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From extreme to mundane? The changing face of paramedicine in the UK Ambulance Service

Introduction

Although management and organisation studies (MOS) has paid little attention to the occupation, there is an enormous literature on paramedics and paramedicine in other disciplines. Unsurprisingly, most of this focuses on timely, successful and cost-effective pre-hospital care, “the technical and physical aspects of varying trauma management” (Williams, 2013a: 512). Still, a considerable number of studies do consider paramedics’ experience of their occupation. On the whole these represent it as a form of ‘extreme work’ (Granter *et al.*, 2005) - physically and psychologically risky, perhaps traumatic; intensely effortful; fast-paced and target driven; ethically demanding; based on problematic shift patterns; carrying an unpredictable workload; and having a persistently low status amongst healthcare occupations.

In this chapter we begin by outlining this representation. We then discuss the significant changes in UK paramedicine in more recent times. In particular, the last 15 years have seen a marked movement away from a ‘scoop and run’ model, where critically ill or injured patients are stabilised before a dramatic, lights and sirens race to an emergency department, to a ‘treat and refer’ or ‘treat and discharge’ approach. In part, this reflects the increasing trend for 999 calls to the English ambulance service being made for or by people with mental health problems, social care needs, minor injuries and/or symptoms of chronic conditions, rather than emergency cases. At the same time, demand for ambulances increases year on year – so much so that volunteer first responders are now routinely used across the country.

To address these challenges, new paramedicine specialisms are emerging, including those where incumbents deliver primary healthcare. The scope of the profession is also expanding more generally to encompass community-based assessment, management and treatment of patients. The most recent example at the time of writing is new legislation enabling paramedics to independently prescribe medication for their patients (College of Paramedics, n.d.). Moreover, the route into UK paramedicine has changed. Currently, the minimum entry qualification is a higher education diploma, and the first diploma graduates are now entering the profession. However, in March 2018, the Health and Care Professionals Council ratified a recommendation from their Education and Training Committee to raise the threshold level of

qualification for entry as a paramedic to degree level. This will come into effect from 2021 (Health and Care Professionals Council, 2018).

After mapping these changes, we review preliminary findings as to the new demands they pose for paramedics, and conclude by tracing some of the ways in which MOS researchers could address significant gaps in the literature on this rapidly changing occupation. These build on already-established MOS concepts such as workplace emotions, occupational stress and dirty work. Research of this kind is important because of its implications for understanding how changes to paramedic work may affect job satisfaction, retention and – of course - patient care.

Paramedicine as an ‘extreme’ occupation

As we have suggested, the overwhelming representation of paramedicine in the extant literature is of an extreme form of work, with very high injury and fatality rates, as well as excessive rates of medical retirement compared to other healthcare jobs. For example, Bentley and Levine (2016) suggests levels of ill health and poor fitness rose significantly amongst US paramedics between 1999 and 2008. One reason for this high occupational risk is that paramedics may be working on patients with infectious diseases, with needles and bodily fluids and in scenarios like natural disasters and terrorist attacks (eg, Corman, 2017; Garus-Pakowska *et al.*, 2017a, 2017b). Equally, paramedicine is physically demanding and ergonomically problematic, involving a lot of lifting, stretching, twisting and bending, often in cramped conditions like the back of a moving ambulance or in patients’ homes. Loading and unloading patients into and from ambulances is often carried out solo in urgent situations due to time pressures; and obese, non-cooperative or unconscious patients pose especial challenges during stretcher transfer. As such musculoskeletal disorders are very common amongst paramedics (eg, Fischer *et al.*, 2017; Garus-Pakowska *et al.*, 2017b; Prairie *et al.*, 2017). Equally patient transport is often undertaken at high speed, involving drivers who may be tired from shift-work. Paramedics also frequently need to eschew seatbelts whilst attending to patients in transit. And wearing seatbelts carries ergonomic risks because of the need to physically compensate by tensing within the restraint when the ambulance decelerates or accelerates (eg, Maguire and Smith, 2013; Arial *et al.*, 2014).

Another risk factor in paramedicine is vicarious trauma - the work necessitates proximity to life-threatening injuries, illnesses and death, sometimes on a mass scale and often with a

patient's family or other bystanders watching triage and treatment efforts (eg, Brady, 2015; Clompus and Albarran, 2016). Paramedics are also commonly the targets of violence from patients and their families and bystanders – including intimidation, sexual harassment, verbal, physical and sexual assault (eg, Corman, 2017; Maguire *et al.*, 2018; van Erp *et al.*, 2018). Taylor *et al.* (2016: 156) suggest male paramedics especially may under-report such violence for fear of appearing weak. This connects to claims around the masculinist occupational culture of paramedicine, discussed later. They add that female paramedics can be seen as soft targets; and that many of their US respondents see violence as part of the job, perhaps not warranting an official report. And yet these respondents felt largely untrained for such risks. Research by Boyle and McKenna (2016, 2017) amongst Australian paramedic students also indexes violence experienced during placements, adding that these respondents often failed to disclose this because they worried about the career repercussions.

Furthermore, paramedicine involves working on patient, bystander and one's own emotions, to ensure patients remain as calm as possible, receive excellent medical care and feel listened to. As Ahl and Nyström (2012: 34) suggest, paramedics therefore need to be able to “deal with patients' vulnerability, anxiety and suffering”. Similarly, Ayub *et al.*'s (2017) study of US paramedics identified challenges associated with “family-member presence and providing information to the family during interventions” (page 233) when treating children. As for the paramedic themselves, emotional processing can continue afterwards, especially following distressing cases (eg, Wireklint Sundström and Dahlberg, 2012; Avraham *et al.*, 2014). Unlike staff in emergency departments, paramedics also typically work in small teams, and lack the information, equipment or medication available in hospitals (eg, O'Hara *et al.*, 2015; Harenčárová, 2017). Relatedly, research identifies the ethical challenges involved in decisions around resuscitating or giving oxygen to end of life patients (eg, Tataris *et al.*, 2017; Leibold, 2018; Waldrop *et al.*, 2018); or working in rural areas, where the paramedic may know the patient or their relatives so managing professional boundaries becomes difficult (eg, Jervis-Tracey *et al.*, 2016; Pyper and Paterson, 2016). Likewise, self-harming patients present specific dilemmas of balancing their right to refuse treatment with “the state's interest in the preservation of life” (Rees *et al.*, 2017: 65).

Further, paramedics are shift-workers who have to be constantly alert, responsive and flexible because their workload is entirely unpredictable. They have to be “prepared for the unprepared” (Wireklint Sundström and Dahlberg, 2012: 573), and of course the decisions they make – often

in conditions of significant uncertainty - can be a literal matter of life and death (Corman, 2017; Harenčárová, 2017). Relatedly, fatigue is predictive of levels of depression, anxiety, stress, burnout and post-traumatic stress disorder (PTSD) amongst paramedics. Early morning starts, split shifts, nightshifts and quick turnovers between shift patterns are especially problematic in this respect.

