Illustration by Sarah Riedmann

To measure in minutes

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It was my last month as a medical assistant at a high-volume, high-acuity pain management and rehabilitation clinic and I'd learned a lot from my early days of sloppy intakes and inefficient charting. During my first weeks I'd been reprimanded for spending too much time taking patient histories and once was even pulled out of a room while holding a crying woman's hands and admonished for prioritizing her pain over that of every other patient on the schedule.

By the time "Jamie" rolled in the door, I was prepared. I had an arsenal of pointed questions, a personalized organizational system, and the experience that I needed to make sure each patient got their chance to speak. Jamie had a broad smile, a sticker-covered wheelchair, and a breathtaking story—one that I planned to fit into a six-and-a-half-minute intake.

Here's the breakdown—as a teenager, Jamie was hit by a bullet from a family member during a domestic violence situation. The incident left him paralyzed from the chest down and homeless. He had phantom pain throughout his lower limbs and was self-medicating with heroin and oxycodone he bought on the street. Recently, he had lost multiple friends to fentanyl-laced pills, which was the final push that he needed to try pain management "the right way," as he said.

I sacrificed a slightly more accurate blood pressure to continue the interview while I took his vitals and spent an extra couple of minutes making sure I understood his current addiction status. I knew I was risking a stern talking-to and a backed-up schedule, but the initial appointment was a refreshing 30 minutes, and it was clear that Jamie had lived a life that simply could not be described in any less time.

We saw Jamie three more times that month, figuring out logistics, beginning physical therapy, and ultimately having him sign our agreement to receive opioid pain medication "the right way." Over those 15-minute appointments and six-and-a-half-minute intakes, we all got to know and admire Jamie. On my last day at the clinic, I offered to set up his next visit, and instead of his usual overly gracious commentary or dry jokes, he just shook his head and rolled out the door.

I later learned that because our opioid agreement included regular drug testing, and because Jamie had cannabis in his system twice, he was discharged. That shake of his head spared me the explanation that he was likely headed back to the streets to buy the same pills that killed his friends.

I wish I could say I responded with the nuance and complexity I intend to explore in this essay, but if I'm being honest, I was furious. I trusted the doctor who treated Jamie, and I knew he understood the gravity of sticking strictly to protocol in that situation. Though I wanted to voice my anger or make some kind of appeal, there was a roster of patients to room and research meetings scheduled late into the evening. There simply wasn't time to explore the ramifications of what just happened. I packed my things and left that job angry and ashamed.

I've thought through what we could have done differently so many times since that day. The clinic could have written a more equitable or flexible drug testing policy, or provided additional counseling and follow-up to patients who violated it. Or someone could have made an exception for an extraordinary patient in an extraordinary situation.

But each of those things would have taken time we didn't have. Adding additional requirements for care and building in time for increased individual discretion would have added to the burdens on our doctors and limited the number of patients we could see. I wish it were as simple as saying that a full and rigid schedule is always inhumane and that the clinic I worked for was just greedy, but it isn't. We had people waiting months and flying from overseas for care only we could deliver. The standardization of appointments, the reliance on protocol, and the efficiency of the timing allowed them to deliver the greatest care to the greatest number of people.

But that wasn't enough for Jamie. And I couldn't help but wonder if we'd lost something massive by measuring everything in minutes.

When I think through the decisions of that day, there is often a famous divinity school study at the forefront of my mind. In the experiment, students were told to go across campus and deliver a lecture on the Good Samaritan, a Biblical story featuring supposedly righteous people walking past an injured stranger. Along the students' path, an actor played that stranger in need and the study measured which students were most likely to stop. The participants' religiosity, their exposure to the story of the Good Samaritan, and their personal values did not affect their likelihood of helping the stranger. What did affect their behavior was how much time they had. When participants were told they were on track to arrive early to the lecture, 63 percent of them stopped to help. When told they were on time, 45 percent of them stopped to help. And when they believed they were late, only 10 percent of people stopped to help.[1]

Every time I think of that study, I picture Jamie as the stranger, smiling broadly in his sticker-covered wheelchair.

That study has become the basis for a large body of work on why the decisions we make under time pressure tend to be less rational and less ethical. The dual process model attempts to explain the underlying mechanism causing this difference. Type 1 Thought is intuitive decision-making that relies on unconscious heuristics to come to a conclusion quickly. Type 2 Thought involves conscious, deliberative decision-making.[2] Ethicists have theorized that Type 1 decisions rely more on deontological morality, which is making choices based on a set of absolute rules. