**Producing Paramedicine: Case Studies in the Medical Labor Process**

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**Abstract**: How is medical labor power, that being the capacity to assemble, adjust, or arrange medical subjects, converted into medical practice? Drawing on three qualitative case studies in the United States, Canada, and the United Kingdom, we argue that this conversion is shaped by pressures channeled through the relations that medical workers enter into with patients “from below” and managers “from above.” We demonstrate this by examining a common empirical object: ambulance labor. In addition to providing a unique window into the varieties of medical work, paramedicine offers a strategic venue for examining the kinds of productive relations that medical laborers enter into. Our research shows how the labor process is shaped by patient requests that can either conform or contradict workers’ shared sense of vocation. We also detail how this same process is simultaneously pressured by managers who are generally focused on increasing both the flexibility and the visibility of their workers. Many of these pressures, we argue, can be linked to common forces of neoliberalism across our three nations. Our analysis of the medical labor process inspires some practical recommendations to reform ambulance-based care. However, our primary aim is to advance a labor-centric approach to studying medicine.

**Keywords**: medical work; paramedicine; ambulance; labor process

**1. Introduction**

*1.1 Medicine as a labor process*

Medicine is made. From the highly professionalized and salaried labor of physicians to the highly proletarianized wage labor of nursing assistants, the production, classification, and regulation of medical subjects always requires work. And, like all workers, medical laborers purposefully transform the world through the social relations they enter into during the productive process.

There are nonetheless plenty of frameworks and topics in medical sociology that neglect, or significantly marginalize, questions of labor: medicalization (Conrad 2007), the medical gaze (Foucault [1973] 1994), medical authority (Starr 1982), medical interactions (Heritage and Maynard 2006), and so on. Medicine is frequently conceptualized as an “institution,” a “field,” an “encounter,” a “commodity,” and even a “profession,” but it is largely ignored as something made by people who are both enabled and constrained by a complex division of labor.

We join a chorus of scholars that examine the ground-level work of medicine and link those microprocesses to larger macroforces (Erickson and Grove 2008; Rodriquez 2014; Ward 2021). Our goal is not to replace existing theories of medicine nor to reduce medicine to a generic labor process, but instead to study how medical work shapes health care in fundamental ways. The point, in other words, is to center, not marginalize, the concerns of labor within medicine.

We suggest that the following question is essential to understanding medicine but rarely actually posed: *How is medical labor power, that being the capacity to assemble, adjust, or arrange medical subjects, converted into medical practice?* Like any labor process question, this means accounting for the social relations of production, including the relations between workers and those who attempt to control and coordinate their labor (Braverman [1974] 1998; Burawoy 1979; Thompson and Newsome 2004). However, for the medical labor process specifically, this also means accounting for the relations between medical workers and their medical subjects, the primary material they work on, in, and with.

*1.2 Ambulance work*

While there are obviously a number of suitable sites for studying the medical labor process, the ambulance is a particularly promising one. A number of researchers have studied the interactions between ambulance crews and patients to better understand how medicine is produced, understood, and negotiated (Corman 2017; Jusionyte 2018; Prener 2022; McCann 2022; Metz 1981; Mannon 1992; Seim 2020). These studies demonstrate how ambulance crews, whether they are made of paramedics, emergency medical technicians (EMTs), or other specialized prehospital emergency workers, perform a wide variety of medical tasks. They utilize an assortment of tools to measure vitals, inject drugs, construct clinical records, and so on.

While paramedicine is certainly a specific subfield, it provides a unique window into the breadth of medical work. We can learn a lot about the medical labor process by looking into the backs of ambulances, those being the primary “shopfloors” of paramedicine. This requires, however, an account not only of the relations between ambulance workers and their patients “from below” but also between these same workers and their managers “from above.”

It is firstly important to account for the human material that ambulance crews work on, in, and with. Researchers across the globe have demonstrated that paramedics and EMTs tend to encounter suffering subjects toward the bottom of complex social hierarchies (Aitavaara-Anttila et al. 2020; Earnest et al. 2012; Ruger et al. 2006; Seim et al, 2017; Yazaki and Nishiura 2020). This does not mean paramedicine only focuses on oppressed or exploited populations, nor does it mean ambulance care is adequate or that there are no serious barriers to accessing emergency medical services (Dadashi et al. 2017; Peralta 2006; Roy et al. 2012). Nevertheless, it does suggest, especially in the so-called Global North, that ambulance crews are frequently collecting ill and injured people near the bottom of societies stratified by class and race.

Some ambulance work is performed “involuntary” on patients, but most is activated by patients themselves who dial 9-1-1 (Canada and the United States), 9-9-9 (United Kingdom), 1-1-2 (Germany), 1-1-9 (Japan), or some other three-digit phone number. Many patients certainly encounter ambulance crews for “real” emergencies that are highly legible to an institution manifestly concerned with treating and transporting critically ill and injured bodies (Earnest et al. 2012; Ruger et al. 2006; Seim 2017). However, a number of studies, especially within the cities of advanced capitalist nations, suggest that many summon ambulance workers for problems that are not easily handled through emergency medicine (Andrew et al. 2020; Booker et al. 2019; Corman 2017; McCann 2022; Seim 2020; Yazaki and Nishiura 2020).