UK ambulance service performance targets and their potentially inimical effects have also been discussed. One example is 'Call Connect', introduced in August 2008 to NHS ambulance trusts in England and Wales. This required ambulance services to respond to 75% of life-threatening 'category A' calls in 8 minutes, and 95% of urgent 'category B' calls in 19 minutes. The clock started when the call was routed to the ambulance despatch team. Perverse outcomes have been reported as a result, like a paramedic suggesting "*As an ambulance service if you get to a patient in 8 minutes and if they die, you succeed; but if you get there in 9 minutes and the patient survives, you fail*" (quoted by Wankhade, 2012: 385 – original emphasis). Equally, sometimes rapid response vehicles, driven by a single paramedic, were despatched and recorded as a response, so the call lost its place in the queue. As such, Ann describes being alone with a patient for 90 minutes waiting for an ambulance, when he was "completely grey, had no radial pulse, [and I] couldn't get a line in cos he was completely shut down" (quoted in Clompus and Albarran, 2016: 4). More recently, the Ambulance Response Programme sets out revised response times and targets, but these are actually tighter than those in Call Connect. Category 1, to patients with life-threatening illnesses or injuries, require a response within 7 minutes on average; and category 2 calls to emergency cases within 18 minutes (Webber, 2017).

Time is a factor in another sense. Corman quotes Jake on the subject of medical assessment on arrival at a scene: "We're trying to play a chess match, [to think] 3, 5 moves ahead ... [it's] contingency planning all the time. The what-ifs" (2017: 608 – original brackets and ellipsis). And, if paramedics don't have detailed or reliable information from dispatchers, they need to assess emergency patients especially extremely quickly to decide on a care pathway (eg, Fjeldheim *et al.*, 2014; O'Hara *et al.*, 2015). The pressure of targets means there is less time to spend with patients anyway, whether at the scene or handing over at the emergency department, which UK targets suggest should be done within fifteen minutes (Clompus and Albarran, 2016). Simpson *et al.* (2017) report accounts from paramedics whereby delays in 'off-loading' at hospital affect transportation decisions, the severity of a patient's condition notwithstanding. Their respondents also talked about receiving 'welfare checks' from despatch when they were

nearing the performance indicator of 20 minutes at a scene, regardless of the patient's medical needs. They perceived these as 'hurry ups'. Similarly, McCann *et al.* (2013) suggest their paramedics were hurried back out to answer calls immediately after handing patients over to emergency department colleagues.

Additionally, the literature on paramedicine as an occupation discusses its persistently low status, identifying a lack of respect from other healthcare professionals and patients alike, a view that paramedics provide little more than a patient transportation service and their perceived lack of influence at work (eg, Hansen *et al.*, 2012; O'Hara *et al.*, 2015). In the UK, McCann *et al.* (2013) suggest that, despite ever-increasing clinical expectations, paramedicine's recognition as a profession in 2000, a legally protected title and the 2009 establishment of a professional association, "paramedics are still struggling to secure those meaningful forms of status, occupational closure, and work autonomy associated with other emerging professions" (page 751). As regards autonomy especially, their paramedics' fear of litigation or making errors, and/ or feeling unsupported by their managers, meant they often self-limited their behaviour at work. For instance, one respondent discussed the records he keeps of explanations for departing from standard protocol, such as a recent memo on oxygen administration. These participants were also constantly under technological surveillance whilst on the road, via radio connections to base and remote monitoring of the position of ambulances.

It is therefore unsurprising that several studies investigate the incidence of drug and alcohol abuse, depression, anxiety, burnout, post-traumatic stress symptoms and full-blown PTSD amongst paramedics (eg, Pilgrim *et al.*, 2016; Luftman *et al.*, 2017; Regehr and LeBlanc, 2017). An online survey, conducted by MIND as part of their Blue Light programme, saw 69% of UK ambulance service personnel reporting work-related mental ill-health. 39% suggested they would be treated negatively at work should they disclose this (College of Paramedics, 2016). Stanley *et al.* (2016: 26) observe that, vicarious trauma aside, the occupational experiences of paramedics "may also lower [their] fear of death", so they are more likely to consider, attempt or succeed in suicide. Of course they also have access to "highly lethal suicide means" (*ibid.*). The MIND survey found that 35% of respondents had considered suicide because of occupational stress (College of Paramedics, 2016). In contrast, Brady (2015: 32) suggests being "constantly reminded of death, dying, human fragility and their own mortality" makes paramedics more prone to death anxiety than those in other

caring jobs. He claims students in particular may feel unable to reveal death anxiety to colleagues for fear of appearing weak.

Other work examines factors said to affect paramedics' vulnerability to mental ill-health, such as gender; educational level; length of service; level of resilience; confidence in coping with stressful situations; social and organisational support; sense of occupational purpose; being involved in mass casualty events; and surviving childhood abuse (eg, Michael *et al.*, 2016; Rybojad *et al.*, 2016; Stanley *et al.*, 2016). Coping strategies of varying effectiveness are also discussed, including debriefings; venting negative emotions; peer or management support; counselling; disassociation, detachment, denial and compartmentalisation; telling war stories; black humour and banter; and unburdening to family and friends (eg, Boyle, 2005; Charman, 2013, 2014; Ogińska-Bulik and Kobylarczyk, 2015; Tangherlini, 2000).

Equally, there are claims around the 'tough guy' or 'John Wayne' culture in paramedicine, despite it being a caring profession. This is said to create challenges for paramedics because of the emphasis on emotional control during calls and 'back-stage' (eg, Williams, 2012, 2013a, 2013b; Avraham *et al.*, 2014; Stanley *et al.*, 2016). Boyle's (2005) study of Australian paramedics suggests this culture may mean those who express distress or 'inappropriate' emotions to colleagues are ostracised or harassed. She underlines the tensions here: "As part of their duties as "caring" paramedics, the [...] on-road staff are expected to perform as emotionally complex individuals while simultaneously adhering to a strict hegemonically masculinist code of conduct" (page 49). There is other evidence of a poor employment culture in paramedicine, including bullying, intimidation and sexual harassment of female paramedics by their colleagues (Bigham *et al.*, 2014).

Altogether, paramedics emerge from this occupational research as quantitatively and qualitatively overloaded. As well as the personal costs of physical and psychological ill-health, the literature emphasises employer costs around sick days, early retirement and labour turnover plus the negative effects on performance and patient outcomes. A reader of the preceding pages might therefore think incumbents in this profession are in terrible distress. However, as this chapter will go on to show, UK paramedicine is changing fairly radically, and in many ways is becoming increasingly advanced as its professionalisation project expands. The portrayal of ambulance services as sites of extreme work is – in many important ways – less and less accurate.

Paramedicine as a changing occupation

From secondary to primary care

One very commonly cited statistic from the Department of Health's (2005: 8) *Taking Healthcare to the Patient* review of the ambulance service is that only 10% of 999 calls involve life-threatening cases. The review asserts that:

“Many patients have an urgent primary (or social) care need. This includes large numbers of older people who have fallen in their homes (around 10% of incidents attended), some with no injury; patients with social care needs and mental health problems; and patients with a sub-acute onset of symptoms associated with a long-term condition such as diabetes, heart failure and chronic obstructive pulmonary disease (around a further 10% of incidents attended)”.

Indeed in England during 2013-2014, something like a third of 999 calls to the ambulance service saw the patient being assessed and treated where necessary at the scene, with no transfer elsewhere in the NHS resulting (Quigg *et al.*, 2017: 365). The Department of Health review also suggests demand on the British ambulance service is rising by 6-7% annually due to our ageing population; public confusion over alternatives to calling 999, like NHS 111 and urgent care centres; reduced out of hours provision by GPs; and under-recruitment of GPs and fewer healthcare workers *per se* (eg, Andrews and Wankhade, 2014; Evans *et al.*, 2014; O'Hara *et al.*, 2015).

Indeed, as Armstrong *et al.* (2012: 64) suggest, “Some patients who are marginalized by ill health and/ or financial burdens use the ambulance service instead of their general practitioner”. These groups are often referred to in the literature as ‘superusers’. Scott *et al.* (2014) undertook a systematic review of literature focusing on superusers. Common themes were that they have not suffered any trauma but instead call an ambulance because of an existing medical problem. Scott *et al.* remark that it is nonetheless important not to demonise superusers because they actually have complex health and social care needs. Ford-Jones and Chaufan (2017) agree, emphasising the need to scrutinise claims that the increasing number of ‘mental health calls’ represent an abuse or misuse of emergency healthcare provision.

Otherwise, we fail to acknowledge that what look like mental health problems might actually be “*reasonable* responses to increasing social exclusion, as the neoliberal state retreats from providing more basic social services toward promoting expanding opportunities for capital accumulation” (page 3 – original emphasis).

Specialisation in paramedicine

In order to address these demands on the ambulance service and improve patient care, new specialisms in paramedicine are developing, such as critical care paramedics, advanced care paramedics, intensive care paramedics, emergency care practitioners, community paramedics and extended care paramedics. These specialists are trained to a higher level or in a wider skill set. In the UK, they work in GPs’ surgeries, nursing homes, emergency departments, minor injury units, urgent care centres and walk-in clinics as well as pre-hospital emergency care (eg, Evans *et al.*, 2014; O’Hara *et al.*, 2015; Simpson *et al.*, 2017; Bennett *et al.*, 2018). Critical, advanced or intensive care paramedics are trained in procedures like fracture or joint reduction, surgical airways, ultrasounds, central venous access, thoracotomies and thoracostomies. The intention is to reduce preventable pre-hospital mortalities and ease the burden on other healthcare services. The community-based roles – emergency care practitioners, community paramedics and extended care paramedics – fill gaps in primary care provision, identify and treat low acuity patients, provide preventative care like cervical smear tests and health promotion, look after patients with mental health problems or drug impairment and provide on-site medical care for those in residential homes. They are said to be especially useful in rural areas with little access to out of hours primary or emergency care, where no other primary medical care exists locally and where higher levels of smoking, obesity, substance abuse and serious injury are likely (eg,; Mulholland *et al.*, 2014; Choi *et al.*, 2016; O’Meara *et al.*, 2016).

Overall these specialisms move paramedicine from the ‘scoop and run’ approach of stabilising critically ill or injured patients and transporting them to definitive care towards providing more ‘wrap around’ healthcare in situ. Indeed the occupation’s scope of practice is widening across the board, so generalist paramedicine increasingly involves community-based assessment, treatment and management *per se*, without further referral where possible (eg, Heath and Wankhade, 2014; Wankhade and Brinkman, 2014; O’Hara *et al.*, 2015).

However, as observed by management and organisational scholars in research on many workplace settings undergoing change, these changes are also creating unexpected outcomes

and knock-on effects. As paramedics are increasingly drawn into unplanned primary care in particular, many report concerns that their critical care skills are deteriorating. This last observation leads us to the new landscape of paramedic experience.

Changing demands in paramedicine

With the shift to more primary care provision especially, there are some intriguing if under-developed findings about paramedicine which describe the challenges this creates. In a development not dissimilar from those explored in policing by Bacon and by Charman in the present volume, Campbell and Rasmussen (2012) suggest their Canadian paramedics did not want to deal with patients' psychosocial issues, and expressed concern that their duties had expanded to include "a lot of social work, counselling", as one put it (pages 93-94). Examples included patients with addictions or mental health problems and vulnerable elderly people. These respondents felt the skill sets required for paramedicine and for social work were too divergent "to be done well simultaneously" (page 94). Equally, Prener and Lincoln (2015: 613 – original ellipsis) cite Mannon's observation that "bringing into the healthcare system those who otherwise would not get there, giving care and attention to the neglected and forgotten ... the counterpart of the social worker in the field of health care seems to be the urban EMT¹ and paramedic".

Similarly, McCann *et al.*'s (2013) UK ethnography found that paramedics are now being called more frequently to patients who are drunk or high on drugs, and that the level and intensity of the abuse to which they are subject have risen as a result. These paramedics said they are often "left to sweep up" in particular cases because they might be the only emergency service available (page 767). Also in the UK, Clompus and Albarran (2016: 4) discuss their paramedics' reactions to non-emergency calls to patients with mental health issues, social needs or substance use problems. Carol remarked:

"I still have to go on blue lights to a fall ... someone on the floor who is not usually hurt ... there's a great gap in the system where nobody picks up [*these*] people ... So they send an ambulance ... I get really angry thinking "why are you wasting all our time?"'" (original ellipses, emphasis and brackets).

¹ Emergency medical technician.

Ann, relatedly, talks about losing her compassion when she is called out to patients who are drunk and won't cooperate. Taylor *et al.*'s (2016: 157) US paramedic and EMT respondents made similar comments, referring to being treated as a taxi to hospital for non-emergent cases, and even being called out to help somebody to reach a remote control. They say there are no repercussions for callers who abuse the system, and that these people don't seem to realise that emergency medical staff have to respond to all 911 calls in the same way – ie, driving at full speed, with lights and sirens. As we have discussed, transport of this kind is risky in and of itself. Similarly, Boyle (2005) says most of the calls her paramedics dealt with were non-urgent, especially during the day and the early part of night shifts. These required high levels of emotional labour, especially surface acting – like maintaining a neutral expression to entice intoxicated patients into the ambulance. Like the respondents in Clompus and Albarran's study, Boyle's paramedics expressed discomfort about dealing with non-urgent cases, describing elderly patients– as 'humpers' or 'geries' (2005: 53) or likening the work involved to taxi driving, as did Taylor *et al.*'s participants.

On the other hand, Corman (2017) discusses how some calls may necessitate persuading a patient that they *do* need to be transported to the emergency department. Julie talked about:

“a fellow who's having a heart attack and he refused to go, and my way to convince him was I said, 'Well I'll just stand here and wait for you to die then. And then when you die (pause) I'll have all the consent I need. And I will zap you back to life and then I'll take you to hospital.' ... I had to be the biggest bitch to get him to go to the hospital with me” (page 618 – original brackets and ellipsis).

