived.

Doctors continually referred to the limited opportunities available for career development. Training in junior years was heavily dependent on senior staff availability and teaching style, with most respondents feeling they learned passively. Time and budget restraints meant respondents' education time was not protected, and not being up to date with the best evidence-based practice meant respondents lost confidence in their own clinical abilities. Sufficiently equipping doctors for the challenges of the future through the development of new skills and preparing them for potential new roles throughout their careers are vitally important.

Doctors garner much of their clinical confidence and sense of fulfilment within their jobs from continued learning and skill acquisition. Limited training opportunities will likely reduce doctor's feelings of personal accomplishment and led to a questioning of their competence and reduced productivity at work (Wong, 2008). Poor training prospects are also likely to impact on recruitment and retention given that all doctors want access to high-quality posts where they will get experience and training. Posts that are within training programmes attract higher calibre individuals, and posts that are less attractive or not recognised for training will suffer (Shannon, 2010).

While it may not be possible, at least in the short term, to increase staff resources thereby freeing up time for training, given the severe budgetary restraints, policy to protect training time is likely to incentivise this group. In the longer term, efforts to increase the number of training posts available will be necessary in order to attract and retain high-calibre individuals.

Respondents were reluctant to refer to themselves as stressed; however, they frequently mentioned being tired. Tiredness and sleep deprivation are forms of stress that can have detrimental effects upon work performance and well-being. Lengthy working hours are associated with more medical errors, greater attention failure and increased frequency of occupational injuries (Olson, Drage & Auger, 2009). Research also shows that doctors are less likely compared with other groups of professionals (e.g., pilots) to see the dangers of being tired and overestimate their ability to function when fatigued (Lyndon, 2006; Wallace, Lemaire & Ghali, 2009).

Respondents expressed their frustration over the inefficient organization of hospitals and the fact that this poor organization impeded their ability to provide acceptable care. Delays with tests, arguments with administrative staff to justify warranted clinical tests and organizing access to beds all affected prompt treatment. Poor residential conditions for medical staff along with inefficient health informatics systems left respondents feeling unappreciated and undervalued as employees. While these frequently encountered issues frustrated respondents, many spoke of their growing immunity to these inefficient processes. Respondents felt they had limited power to alter the conditions under which they worked, and an element of detachment from or acceptance of these conditions was apparent. This is perhaps unsurprising given the high intensity of work, the time demands, the heavy professional responsibility occurring in systems deficient in manpower and physical resources (Watt *et al.*, 2008).

Small organizational changes such as including an induction programme for new staff could improve communication and cooperation between administrative staff and junior doctors and increase efficiency. A feedback loop by which junior doctors could suggest changes to daily routines may also increase feelings of value and respect in this group. The inclusion of their opinions in decisions made by management regarding the conditions under which they work is likely to have a positive effect on morale among this group.

In general, respondents preferred to have control over decision-making within their job and equated questioning of a clinical decision to a questioning of their clinical abilities. International research has shown that a sense of control over one's practice environment is the largest predictor of doctor satisfaction (Riley, 2004). Most respondents spoke of the pressure placed on them while on rotation, having to learn on the job with little knowledge of diseases within a new department. Staff shortages often meant they were performing procedures without full training. Levels of stress are related to the levels of knowledge one has over a given situation. Karasek's (1979) model of 'job strain' states that jobs are stressful if they combine limited control with high demands and, over time, are predictive or poor physical and mental outcomes.

Burnout, a state in which individuals experience emotional exhaustion, depersonalization and reduced personal accomplishment, appears to resonate with many of the issues raised by junior doctors in this study. While most respondents were reluctant to use words such as 'stress' or 'burnout', many referred to feeling fatigued and anxious about their work performance and clinical decision-making skills while sleep-deprived. Respondents felt unappreciated and undervalued within the system and felt they lacked control to influence change over their work environment. Doctors continuing to work under these conditions may well come to view their job as a burden, and the lack of reward they receive through limited training may lead to an undermotivated workforce. This will have implications, not only for their health, but for their clinical performance and ultimately for patient care.

Limitations

The sole use of note taking as a means to record the interview data may have impacted on the depth of information garnered from the interviews. There is also the possibility of recall, selection or omission bias. Every effort was made to record responses as accurately as possible with inclusion of a dedicated note taker in the interview process. Individual respondents were all newly appointed to their tutor role, about to begin dividing their time between their clinical work and educational training of medical students and as such all held training posts. Those holding training posts may differ in terms of their experiences compared with other junior doctors. However, there was considerable consistency across the data in the themes highlighted in the interviews; therefore, the issues identified by this group of doctors may highlight feelings that are shared by many doctors working in Ireland. Future research should expand on this area to include other categories of junior doctors' experiences in non-training posts.