That said, ambulance labor is obviously not just shaped by the demands of patients. The administration of paramedical operations by managers is also critical. While there is significant variation in terms of who retains significant control and influence over ambulance labor across the globe, most seem to be primarily managed by a mixture of bureaucrats, professionals, and, in some cases, private business owners (Al-Shaqsi 2010; Black and Davies 2005; George et al. 2015; Peralta 2006; Prener 2022; Rodigin 2015; Suryanto et al. 2017; Timerman et al. 2006).

Paramedical labor is usually part and parcel of the municipal, regional, or national state, often as a function of a “public safety” bureaucracy (e.g., fire or rescue departments) or a “public health” bureaucracy (e.g., hospital or health care network). The bureaucrats that manage ambulances tend to be largely focused on the breadth and efficiency of ambulance coverage. We cannot, however, reduce the control of ambulances to bureaucracies or even the common legal domains that directly influence them (e.g., courts and legislatures). Medical experts, who sometimes double as bureaucrats (e.g., medical directors), often act through relatively autonomous professional organs to help regulate ambulance-specific protocols and credentialing (American College of Emergency Physicians 2006; Studnek et al. 2009; Thompson and Curry 1993). These professionals are usually physicians, but they can sometimes include paramedics and other health care workers promoted to leadership positions. Either way, a specialized expertise of prehospital emergency medicine typically intersects with bureaucratic power to establish what is possible during ambulance encounters by officiating “standards of care,” “scopes of practice,” and so on. Finally, in some areas, capitalists have direct influence over paramedicine. It may be true that ambulances, like all medical institutions designed for the masses, support capitalism by reproducing (general) labor power, maintaining surplus populations, and eliciting consent for the conditions of economic oppression (Navarro 1983; Waitzkin 1991). Within some areas, however, for-profit firms secure contracts with local governments to manage ambulance operations directly, usually in exchange for the “right” to bill patients and their insurance (Déziel 2017; Eckstein 2013; Seim 2020). This is fairly common, for example, in the U.S.

Like the vast majority of workers, ambulance crews are caught between the subjects and managers of their labor. They exist between those who consume and those who control their medical practices. Relative to their patients, ambulance crews are immediate medical authorities for identifying and treating medical problems. They work on, in, and with their medical subjects, and they commonly do so in reference to a particular sense of vocation to do paramedicine for its own sake (Corman 2017; Jusionyte 2018; Prener 2022; Metz 1981; Mannon 1992; McCann 2022; Seim 2020). Meanwhile, these same workers are positioned beneath the bureaucrats, professional leaders, and capitalists who control the organizations that employ and legitimate them. Relative to these actors, ambulance crews are “street-level bureaucrats” (Henderson and Pandey 2013), “blue-collar professionals” (Metz 1981), and “low-wage workers” (Jacobs et al. 2017).

*1.3 Toward a labor-centric approach to studying medicine*

As ethnographers who have peered into the backs of ambulances in the U.S., Canada, and the UK, we argue that social scientists cannot adequately understand the experiences of ambulance workers without considering the social relations they enter into with the subjects and supervisors of their labor. Extending this vertical analysis even further, we suggest it is also critical to situate the micro interactions between workers, patients, and managers under an array of macroforces. These insights all point to the promises of adopting a labor-centric approach to studying medicine.

Consider something as simple as worker frustration. While we find that ambulance labor can certainly be rewarding for crews, we also find these workers are deeply frustrated. They are often vexed with patients because they frequently present with problems that are seemingly mismatched with the manifest functions of the ambulance. Across our case studies, most ambulance workers are committed to a paramedical vocation - to “real ambulance work” consisting of “true” emergencies - but most of their cases contradict that vocation. This frustration is ostensibly sourced from below, from the patient population. However, we also find that worker frustration is firmly rooted in conditions more directly shaped by their relations with managers from above: long hours, schedule uncertainty, low pay, demanding performance expectations, and more. Worker frustration seems to be most proximately linked to these relations with immediate subjects and supervisors, but these relations do not exist in a vacuum. We argue they are structured by a larger array of social forces, from those that concentrate ambulance demand toward the bottom of social hierarchies to those that orient how managers navigate policies and markets. Indeed, worker frustration is not something that simply or automatically boils within individuals. It is something that manifests through the social relations of production.

The article at hand extends this line of inquiry. We argue that the conversion of medical labor power into medical practice is shaped by pressures channeled through the relations that medical workers enter into with patients below and managers above. Our research shows how the labor process is shaped by patient requests that can either conform or contradict workers’ shared sense of vocation. We also detail how this same process is simultaneously pressured by managers who are generally focused on increasing both the flexibility and the visibility of their workers. Many of these pressures, we argue, can be linked to common forces of neoliberalism across our three nations. Our analysis of the medical labor process inspires some practical recommendations to reform ambulance-based care. However, our primary aim is to advance a labor-centric approach to studying medicine.

**2. Methods**

We draw on three independent case studies to examine ambulance crews and the pressures they experience from patients below them and managers above them. While we collected our observational and in-depth interview data in different locations, asked unique research questions, and used somewhat distinct research designs and methods, we each aimed to accomplish a common goal: to examine the medical labor process. Unsurprisingly, we spent considerable time studying the relations between ambulance workers and their patients. That is largely because medical providers and patients always presuppose one another. Neither position can be understood without reference to the other. However, the same is also true of employers and employees. The latter position only exists in relation to the former and vice versa. Therefore, in thinking about ambulance work, we each had to consider ambulance crews as both providers in reference to their patients and employees in reference to their employers. This frequently necessitated a concern for other actors, like hospital nurses, law enforcement, and emergency bystanders. Each of our studies provide unique insights into the lives of ambulance crews caught in the middle of these complex social relations, and this article cross examines those insights.

*2.1 United States study*

The first study was conducted by Author 1 in a large unnamed county in California during 2015 and 2016 (Seim 2020). This project advanced a labor-centric framework to rethink the ambulance as an institution for governing urban suffering. In his first year of fieldwork, Author 1 shadowed ambulance crews and paramedic field supervisors employed by a for-profit firm that held an exclusive 911 transport contract with the local government. He observed 279 emergency calls and “hung out” with both labor and management at this firm. In the second year, Author 1 was employed as a novice EMT for this same company, where he worked, essentially as a driver and clinical assistant for better-trained paramedics, on 287 calls. He directly observed and worked with 48 paramedics, 19 EMTs, and 8 supervisors, but this brought him in contact with dozens of other ambulance workers, nurses, police officers, firefighters, and managers. Author 1 jotted notes in the field as both a “participant observer” (via ride-along shifts) and an “observant participator” (via EMT shifts), and he routinely used these jottings to type more extensive field notes when he was not actively in the field (Seim 2021).

*2.2 Canada study*

The second study was conducted by Author 2 in the Canadian city of Calgary between 2010 and 2011 (Corman 2017). This project examined the everyday work of paramedics with a particular focus on how the work of paramedics is socially organized. Author 2 drew on institutional ethnography (Smith, 2005) to examine the experiences, relations, and organization of ambulance work. This involved, among other things, an analysis of how these workers understand their labor, how they interact with others at work (e.g., patients, nurses, doctors, managers, dispatchers), and how their work is structured by technologies of knowledge, communication, and governance. Over an 11 month period, Author 2 observed paramedics and EMTs for more than 200 hours across 34 separate ride-alongs, and he informally conducted more than 100 interviews with the ambulance workers he observed during their “downtime” between emergency calls. Additionally, Author 2 conducted observations at dispatch operations and 36 interviews with other emergency workers and managers (e.g., supervisors, nurses, doctors, and dispatchers).

*2.3 United Kingdom study*

The third study was conducted by Author 3 in England during 2015-18 (McCann 2022). This project examined the impact of paramedics’ ongoing professionalization project while ambulance services were also experiencing extreme pressure to improve their efficiency as measured by very demanding nationally-mandated response times. Author 3 interviewed 20 paramedics employed by National Health Service ambulance trusts across various locations in England. Participants were recruited through contacts made with ambulance trust managers. Interviews were conducted off work time and off work premises, with paramedics giving their own personal accounts of their working lives as individual professionals. Several were interviewed multiple times over the course of the research to provide further updates and reflections. Author 3 primarily asked questions about everyday work experiences, patient encounters, relations with management, and shifting scopes of practice.

*2.4 Cross-case analysis*

This article explicates a shared empirical object across each of case studies: ambulance labor. We independently studied the lived experiences of ambulance crews - as medical workers embedded in complex labor processes - to better understand the ambulance as an essential institution for regulating the uneven distribution of suffering within advanced capitalist societies. Each of us examined our own datasets, but we collaboratively developed analytical notes and memos to assemble a comparative analysis that considers three themes: 1) the pressures ambulance crews experience “from below” (e.g., from the living and suffering subjects of their work), 2) the pressures ambulance crews experience “from above” (i.e., from those who attempt to control and coordinate their labor), and 3) the lived realities of ambulance crews caught between these pressures. Consistent with our specific institutional review protocols, fictional names are used for all individuals.

A quick note on national differences before we proceed. There are no doubt important structural variations between our three cases. The UK relies primarily on regionalized public ambulance trusts, Canada relies on some province-level and municipal-level government agencies, and both even include some private ambulance services. In the U.S., ambulance services are even more delegated and decentralized across public and private organizations that tend to bill patients (or rather their insurance providers) for utilization. We nonetheless learned quickly in our cross-analysis that the similarities were more striking than the differences. That is in large part because the medical labor process, whether executed “publicly” or “privately,” or under “for-profit” or “non-profit” objectives, unfolds through similar pressures. And these similarities, illuminated through a labor-centric analysis, seem to be linked to common microforces we can broadly classify as neoliberal.

**3. Findings**

*3.1 Pressures from below*

Paramedics and EMTs confront a number of pressures “from below,” from the subjects they work on as frontline medical laborers. While it is fair to situate providers above patients in an authority hierarchy, we should not confuse a relatively high probability of obedience with absolute domination. Patients, especially under regimes that emphasize “medical rights,” “patient-centered care,” and “medical consumerism,” have significant power to shape clinical encounters (Latimer et al. 2017). They can demand certain services and treatments, and, while their demands are not always guaranteed, they often have a curious power to influence the work that’s performed on them. Even unconscious and lifeless patients offer a sort of pressure via the expectations of humane treatment, which, as Erving Goffman (1961: 74-83) notes, cannot be fully explained or regulated by official protocol. While patients are still “dominated” by providers in a general Weberian sense, their domination is far from total and there are many ways patients, and the particular problems they present, can shape medical labor from below (Weber [1922] 1978: 212).

The severely injured or ill subject, for example, presents unique pressures from below: a pressure to stabilize, treat, and transport. Even when unconscious and physically incapable of verbalizing a medical complaint, these subjects trigger intervention. The body in cardiac arrest essentially pressures ambulance crews to compress the chest, clear and ventilate the airway, inject epinephrine, and so on. Likewise, bodies in other “severe crises” that are highly legible to the field paramedicine also pressure particular interventions: spinal immobilization, nitroglycerin, wound dressing, splints, glucagon, albuterol, naloxone, and more. As ambulance workers across our three cases generally put it, these are cases that they want to labor. They invoke a sense of duty and constitute a force from below. While that duty may be internalized within workers or perhaps disciplined from above through training, cases of “real emergencies” can be understood as demands generally welcomed by crews committed to paramedicine as a vocation.

That said, our research suggests that most ambulance cases do not generate a desirable pressure from below. The majority of cases involve the absence of “real emergencies.” In the U.S., ambulance crews complained about “bullshit” cases, and in Canada they complained about “shit” calls. The former were often distinguished from cases framed as “legit,” and the later were often distinguished from calls framed as “good.” In the UK, some ambulance workers used more formal language to lament ambulance runs for “social issues” (as somehow distinct from “medical issues”) and “unplanned primary care” (as distinct from “medical emergencies”). Other English paramedics would describe “dross”, “rubbish”, or “nothing” calls. Whether it is “shit” or “social,” the frustration is generally the same: ambulance crews across our studies felt that a majority of their patients summon paramedicine for problems that are generally mismatched with that craft. While this was certainly a mismatch between problems and possible interventions - and even between problems and instruments - it was primarily frustrating as a mismatch between vocation and labor. In other words, ambulance crews were generally frustrated with the large number of cases that did not match their “skills” and “mission” to salvage bodies experiencing “legitimate” medical crises.

Consider an excerpt from Author 1’s field notes when we worked as an EMT. On this particular night shift (6:30pm to 6:30am), Author 1 was assisting paramedic Amanda. This was their first call of the night,

*We picked up a woman (African American, early 20s) outside her apartment in (a high poverty neighborhood). She called 911 for abdominal pain. I started paperwork as soon as we loaded her into the rig (ambulance) and I collected her vital signs, but Amanda asked that we just “load and go” (rather than “stay and play”). After exiting the back of the ambulance and entering the cab, I drove us toward the closest emergency department. Amanda (while still in the back of the ambulance with the patient), did no significant medical interventions en route to the hospital. She did not even administer fentanyl (for pain alleviation). I found this a little surprising since I heard the patient claim 8 out of 10 pain. Amanda later told me she would have administered fentanyl if “she really would have complained.” After parking the ambulance and rolling the patient into the triage bay at the hospital, a nurse asked the patient questions about her smoking habits and her medical history. Per usual, there were no discussions of the patient’s social context during this encounter. At the conclusion of the transport, Amanda told me this was a “bullshit call.” Throughout the shift, she complained of similar “toe pain” calls that we were essentially forced to work.*

In this excerpt, Author 1 and Amanda experienced a “pressure from below,” from a patient who successfully requested a hospital transport. Amanda, the relative authority here on “real” medical emergencies and the leader of this two-person crew, did not want to treat and transport a “bullshit” case like this. Amanda essentially equated the woman’s 8 out of 10 abdominal pain to something as trivial as “toe pain.” But, she and Author 1 essentially had to work this case. Official transport and treatment protocols, while technically imposed and sanctioned “from above,” give patients significant power “from below” to successfully demand ambulance transports. Author 1 and Amanda knew this, and it is possible the patient did too. It is so banal it is rarely stated in the field: ambulance patients in the studied county can essentially demand transport to the hospital so long as they can articulate a medical complaint. This excerpt also suggests such pressure from below is variable. Amanda insisted that she would have administered pain medication if the patient would have complained more, or, in other words, if the pressure was more intense. Author 1 heard statements from other workers throughout his fieldwork that was consistent with this thinking (“the squeaky wheel gets the grease”).

While all patients, by way of emergency medical “entitlements” and “rights,” offer a significant pressure from below, those summoning ambulance crews for cases that are mismatched with the vocation of paramedicine best illustrate the significance of such pressure. Across each of our studies, ambulance crews stressed a generalized frustration in being “forced” by patients to respond to problems that mismatched their skillset. Even the patients that crews interpreted to be highly disreputable could impose significant pressure from below. As paramedic Carl in the UK told Author 3,

*The number of idiots has increased: the scrotes, the drunks. It is harder to keep them in check than it was, you are fearful of appearing rude or getting complaints, even from them. Basically you don’t get into it with them. I try to teach a little on conflict resolution. I advise paramedics, even when the patient is being outrageous or ridiculous, don’t let it get to you. You could lose your career, lose your house because of one guy – it’s not worth it.*

Workers can sometimes feel like they are being held hostage by patients. The possibility of formal complaint is just one example. More commonly they are frustrated that they have to work cases that are mismatched with paramedicine. Reflecting on this problem in Canada, paramedic Jake told Author 2, “I wish they (patients) were more sick.” Indeed, it is not the case that the workers we studied wanted to avoid labor, they just wanted to work cases that they saw as vocationally fulfilling. Instead, the pressures they faced from below were largely from patients seeking care for so-called bullshit problems.

In sum, workers are pressured by patients “from below.” While it is true that official protocols “from above” give patients the opportunity to demand treatment, these protocols do not fully determine what they demand or how they do so. Of course, cardiac arrests, strokes, gunshot wounds, and other so-called real emergencies are critical. Such problems, either articulated by patients or discovered through medical examination, trigger particular responses from workers. These are, however, pressures that are generally desired by workers. Much to their frustration, most cases constitute an undesirable pressure from below: a seemingly infinite number of “bullshit” problems.

*3.2 Pressures from above*

The pressures that ambulance crews experience from below cannot be understood without an account of the pressures they experience from above. Indeed, while paramedics and EMTs may be providers “over” patients, they are also employees “under” employers. In the Canada and UK studies, ambulance crews are employed by public bureaucracies. In the U.S. study, they are employed by a private for-profit firm that holds a contract with a local government. Despite these differences, ambulance workers across each of our studies experiences some comparable pressures from above. As noted in the previous section, official protocols frequently mandate ambulance crews to work cases they see as vocationally unfulfilling. This is, however, one downward pressure among many and it is largely converted, or at least experienced, as a pressure from below.

There are more obvious pressures from above. Ambulance workers in our studies frequently criticized managers in interviews and observation-based conversations for imposing increasingly demanding performance expectations. Even for those services that are publicly funded and run as “not-for-profit,” as we see in Canada and the UK, market-based solutions rooted in neoliberal logics and the ethos of “New Public Management” are pervasive (Clarke and Newman 1997). The ends may not be profit, as we see in the U.S., but rather “fiscal responsibility.” Regardless, the means are largely the same: managers across all of our cases pressure crews to maximize efficiency.

Author 2’s study in Canada illustrates how some of these efficiency pressures can intensify on workers. There, paramedics frequently spoke about recent reforms and restructurings that aimed, in part, to alleviate increased hospital wait times, escalating health care costs, and other organizational crises. These changes ushered in new protocols to ambulance services, many of which expanded the scope of practices for both paramedics and EMTs (e.g., expanded list of drugs to administer in the field). While some workers welcomed the scope expansion because it meant they could perform more treatments for so-called real emergencies, some interpreted the reform as an effort to further exploit labor. For example, EMTs were upskilled to initiate intravenous treatment and that made this common intervention cheaper because EMTs are paid less than paramedics. Indeed, by essentially loosening the scope, administrators increased labor flexibility without doing much to actually increase the number of workers. This meant workers were expected to do “more with less” (see also Rodriquez 2017). While some welcomed the expanded scope as an expansion of the craft, others described it as a “downgrade” and stressed concern about the increased risks for both patients and workers.

As paramedic Julie put it,

*The more tools you're given [referring to expanded scope of practice], the more things you can screw up…we can really do some damage, really help them or really hurt the patient...More is being asked of us.*

The reforms shifted, or rather intensified, a pressure from above. That pressure pushed more risk on to workers and essentially squeezed them to produce more with less.

Across the Atlantic, public ambulance administrators are also strategizing ways to maximize the efficiency of labor. Author 3’s study in the UK showcases how they do so in large part through target-setting and surveillance. If ambulance crews subject patients to a “medical gaze,” then managers subject crews to a “managerial gaze” (McKinlay and Starkey 1997: 3). They become subjects to be measured against the standards not of bodily health, but of organizational health. The “performance targets” of ambulance crews, especially with respect to their “response times” and various “quality control” measures, are closely monitored by an audit culture largely consisting of digital surveillance and information technology systems with dubious clinical value.

Paramedic Liam summarized the situation as such,

*The 8 minute target, it is not clinically sensible. There is a small number of patients where if you get to them in 3 to 4 minutes you can make a huge difference. But 8 minutes is no good to them. For all the others, 8 minutes makes little clinical sense in terms of differences it would make to their outcomes; really they can wait longer. 8 minutes, 7 minutes, 10 minutes, take your pick! [...] AMPDS (Advanced Medical Priority Dispatch System, a call prioritization software) is a joke. It’s just not accurate. The system’s broken. It shouldn’t be like this.*

Liam specifically criticizes the standardized dispatch system which looks remarkably similar across our three cases. This system seeks to rationalize and accelerate ambulance labor by imposing triage-varied time targets for ambulance response. Most of the workers we spoke to insisted that managers imposed this system and ones like it not so much to improve care but instead to increase efficiency. Many noted that if patient care was a priority for management then they would dispatch more ambulance crews on the streets or implement time requirements that were more clinically justified. Many also stated that they felt like they had little power or opportunities to challenge top-down performance surveillance.

The U.S. study revealed similar pressures to increase labor flexibility and to make workers’ performances increasingly visible to management. Author 1 also witnessed another strategy to promote efficiency from above: schedule manipulation. Here, managers take advantage of crews’ dependency on uncertain shift assignments, a common feature of medical work generally and ambulance work specifically (see also Clawson and Gerstel 2014). In a sense, this combined labor flexibility with labor surveillance.

The following excerpt is from a field note entry that attempts to make sense of some patterns Author 1 was observing across a handful of managerial meetings he attended:

*A personnel manager heavily contributes to (the meeting). This man, often mocked by workers behind his back for being fat and abrasive, oversees three union-protected items: the employee schedule, the wage structure, and worker sanctions. Especially toward the end of the week, he presents his strategy for populating vacant shifts with a sparse labor force. Meeting attendees (other managers and Author 1) rarely question his judgment, likely because they know his recommended changes are informed by an algorithm that draws on previous patterns in 911 medical calls. His most important announcement concerns what shifts in the next 48 hours should be upgraded to “incentive shifts” or “voluntary mandation.” An incentive shift is a shift that reduces a worker’s tardy marks and similar sanctions and it is the least distasteful to capital. The more rare and oxymoronic “voluntary mandation shift” is a shift with a 200 percent hourly wage that is awarded to employees who volunteer for a mandated, or “must be filled,” shift... Most of us stare silently at a calendar displayed on a 50-inch monitor as the personnel manager tells us which and how shifts will be upgraded.*

In this example at least, the personnel manager at the studied firm attempts to motivate workers with “carrots” rather than “sticks.” Two carrots are used: “incentive shifts” and “voluntary mandation shifts.” The latter is more expensive, but it is essentially guaranteed to fill an empty ambulance. It is unclear in this excerpt, however, why management is motivated to pressure workplace attendance at such a high price. The answer is often taken-for-granted and unstated in these meetings: the firm needs enough ambulance crews on the streets to maintain contractual compliance with the local government. The local state fines the company for late and tardy ambulances, and these fines can quickly snowball into tens, sometimes hundreds, of thousands of dollars each month. One way to keep the risk of tardy ambulance fines down is to pressure employees to pick up shifts, especially during busy periods or when the workforce is thin or exhausted (as is often the case). Of course, managers do not want to staff too many ambulances as this could quickly increase the risk of idle ambulance crews and “wasted” labor power (and thus decreased profitability). Management at the U.S. firm, not unlike that at the organizations studied in the UK and Canada, seek to deploy an ambulance fleet that is lean and minimally wasteful. A careful and regular tweaking of the schedule is one way managers can accomplish this goal.

Still, it is important to note that the most basic way managers incentivize labor across our three cases is through wages. Paramedics and EMTs reasonably critique their low pay, but few can deny that even their small paychecks encourage routine job attendance. Indeed, the very fact that the wages are low motivate many to work overtime. Ambulance crews are quick to argue, like many medical workers, that they are called by more than “just a paycheck,” but it is important to acknowledge the taken-for-granted pressure of wages.

Whether it be by adjusting the scope of practice, changing performance expectations, modifying the employee schedule, or simply paying workers, managers across our three cases provide significant pressures “from above.” Together, these pressures help organize the conversion of medical labor power into medical practice.