Strategies for this, Corman adds, vary, so at other times being very charming is more appropriate. The situation is complicated by the fact that these Canadian paramedics have limited discretion to leave patients at home/ on scene, seemingly regardless of the severity of their condition. Nonetheless, again they differentiate between 'good' or 'holy hairy' and 'shit' or 'bogus' calls which might involve a spot that has burst or trapped wind (Corman, 2017, 2018). Jake also remarked that he much preferred night shifts because “you don't get the BS that you get during the day” (2017: 619), like answering calls for nursing home patients.

In a much earlier study, this time from the US, Palmer (1983) calls his paramedic respondents ‘trauma junkies’ because “calls involving multiple casualties, physical trauma and fast-paced action were deemed to be the “real work” of emergency medical services personnel. Calls evoking less sophistication of response behaviour are devalued” (page 162). Palmer talks of the ‘high’ that ‘real work’ produced because it allowed the paramedics to use their most advanced skills and preserved their occupational self-image. Donnelly *et al.* (2015) agree that emergency medical services personnel tend to be thrill seekers. They quote one EMT as saying “There’s nothing cooler in this world than a Ford F350 Ambulance driving code three² ... the wrong way down a two way street as people look at you in awe is really cool” (Brian, page 216 – original ellipsis). Klee and Renner (2012) also suggest paramedics may have a ‘rescue personality’, including a predilection for risk taking. On the other hand, Palmer cites respondents discussing ‘pukes’, where calls involve a patient who may literally be vomiting but equally could be exaggerating the severity of their symptoms. He quotes Metz to the effect that these calls are seen as “nonessential calls, abuse calls, nothing calls, nonemergency calls, and nuisance calls” (page 167). Like Boyle and Clompus and Albarran, Palmer suggests paramedics resent such calls and may even become hostile, handling patients roughly or assessing them carelessly. In such conditions, paramedics’ storytelling and griping about an undeserving public, pointless callouts and illogical, risk-averse call prioritising sounds very similar to what is shown in dozens of studies of ‘police culture’ (see Charman, this volume).

However, the only studies we located which foreground these issues are the aforementioned work by Prener and Lincoln (2015) and research on Australian paramedics by Simpson *et al.* (2017). Prener and Lincoln’s US paramedics and EMTs saw many patients with mental health problems. These participants report that patients often smelled bad due to alcohol consumption or incontinence, say, as well as having to keep their guard up lest patients became combative. They also questioned whether cases involving patients with psychiatric issues represented actual emergencies. One respondent suggested “If a homeless alcoholic is found – there’s nothing really wrong with him. I do not know who’s supposed to take care of that guy, but definitely not us” (page 616). As Prener and Lincoln point out - echoing others – where patients are labelled as misusing or outright abusing the system this may affect the treatment they receive. Some respondents said they were less compassionate with these patients. They were also aware, however, that onlookers could react badly to this, with one commenting:

² The US term for driving with lights and sirens.

“When I walk up to that guy and go “hey, get in” . . . [bystanders] don’t know that that’s probably the second time I’ve taken him today and the last time I took him he shit all over himself and the stretcher, so it’s not good for anybody. It doesn’t put a good image forward for EMS, and we’re not actually helping [the patient]” (page 617 – original ellipsis and brackets).

Respondents also said attending to these patients meant ambulances were sometimes not available for real emergencies, and – like Taylor *et al.*’s participants – felt responding to ‘psych’ calls reinforced that it is acceptable to call 911 in these instances.

Turning to Simpson *et al.* (2017), despite acknowledging that Australian paramedicine increasingly involves attending non-emergent patients, their respondents still regarded ‘high acuity’, ‘good’ or ‘sexy’ calls as ‘legitimate’ work. One commented:

“generally as ambulance practitioners, we like the blood and guts and gore and the glory jobs and the front page of the paper jobs and . . . the routine stuff where picking people off the floor can be a little bit – it’s not glamorous, it’s not fun, there’s no adrenalin rush involved in it” (page 5).

These calls are described as ‘frustrating’, ‘annoying’ and ‘routine’, and – once more - as possibly taking staff away from ‘real work’ (page 8). The wider point Simpson *et al.* make, echoing Prener and Lincoln, is that these perceptions of what real paramedicine is explain whether a specific call is deemed to be legitimate. This then informs how staff approach each case. On the other hand, some participants reported a felt need to ‘cover their arses’ by taking all patients to hospital so they would not be “hung out to dry” – the “you call, we haul” approach (page 9). Granter *et al.* (2018) discuss the complexities of the ambulance responder role in terms of the ‘edgework’ involved in navigating between the desire for interesting, worthwhile, high acuity patient episodes on one side and the need for an easier, less demanding shift on the other.

Like the overwhelming majority of ‘police culture’ studies, much of the above literature portrays ambulance work as retaining much of its traditional blue-collar, work culture. But that culture is changing fast. The recent introduction of a higher education degree route into

paramedicine is now producing its first graduates. Kennedy *et al.* (2015), noting the paucity of research on students transitioning into the profession, emphasise the lack of attention during degree programmes to the emotional impact of this occupation (also see Williams, 2012, 2013a, 2013b). They observe a generalised anxiety about the job's demands in interviews with new Australian graduates, also noting their desire to 'fit in'. Many feel a sense of separation from their older, more experienced colleagues, who - they think - expect graduates to enter fully equipped for everything paramedicine can throw at them. Simpson *et al.*'s (2017: 6) participants also talked of lacking education in managing older fallers, and educators in the sample confirmed this. As such a belief that these cases were not 'real work' was reinforced by this gap in their training, which carried over into inattention to a recent protocol introduced to support decision making during such calls.

Ross *et al.* (2016: 2) suggest media representations of paramedicine are influential in perpetuating the stereotype of "lights, sirens, and dramatic resuscitations". Their study of Australian paramedic students concludes that these participants chose their degree based on wanting to help people, but also having an exciting career and saving lives. Again this points to a potential gap between what entrants expect and the realities of the occupation. And O'Meara *et al.* (2016: 7 – original ellipsis) quote a Canadian paramedic educator in Ontario as follows:

"A lot of people who come into my program are looking for the lights and sirens and trauma and excitement, and when we start talking about something with a slower pace in community paramedicine, then we take them back ... a lot of students sort of walk in the door going, I want to drive fast, lights and sirens and car crashes and all that good stuff, and when you say, well in actual fact that's about five percent of your career, 95 percent of your career looks much more like community paramedicine."

Having now established what seems to be the new face of contemporary paramedicine, in the UK and elsewhere, we now discuss how MOS scholars can contribute to what is as yet an understudied set of occupational demands.

Discussion

Johnston and Acker (2016: 3) suggest stereotypes of the paramedic include trauma junkies, rescue personalities, silent heroes and lifesavers, yet also index “the shift towards low acuity patient pathways and primary care interventions”. They remark that, as the profession changes, there is a real need to question these images in terms of the professional identities of contemporary paramedics. It is precisely this kind of research which MOS scholars are well-equipped to undertake. We now identify some key directions in this regard.