Conclusion

This study has identified several 'red flags' that need to be addressed in order to prevent such an occurrence. It is important that Ireland become proactive and not reactive in terms of its policy on protecting and preserving its health care workforce. Action to prevent undue stress and a demotivated junior doctor workforce is essential in terms of

providing the highest quality care to patients. The challenges currently faced by junior doctors in Ireland identified within this study are likely to be illustrative of problems faced by junior doctors in many countries where government spending is decreasing and deficits are rising.

Acknowledgement

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Appendix A: Interview Protocol

Introduction

Good morning/afternoon everyone. Thank for agreeing to participate to this meeting. My name is XX and I am a researcher from YY. Today I will be assisted by my colleague, ZZ. As part of a larger European project, my colleagues and I are conducting a study that focuses on quality of care (QoC) and sources of stress in medical settings. We are interested in finding out what are the factors that contribute to QoC, from the perspective of both medical staff. This is why your opinion and your thoughts on this subject are very important to us. I will give you an informed consent form. Please read it and sign it afterwards.

Interview Questions

Section 1

1. Would you tell us about your work? How long have you worked in this hospital? What does a typical workday look like?
2. What aspects of your work give you satisfaction/fulfilment?
    a. Can you give some examples?
3. Is there anything about your work you find to be stressful?
    a. How do you feel when you are stressed?
    b. How does stress affect you and your work?

4. If you feel stressed at times, what are some of the ways in which you cope with that?

Note to interviewer: Some of the topics below might have been elicited in Q #3, but not in detail. Thus, you can say: '*We talked about (this topic) previously, do you feel like there is something else to add*?'

5. What do you think about the amount of work you usually have? (*probes if needed*: Do you feel like you can get your job done in reasonable time? Do you have enough time for rest?)
6. What can you tell us about working with patients? (*probes if needed*: Do you have an adequate number of patients during the day, what kind of relationships do you have with them?)
7. What can you tell us about the relationships with your colleagues? (*probes if needed*: Is there support among colleagues? Are there misunderstandings? Do you get support and feedback from your supervisors/bosses)?

Section 2

8. Can you tell me what QoC means to you in terms of your work?

Note to the interviewer: as participants start discussing the factors influencing QoC take notes, listing all the factors indicated by participants. When they stop indicating factors, ask additional questions exploring each of the factors that they mentioned.

If participants do not cooperate easily, use one or more of the following prompts:

- The resources that the hospitals have (medical equipment, medical supplies, etc.)
- Health professionals-patient communication (refer to both doctors and nurses).
- Health professionals – patients' family communication (refer to both doctors and nurses).
- Waiting time/hospitalization time.
- Medical and auxiliary personnel competencies.
- The physical context in each medical care is provided (how clean the hospital is, how well equipped the ORs and rooms are, etc.)
- Organizational factors (hospital administration, paperwork that one has to do, etc.)
- Standard protocols and procedures.

9. How is the quality of medical care evaluated in your hospital?

- Is there a formal department doing the evaluation?
- What are the criteria for assessing QoC?
- How often such an evaluation takes place?
- What happens with the results of these evaluations? Who benefits from them, when, in what way?

10. What are the most frequent difficulties that you encounter while trying to offer the QoC that you would like to offer to your patients?

Note to the interviewer: as participants start discussing the difficulties that they encounter take notes, listing all the difficulties indicated by participants. When they stop indicating such difficulties, ask additional questions exploring each of the categories that they mentioned.

If participants do not cooperate easily, use one or more of the following prompts:

- Refer to the medical system in general.
- Refer to the legislation concerning medical care.
- Refer to the administration of the hospital/the local management.
- Refer to the equipment that the hospital has.
- Refer to the training/competencies of the medical and auxiliary personnel.

11. What are some of the changes that could be made in the hospital you are working in, to improve QoC?

Section 3

12. Do you feel like you have independence in making decisions? (*probes if needed*: do your the tasks seem out of your control, do you feel that you are in control of what you need to do, do you have independence?)
13. Tell us about the physical environment in your workplace? (*probes if needed*: how is the building, offices, are there adequate resources and materials).
14. What would you say about the rewards you receive from work (*probes:* salary, promotions, opportunities for further qualifications, etc.)
15. How do you feel about the organization/management of your institution/hospital; about the policies and rules in your workplace?
16. What is your opinion about general healthcare policies? (*probes if needed*: how is healthcare reform, new health laws, healthcare restructuring affecting your job environment?)
17. What helps you do your work more effectively? (*probes if needed:* what makes you feel you are getting things done, developing your skills, contributing, etc.)?
18. What are some of the ways in which the satisfying aspects of your work can be increased?
19. Is there anything you would like to add? Something that you find important but our questions did not cover?