*3.3 Workers caught in the middle*

The ambulance workers we studied are caught between pressures from below that largely concern a denial of vocation and pressures from above that largely concern an advancement of exploitation. Across each of our cases, ambulance workers are generally and increasingly frustrated with patients calling for “bullshit” and managers promoting “efficiency.”

Consider a relatively common experience from the U.S. case study: “holdover bullshit.” This occurs when an ambulance crew is mandated to work past their 12-hour shift to respond to another 911 call but that call is vocationally unfulfilling. Due to low staffing and limited ambulance coverage, it is not surprising that ambulance crews are frequently required to work past their off-duty time. And, because most calls are closer to the bullshit end of the continuum, most holdovers have crews working their 13th, and sometimes 14th hours, of their shifts handling undesirable cases. Here, workers are explicitly caught between managerial pressures to labor overtime and patient pressures to respond to so-called non-emergencies. Workers, under these circumstances, are usually as exhausted as they are frustrated. While much of this can be blamed on the market and policy circumstances managers, which encourage them to promote an efficient workforce, crews frequently blame patients. They are almost always seen as the immediate and visible “reason” for why a crew is “held over with bullshit.”

Further confirming the interpretation that crews understood “holdover bullshit” as particularly loathsome, Author 1 documented cases where “legit holdover calls” were welcomed. He observed crews volunteer over the radio to work late to treat and transport legit calls. Author 1 also noted that frustrations with “bullshit” were more intense, or at least more frequently verbalized to patients, during holdover calls than in the initial hours of a shift.

There are other examples where pressures from above and below seem to converge on workers simultaneously. For instance, in the Canadian study, ambulance crews were often caught between a patient’s desire to go to a specific hospital and management’s desire for an efficient use of resources. Facilitated by technological innovations in dispatch operations, crews were often directed to hospitals that supposedly had better capacity at the moment. This frequently disappointed patients because the dispatch-determined destinations were often to hospitals located further from their residence.

The UK research also demonstrated many instances where the growing expectations of both patients and managers intensified worker frustration. The scope expansion implemented there broadened patients’ aspirations of care, but workers often felt their managers did not sufficiently prepare them for increased clinical risk. The scope had been broadened, but some workers claimed that managers were not offering sufficient training and resources for this heightened clinical risk to be handled appropriately. As paramedic David put it, “There is increasing pressure to treat at home and often the patient wants to stay, quite understandably.... But often you have no way of knowing if your care was helpful to the patient, or how the whole episode or treatment panned out for that individual.” Indeed, scope expansion may be imposed from above, but it often inspires new demands from below. The general expectation to do “more with less” tends to intensify pressures from both directions.

These are just particularly illustrative examples. We suggest that ambulance workers are essentially always caught between pressures from above and below. These pressures converge on workers to shape the conversion of their medical labor power into medical practice. In many ways, the pressures are conceptually distinct but not concretely seperable. “Bullshit calls,” for example, cannot be understood without a consideration of the mandatory treatment policies imposed onto workers above. Likewise, the intensified performance expectations imposed by managers cannot be fully understood without a consideration of how patients will continue to “overwhelm” ambulance services.

We see these pressures as interdependent largely because they are plausibly linked to a similar set of macroforces that we can broadly classify as “neoliberal” (Crowley and Hodson 2014; Harvey 2007). On the one hand, neoliberal statecraft, in combination with an expanding medicalization of Western society, has shaped pressures from below by intensifying the governance of individual, rather than collective, suffering. Traditional social safety nets have become more disciplinary and stingy, while emergency medicine has emerged as a primary field for mitigating the agonies of destitute and stigmatized populations (Gordon 1999; Lara-Millán 2021; Malone 1998). More and more people are turning to emergency departments, ambulances, and similar settings to alleviate an array of sufferings and many of them are not seen as “real emergencies” or even “really medical.” Ambulance crews have become one of the few but essential workforces that are almost always promised to those suffering near the bottom of social hierarchies. Even in the U.S., where ambulance transports are typically billed to patients, *access* to paramedicine is essentially guaranteed for most of the population, especially those in large metropolitan areas. Under these conditions, it should come as little surprise that so many people summon paramedicine for “non-emergencies.”

On the other hand, neoliberalism has also transformed the management of frontline medical work. This is especially obvious in our U.S. study, where ambulance services are contracted out to a private firm that operates on a fee-for-service revenue model. Here the focus on labor efficiency is not surprising because it is directly linked to the pursuit of profit. However, market-based logics have also infiltrated public infrastructure in Canada and the UK, consistent with the rise of “New Public Management” regimes within state bureaucracies (Bevan and Hood 2006; Connell 2009; Lapsley 2009; Power 1997). Whether it be adjusting the scope of practice to increase labor flexibility or adding more performance measures to increase visibility, management across the Canada and the UK studies, similar to those in the U.S. study, attempted to increase efficiency by pushing risk on to individual workers. Indeed, managers individualize workers into “cases” just as providers do to patients.