Emotions

The literature on emotions and organisations is now paying more concerted attention to boredom as an emotion with workplace implications. Skowronski (2012), for example, identifies consequences of workplace boredom, including alcohol abuse, lower job satisfaction, absenteeism, reduced performance and counterproductive behaviours. He develops a theoretical framework to research coping strategies, focused on how workers look to raise their levels of stimulation. It rests on classifying boredom as a stressor. These coping strategies, Skowronski suggests, may have positive and negative effects on organisations, and he singles out worker autonomy as a potentially important mediator.

Van Hooff and van Hooft (2014) also develop a theoretical framework of the consequences of workplace boredom, differentiating between bored behaviour as a response and the consequences of boredom (including depression and counterproductive behaviours). For them, bored behaviour is unlikely to ameliorate boredom. Something which they think will have this effect, however, is ‘job crafting’ - the ability to change the boring characteristics of one’s work, which has clear parallels with autonomy. Similarly, Mael and Jex (2015) develop a model for assessing both antecedents and consequences of boredom at work. Their starting point is that boredom “has been called a socially devalued emotion, one considered trivial by others [which] is also likely to elicit little managerial sympathy and may be blamed on the employee himself or herself” (page 132). But they suggest it nonetheless generates ‘maladaptive’ responses including job dissatisfaction, accidents and counterproductive work behaviours. Mael and Jex provide a multi-faceted definition of boredom, distinguishing between ‘episodic’ and ‘chronic’ boredom, for example, as well as ‘situational’ (specific to certain job stimuli, say) and ‘global’ (much more pervasive in an individual’s life) boredom.

Our first observation is that these psychologicistic models of workplace boredom are ripe for application to paramedicine, for example to assess whether they can be used to analyse aspects of its shift towards more primary and social care. Skowronski's (2012) claim that some jobs allow much less leeway for interest enhancement seems germane here, as this seems to be increasingly true of paramedicine. Van Hooff and van Hooff's (2014) suggestion that job crafting comprises a positive way to ameliorate workplace boredom is unlikely, on the other hand, to be relevant because paramedics have no discretion in deciding which calls they answer. Mael and Jex (2015) imply that episodic boredom - which might well be experienced in response to non-emergent calls in paramedicine, and which they say characterises police work - is probably less harmful. However, expectations play a significant role here, so workers may "experience considerable boredom when jobs do not always live up to expectations" (page 145). The nascent literature on how paramedics experience non-emergent calls and some of the material on paramedic education suggest these were not the sorts of cases they hoped for or expected. Equally, Simpson *et al.* (2017: 7) identify the possibility of "getting "burnt out" on low acuity work". They also point out that assuming such calls are routine is risky for the patient because it could well produce "a cursory examination, poor information gathering, and sub-optimal clinical decisions".

The second observation is that more sociologically informed studies of emotions and organisations have had little or nothing to say about workplace boredom (for a notable exception, see Phillips (2016) on boredom in the police service). Some work has been done on emotional labour and associated concepts in paramedicine (eg, Williams, 2012, 2013a, 2013b), but this largely understands the occupation as extreme. We see an interesting opportunity here to explore emotional labour and emotion work in more depth as they relate to non-emergent cases.

Occupational stress

In their systematic review of research testing the Job Demand-Control model, Häusser *et al.* (2010) establish that the additive effects of job demands and job control predict both job satisfaction and emotional exhaustion. Job demands include time pressure, quantitative or qualitative overload, role conflicts and physical and emotional demands. Job control (which roughly overlaps with autonomy) encompasses someone's ability to use particular skills at

work, but also decision authority - “the extent to which a person is autonomous in task-related decisions, such as timing and method control” (page 3). The model proposes that high demand, low control occupations will produce higher levels of stress and lower well-being, and vice versa. Paramedicine is particularly interesting in this regard because it can combine qualitatively high workload – tasks which are difficult in themselves – with episodes of quantitatively high workload, on busy shifts. But it also requires its incumbents to manage the transition from dealing with a trauma case, say, to one where an elderly person has fallen, as well as coping with stop-start work flow. As such paramedicine appears to generate very variable emotional, not to say physical, demands, often within one shift, as our discussion of boredom also indicates.

More than this, however, paramedics continue to have some opportunity to use the skills they were trained in – ie, treating emergent patients - but this is not the case across the board. They also report dealing with cases for which they feel significantly under-prepared, like Prener and Lincoln’s (2015) ‘psych’ calls. Equally, they have almost no decision authority when it comes to timing - in particular how quickly they have to answer a call, although they often retain discretion (sometimes considerable levels of discretion) over how long they spend on scene or the duration of patient handover. The complexities of the Job Control-Demand model as it applies to paramedicine therefore warrant further investigation.

Another interesting concept in the occupational stress literature is what Semmer *et al.* (2016) describe as illegitimate tasks, which “do not conform to what can appropriately be expected from someone in terms of his or her role” (page 33). They suggest illegitimate tasks have received little attention in this discipline, and report the results from their empirical investigations of this phenomenon. Semmer *et al.* are careful to point out that tasks become illegitimate when employees feel they should not be doing them. They also differentiate between tasks which are categorised as unreasonable – seen to lie outside the worker’s occupational ambit, expertise, authority or experience – and tasks which are categorised as unnecessary, perhaps because of organisational inefficiencies. One central point is that “illegitimate tasks affect one’s professional identity, and thus, the self, because role expectancies are violated” (page 49). These findings suggest illegitimate tasks are predictive of levels of employee well-being and strain at work. Again this concept offers an interesting avenue for occupational stress researchers to study paramedicine. Some studies suggest paramedics regard certain cases as illegitimate tasks, ‘pukes’, ‘humpers’, ‘geries’, ‘bogus’

and ‘psych’ calls amongst them. In other words, these are unreasonable. This perspective also connects to the literature modelling workplace boredom but takes a slightly different (although still psychologistic) approach.

Dirty work

In Ashforth and Kreiner’s (1999) influential development of Hughes’ (1958, 1962) original formulation of dirty work, dirt derives from three socially constructed forms of ‘taint’: physical, where work is deemed dirty in itself or carried out in dangerous or unsanitary conditions; social, where workers interact with stigmatised groups, or undertake menial or servile tasks; and moral, rendering the work morally repugnant or focusing on the dubious means needed to carry it out. The dirty work literature has been instructive across a broad range of occupations, including studies on professions in the same ballpark as paramedicine, such as policing, nursing and social care.

However, what is intriguing about paramedicine for dirty work researchers is the changing nature of the profession allied with what might be seen as its dirty qualities. Emergent cases could be deemed physically dirty of course, because they involve dealing with bodily fluids and excretions, blood especially. Paramedics can also work in very risky situations and are vulnerable to violence. But there is also the dirt which may attach to the bulk of their workload, the cases which involve, to reprise Prener and Lincoln’s (2016: 613) argument, “the neglected and forgotten”. Hughes’ (1958: 51, 1962: 7) argument that dirty work consists of socially necessary activities which most of us nonetheless disdain is relevant here, as well as McMurray’s (2012: 127) suggestion that dirty work becomes dirty *precisely because* it involves tasks that the majority of us neither want to acknowledge nor undertake. There may well be a social taint operating in these non-emergent cases because the patients involved are indeed ‘the neglected and forgotten’. As such, the work of a paramedic could be likened to that done by the Samaritans. In McMurray and Ward’s (2014), study, these volunteers spoke of taking calls from people who had been banned from accessing public services like community mental health provision and had no other avenue for expressing their distress.

Equally, paramedics may resent the physical dirt entailed in treating non-emergent cases. Recall, for example, the remark made by one of Prener and Lincoln’s (2015) respondents about a patient defecating on a stretcher. We suggest they may react differently to the same

bodily fluid or excretion depending on the case, with emergent patients perhaps being seen as less dirty because they have a legitimate reason for their excretions as well as for the emergency call being made at all.

Conclusion

This chapter has established that research on paramedics is overwhelmingly focused on the various elements which affect the quality of pre-hospital emergency care. However, the literature that considers the experience of paramedicine as work usually presents it as an extreme occupation – fast-paced and highly time-pressured; risky; involving significant levels of vicarious trauma and the need to manage one’s own and others’ emotions; characterised by problematic shift patterns; involving considerable ethical decision making; and underservedly lacking in status. Incumbents suffer disproportionately from work-related physical and psychological complaints and paramedicine has concomitantly high levels of occupational fatality, injury and medical retirement. Notably, very little of this occupational research has been carried out by MOS scholars.

But the profession is also moving away from the traditional ‘scoop and run’ model. Demands for ambulances continues to rise and, to tackle this, new critical care and community specialisms are being introduced in paramedicine. The generalist paramedic’s scope of practice is also widening. There are some indications in the extant research that this poses quite different demands from those associated with emergency cases. But this theme is under-developed. There is a genuine need to understand more about how paramedics in the UK – and elsewhere - experience non-emergent calls as they make up more of their workload. This changing caseload could also have significant implications for job satisfaction (consistently reported as low), labour turnover (consistently reported as high) and patient care. MOS researchers sensitive to the qualitative complexities of the social context in which work happens (including the real and perceived roles of, for example, professional, occupational and managerial identities, and the behaviours and symbols of ‘the public’ or ‘the street’) are – we contend - ideally positioned to address these gaps in the literature as the research base on this fascinating occupation continues to grow.

References

- Ahl, C. and Nyström, M. (2012) 'To handle the unexpected – the meaning of care in pre-hospital emergency care', *International Emergency Nursing*, 20: 33-41.
- Andrews, R. and Wankhade, P. (2014) 'Regional variations in emergency service performance: does social capital matter?', *Regional Studies*, 49 (12): 2037–2052 .
- Arial, M., Benoît, D. and Wild, P. (2014) 'Exploring implicit preventive strategies in prehospital emergency workers: a novel approach for preventing back problems', *Applied Ergonomics*, 45 (4): 1003-1009.
- Armstrong, K., Akroyd, K.V. and Burke, L. (2012) 'Short reports. The role of the emergency care practitioner in the provision of health advice and promotion to patients within the UK National Health Service', *Journal of Interprofessional Care*, 26 (1): 64-65.
- Ashforth, B.E. and Kreiner, G.E. (1999) "'How can you do it?": dirty work and the challenge of constructing a positive identity', *Academy of Management Review*, 24 (3): 413-434.
- Avraham, N., Goldblatt, H. and Yafe, E. (2014) 'Paramedics' experiences and coping strategies when encountering critical incidents', *Qualitative Health Research*, 24 (2): 194-208.
- Ayub, E.M., Sampayo, E.M., Shah, M.I. and Doughty, C.B. (2017) 'Prehospital providers' perceptions on providing patient and family centered care', *Prehospital Emergency Care*, 21 (2): 233-241.
- Bennett, K.J., Yuen, M.W., Merrell, M.A. (2018) 'Community paramedicine applied in a rural community', *Journal of Rural Health*, 34: s39-s47.
- Bentley, M.A. and Levine, R. (2016) 'A national assessment of the health and safety of emergency medical services professionals', *Prehospital and Disaster Medicine*, 31 (s1): s96-s103.
- Bigham, B.L. Jensen, J.L., Tavares, W., Drennan, I.R., Saleem, H., Dainty, K.N. and Munro, G. (2014) 'Paramedic self-reported exposure to violence in the emergency medical services (EMS) workplace: a mixed-methods cross-sectional survey', *Prehospital Emergency Care*, 18 (4): 489-484.
- Boyle, M.V. (2005) "'You wait until you get home": emotional regions, emotional process work, and the role of onstage and offstage support', in C.E.J. Hartel, W.J. Zerbe and N.M. Ashkenazy (eds) *Emotions in Organizational Behavior*, Mahwah, N.J: Lawrence Erlbaum.
- Boyle, M. and McKenna, L. (2016) 'Paramedic and midwifery student exposure to workplace violence during clinical placements in Australia – a pilot study', *International Journal of Medical Education*, 7: 393-399.

- Boyle, M. and McKenna, L. (2017) 'Paramedic student exposure to workplace violence during clinical placements – a cross-sectional study', *Nurse Education in Practice*, 22: 93-97.
- Brady, M. (2015) 'Death anxiety among emergency care workers', *Emergency Nurse*, 23 (4): 32-36.
- Campbell, H. and Rasmussen, B. (2012) 'Riding third: social work in ambulance work', *Health and Social Work*, 37 (2): 90-97.
- Charman, S. (2013) 'Sharing a laugh. The role of humour in relationships between police officers and ambulance staff', *International Journal of Sociology and Social Policy*, 33 (3/4): 152-166.
- Charman, S. (2014) 'Blue light communities: cultural interoperability and shared learning between ambulance staff and police officers in emergency response', *Policing & Society*, 24 (1): 102-119.
- Choi, B.Y., Blumberg, C. and Williams, K. (2016) 'Mobile integrated health care and community paramedicine: an emerging emergency medical services concept', *Annals of Emergency Medicine*, 67 (3): 361-366.
- Clompus, S.R. and Albarran, J.W. (2016) 'Exploring the nature of resilience in paramedic practice: a psycho-social study', *International Emergency Nursing*, 28 (September): 1-7.
- College of Paramedics (2016) 'MIND press release – one in four emergency services workers has thought about ending their lives', 20th April. Online. Available at: <https://www.collegeofparamedics.co.uk/news/mind-press-release-one-in-four-emergency-services-workers-has-thought-about-ending-their-lives>
- College of Paramedics (n.d.) 'Independent prescribing'. Online. Available at: <https://www.collegeofparamedics.co.uk/publications/independent-prescribing>
- Corman, M.K. (2017) 'Street medicine – assessment work strategies of paramedics on the front lines of emergency health services', *Journal of Contemporary Ethnography*, 46 (5): 600-623.
- Department of Health (2005) *Taking Healthcare to the Patient: Transforming NHS Ambulance Services*, London: Department of Health. Online. Available at: https://www.nwas.nhs.uk/media/79142/taking_healthcare_to_the_patient_1.pdf.
- Donnelly, E.A., Siebert, D. and Siebert, C. (2015) 'Development of the Emergency Medical Services Role Identity Scale (EMS-RIS)', *Social Work in Health Care*, 54 (3): 212-233.
- Evans, R., McGovern, R., Birch, J. and Newbury-Birch, D. (2014) 'Which extended paramedic skills are making an impact in emergency care and can be related to the UK

paramedic system? A systematic review of the literature', *Emergency Medicine Journal*, 31 (7): 594-603.