These are conditions ripe for worker frustration. We frequently heard crews complain that both managers and patients “don’t understand.” Where most patients do not seem to understand what a “real emergency” is, most managers do not seem to understand what the work “really entails.” From the standpoint of labor, both patients and managers seem to also expect more than what labor can provide with a narrow skillset and limited resources. Where patients frequently summon ambulance crews for sufferings they are ill equipped to mitigate in meaningful ways, managers increasingly pressure crews to reduce their response times, increase their transports, and so on.

That said, not all the pressures we examined were despised. There were also pressures welcomed by workers and extant research suggests these are also linked to larger economic and political forces. As social scientists have long argued, since at least the writings of Friedrich Engels ([1845] 1993) and W.E.B. Du Bois ([1899] 2010), capitalism, racism, and other injurious systems concentrate bodily crises toward the bottom of social hierarchies (see also Flynn 2021; Williams et al. 2019). This suggests that the “legit” calls that awaken a sense of duty within ambulance providers across our studies are rooted to the same macroforces that give rise to “bullshit” calls. Likewise, the pressures from above that incentivize labor with “carrots” rather than “sticks” seem to also be linked to the same macroforces that coerce production. The labor regimes we study might best be described as more “hegemonic” than “despotic” (Burawoy 1979). Managers rely, at least in significant part, on the consent of their workers, and things like “voluntary mandation” shifts help elicit this consent.

In short, ambulance workers across our three cases are sandwiched between an array of pressures that shape how their medical labor power is converted into medical practice. These pressures are interdependent, and extant theory gives us good reason to suspect that they are linked to common macroforces.

**4. Discussion**

We draw on a cross-case analysis of ambulance work in U.S., Canada, and the UK to advance our understanding of the medical labor process, that being the conversion of medical labor power into medical practice. Our findings suggest that this conversion is shaped by pressures channeled through the relations that medical workers enter into with patients “from below” and managers “from above.” The particular pressures we detail are largely similar across our three cases and we estimate that much of this is due to comparable neoliberal forces.

This article does not come without limitation. While our focus on paramedicine allowed for reasonable cross-national comparisons, we are limited to theorizing a massive case of the medical labor process from the specific location of paramedicine. Our retrospective comparisons also fixed us to select corners of the Anglosphere, and this obviously limits the global implications. We simply hope that, along with its strengths, the weaknesses of our analysis inspire future research on the medical labor process in other parts of the world and with other workers.

These empirical shortcomings aside, our cross-case analysis inspires some general policy implications. We argue that ambulances should prioritize the needs of those who depend on it most: the patients who need it for both “emergency” and “non-emergency” aid and the workers who need it for both a paycheck and sense of meaningful work. We understand that there is a tension, perhaps a permanent one, between patients and providers. Nonetheless, we think it is more socially just to prioritize these parties over the bureaucrats and capitalists that coordinate and control ambulance operations.

One way we can do this is by adjusting the labor process so that it better meets demands on the ground. This could mean, among other things, expanding the social work capacities of ambulance workers so that “non-urgent” and even “non-medical” calls can be better serviced by workers. This would mean both a transformation of the vocation and how ambulance workers are trained (so that workers *want* to provide more than just emergency medical care) and a transformation of the paramedical toolkit (so that workers *can* provide more than just emergency medical care). Recent calls for “community paramedicine” programming across our three countries, which push for a broader “primary care” and “social service” mission of ambulance labor, are promising (Choi et al. 2016; O’Meara et al. 2016). This requires, in our view, not only pedagogical changes like “structural competency” training (Metzl and Hansen 2014), but also a general strengthening of the social safety net so that ambulance crews can do far more than just connect patients to emergency departments.

That said, we recommend such transformations be done cautiously and with the interests of both patients and workers in mind. Scope expansion, as we have noted, can align with neoliberal reforms to “do more with less.” Meanwhile, so-called community paramedicine programs may really be motivated by an interest to divert “frequent flyers” away from the ambulance to save money.

We are calling for something else: we want *more with more*. Among other things, this means more pay and benefits for workers and more crews and ambulances on the streets for patients. Such changes, however, are only made possible by a rejection, or at minimum a dramatic departure, from neoliberalism and the kinds of medical labor processes it inspires.

**5. Conclusion**

Our overarching conclusion for social scientists of medicine is rather simple: medicine is a labor process embedded in complex relations of production. The specific approach we employ and advance in this article encourages a close examination of how medical labor power is converted into medical practice. This necessitates a concern for various pressures that medical workers experience from subjects below and supervisors above. Our goal is not to ditch the mostly “laborless” theories, frameworks, and concepts that structure much of the medical social sciences. Instead, we aim to integrate a labor-centric approach that can inform our understanding not just of ambulances, but of hospitals, outpatient clinics, and other sites of medical production broadly conceived.

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