Fjeldheim, C.B., Nöthling, J., Pretorius, K. Basson, M., Ganasen, K., Heneke, R., Colete, K.J. and Seedat, S. (2014) 'Trauma exposure, posttraumatic stress disorder and the effect of explanatory variables in paramedic trainees', *BMC Emergency Medicine*, 14 (23rd April), doi: 10.1186/1471-227X-14-11.

Ford-Jones, P.C. and Chaufan, C. (2017) 'A critical analysis of debates around mental health calls in the prehospital setting', *Inquiry*, 54: 1-5.

Fischer, S.L., Sinden, K.E., MacPhee, R.S. and the Ottawa Paramedic Service Research Team (2017) 'Identifying the critical physical demanding tasks of paramedic work: towards the development of a physical employment standard', *Applied Ergonomics*, 65: 233-239.

Garus-Pakowska, A., Górajski, M. and Szatko, F. (2017a) 'Awareness of the risk of exposure to infectious materials and the behaviors of Polish paramedics with respect to the hazards from blood-borne pathogens – a nationwide study', *International Journal of Environmental Research and Public Health*, 14 (8), doi: 10.3390/ijerph14080843.

Garus-Pakowska, A., Szatko, F. and Ulrichs, M. (2017b) 'Work-related accidents and sharp injuries in paramedics – illustrated with an example of a multi-specialist hospital located in central Poland', *International Journal of Environmental Research and Public Health*, 14 (8), doi: 10.3390/ijerph14080901.

Granter, E., McCann, L., and Boyle, M., (2005) 'Extreme work/ normal work: intensification, storytelling and hypermediation in the (re)construction of 'the New Normal'', *Organization*, 22 (4): 443-456.

Granter, E., Wankhade, P., McCann, L., Hyde, P. and Hassard, J. (2018) 'Multiple dimensions of work intensity: ambulance work as edgework', *Work, Employment and Society*, OnlineFirst, doi: 10.1177/0950017018759207.

Hansen, C.D., Rasmussen, K., Kyed, M., Nielsen, K.J. and Andersen, J.H. (2012) 'Physical and psychosocial work environment factors and their association with health outcomes in Danish ambulance personnel – a cross-sectional study', *BMC Public Health*, 12 (July), doi: 10.1186/1471-2458-12-534.

Harenčárová, H. (2017) 'Managing uncertainty in paramedics' decision making', *Journal of Cognitive Engineering and Decision Making*, 11 (1): 42-62.

- Häusser, J.A., Mojzisch, A., Niesel, M and Schulz-Hardt, S. (2010) 'Ten years on: a review of recent research on the Job Demand–Control (-Support) model and psychological well-being', *Work & Stress*, 24 (1): 1-35.
- Health and Care Professions Council (2018 'Changes to SET 1 for education providers'. Online. Available at: <http://www.hpc-uk.org/education/standards/set1changeseducationproviders/>
- Heath, G. and Wankhade, P. (2014) 'A balanced judgement? Performance indicators, quality and the English ambulance service; some issues, developments and a research agenda', *Journal of Finance and Management in Public Services*, 13 (1). Available at: <http://www.cipfa.org/policy-and-guidance/the-journal-of-finance-and-management-in-public-services>
- Hughes, E.C. (1958) *Men and Their Work*, Westport, CT: Greenwood Press.
- Hughes, E.C. (1962) 'Good people and dirty work', *Social Problems*, 10 (1): 3-11.
- Jervis-Tracey, P., McAuliffe, D., Klieve, H., Chenoweth, L., O'Connor, B. and Stehlik, D. (2016) 'Negotiated policy spaces: identifying tensions for rural professionals in delivering their statutory responsibilities', *Journal of Rural Studies*, 45: 123-133.
- Johnston, T.M. and Acker, J.J. (2016) 'Using a sociological approach to answering questions about paramedic professionalism and identity', *Australasian Journal of Paramedicine*, 13 (1): 1-7.
- Kennedy, S., Kenny, A. and O'Meara, P. (2015) 'Student paramedic experience of transition into the workforce: a scoping review', *Nurse Education Today*, 35 (10): 1037-1043.
- Klee, S. and Renner, K-G. (2013) 'Short communication. In search of the "Rescue Personality": a questionnaire study with emergency medical services personnel', *Personality and Individual Differences*, 54 (5): 669-672.
- Leibold, A., Lassen, C.L., Lindenberg, N., Graf, B.M. and Wiese, C.H.R. (2018) 'Is every life worth saving: does religion and religious beliefs influence paramedic's end-of-life decision-making? A prospective questionnaire-based investigation', *Indian Journal of Palliative Care*, 24 (1): 9-15.
- Luftman, K., Aydelotte, J., Rix, K., Ali, S., Houck, K., Coopwood, T.B., Teixeira, P., Eastman, A., Eastridge, B., Brown, C.V.R. and Davis, M. (2017) 'PTSD in those who care for the injured', *Injury*, 48 (2): 293-296.
- Maguire, B.J., O'Meara, P., O'Neill, B.J. and Brightwell, R. (2018) 'Violence against emergency medical services personnel: a systematic review of the literature', *American Journal of Industrial Medicine*, 61 (2): 167-180.

- Maguire, B. and Smith, S. (2013) 'Injuries and fatalities among Emergency Medical Technicians and paramedics in the United States', *Prehospital Disaster Medicine*, 28 (4): 376-382.
- Mael, F. and Jex, S. (2015) 'Workplace boredom: an integrative model of traditional and contemporary approaches', *Group & Organization Management*, 40 (2): 131-159.
- McCann, L., Granter, E., Hyde, P. and Hassard, J. (2013) 'Still blue-collar after all these years? An ethnography of the professionalization of emergency ambulance work', *Journal of Management Studies*, 50 (5): 750-776.
- McMurray, R. (2012) 'Embracing dirt in nursing matters' in R. Simpson, N. Slutskaia, P. Lewis and H. Höpfl, H (eds) *Dirty Work: Concepts and Identities*, Houndmills, Basingstoke: Palgrave Macmillan, pp. 126-142.
- McMurray, R. and Ward, J. (2014) "'Why would you want to do that?': defining emotional dirty work", *Human Relations*, 67 (9): 1123-1143.
- Michael, T., Streb, D. and Hällner, P. (2016) 'PTSD in paramedics: direct versus indirect threats, posttraumatic cognitions, and dealing with intrusions', *International Journal of Cognitive Therapy*, 9 (1): 57-72.
- Mulholland, P. Barnett, T. and Spencer, J. (2014) 'Review article. Interprofessional learning and rural paramedic care', *Rural and Remote Health*, 14 (3): 1-13.
- Ogińska-Bulik, N. and Kobylarczyk, M. (2015) 'Relation between resiliency and post-traumatic growth in a group of paramedics: the mediating role of coping strategies', *International Journal of Occupational Medicine and Environmental Health*, 28 (4): 707-719.
- O'Hara, R., Johnson, M., Sirwardena, A.N., Weyman, A., Turner, J., Shaw, D., Mortimer, P., Newman, C., Hirst, E., Storey, M., Mason, S., Quinn, T. and Shewan, J. (2015) 'A qualitative study of systemic influences on paramedic decision making: care transitions and patient safety', *Journal of Health Services Research & Policy*, 20 (Supplement 1): 45-53.
- O'Meara, P., Stirling, C., Ruest, M. and Martin, A. (2016) 'Community paramedicine model of care: an observational, ethnographic case study', *BMC Health Services Research*, 16: 39. doi: 10.1186/s12913-016-1282-0.
- Palmer, C.E. (1983) "'Trauma junkies" and street work: occupational behavior of paramedics and emergency medical technicians', *Urban Life*, 12 (2): 162-183.
- Phillips, S. (2016) "'Police discretion and boredom': what officers do when there is nothing to do", *Journal of Contemporary Ethnography*, 45 (5): 580-601.
- Pilgrim, J.L., Dorward, R. and Drummer, O.H. (2016) 'Drug-caused deaths in Australian medical practitioners and health-care professionals', *Addiction*, 112 (3): 486-493.

- Prairie, J. , Plamondon, A., Larouche, D., Hegg-Deloye, S. and Corbeil, P. (2017) 'Paramedics' working strategies while loading a stretcher into an ambulance', *Applied Ergonomics*, 65 (November): 112-122.
- Prener, C. and Lincoln, A.K. (2016) 'Emergency medical services and "psych calls": examining the work of urban EMS providers', *American Journal of Orthopsychiatry*, 85 (6): 612-619.
- Pyper, Z. and Paterson, J.L. (2016) 'Fatigue and mental health in Australian rural and regional ambulance personnel', *Emergency Medicine Australia*, 28 (1): 62-66.
- Quigg, Z., McGee, C., Hughes, K., Russell, S. and Bellis, M.A. (2017) 'Violence-related ambulance call-outs in the North West of England: a cross-sectional analysis of nature, extent and relationships to temporal, celebratory and sporting events', *Emergency Medicine Journal*, 34 (6): 364-369.
- Rees, N., Rapport, F., Snooks, H., John, A. and Patel, C. (2017) 'How do emergency ambulance paramedics view the care they provide to people who self-harm?: ways and means', *International Journal of Law and Psychiatry*, 50: 61-67.
- Regehr, C. and LeBlanc, V.R. (2017) 'PTSD, acute stress, performance and decision-making in emergency service workers', *Journal of the American Academy of Psychiatry and the Law*, 45 (2): 184-192.
- Ross, L., Hannah, J. and Van Huizen, P. (2016) 'What motivates students to pursue a career in paramedicine?', *Australasian Journal of Paramedicine*, 13 (1): 1-7.
- Rybojad, B., Aftyka, A., Baran, M. and Rzońca, P. (2016) 'Risk factors for posttraumatic stress disorder in Polish paramedics: a pilot study', *Journal of Emergency Medicine*, 50 (2): 270-276.
- Scott, J., Strickland, A.P., Warner, K and Dawson, P. (2014) 'Frequent callers to and users of emergency medical systems', *Emergency Medical Journal*, 31 (8): 684-691.
- Semmer, N.K., Jacobshagen, N., Meier, L.L., Elfering, A., Beehr, T.A., Kälin, W. and Tschan, F. (2015) 'Illegitimate tasks as a source of work stress', *Work & Stress*, 29 (1): 32-56.
- Simpson, P., Thomas, R., Bendall, J., Lord, B., Lord, S. and Close, J. (2017) 'Popping nana back into bed' – a qualitative exploration of paramedic decision making for older people who have fallen', *BMC Health Services Research*, 17 (21st April), doi: 10.1186/s12913-017-2243-y.
- Skowronski, M. (2012) 'When the bored behave badly (or exceptionally)', *Personnel Review*, 41 (2): 143–159.

- Stanley, I.H., Hom, M.A. and Joiner, T.E. (2016) 'A systematic review of suicidal thoughts and behaviors among police officers, firefighters, EMTs, and paramedics', *Clinical Psychology Review*, 44 (March): 25-44.
- Tataris, K.L., Richards, C.T., Stein-Spencer, L., Ryan, S., Lazzara, P. and Weber, J.M. (2017) 'EMS provider perceptions on termination of resuscitation in a large, urban EMS system', *Prehospital Emergency Care*, 21 (5): 610-615.
- Tangherlini, T.R. (2000) 'Heroes and lies: storytelling among paramedics', *Folklore*, 111 (1): 43-66.
- Taylor, J.A., Barnes, B., Davis, A.L., Wright, J., Widman, S. and LeVasseur, M. (2016) 'Expecting the unexpected: a mixed methods study of violence to EMS responders in an urban fire department', *American Journal of Industrial Medicine*, 59 (2): 150-163.
- Van Erp, K.J.P.M., Gevers, J.M.P, Rispens, S. and Demerouti, E. (2018) 'Empowering public services workers to face bystander conflict: enhancing resources through a training intervention', *Journal of Occupational and Organizational Psychology*, 91 (1): 84-109.
- Van Hooff, M.L.M. and van Hooft, E.A.J. (2014) 'Boredom at work: proximal and distal consequences of affective work-related boredom', *Journal of Occupational Health Psychology*, 19 (3): 348-359.
- Waldrop, D.P., McGinley, J.M. and Clemency, B. (2018) 'The nexus between the documentation of end-of-life wishes and awareness of dying: a model for research, education and care', *Journal of Pain and Symptom Management*, 55 (2): 522-529.
- Wankhade, P. (2012) 'Different cultures of management and their relationships with organizational performance: evidence from the UK ambulance service', *Public Money & Management*, 32 (5): 381-388.
- Wankhade, P. and Brinkman, J. (2014) 'The negative consequences of culture change management: evidence from a UK NHS ambulance service', *International Journal of Public Sector Management*, 27 (1): 2-25.
- Webber, R. (2017) 'The best response, first time', *National Health Executive*, 13th December. Online. Available at: <http://www.nationalhealthexecutive.com/Comment/the-best-response-first-time>.
- Williams, A. (2012) 'Emotion work in paramedic practice: the implications for nurse educators', *Nurse Education Today*, 32 (4): 368-372.
- Williams, A. (2013a) 'A study of emotion work in student paramedic practice', *Nurse Education Today*, 33 (5): 512-517.
- Williams, A. (2013b) 'The strategies used to deal with emotion work in student paramedic practice', *Nurse Education in Practice*, 13 (33): 207-212.

Wireklint Sundström, B. and Dahlberg, K. (2012) 'Being prepared for the unprepared: a phenomenology field study of Swedish prehospital care', *Journal of Emergency Nursing*, 38 (6): 571-577.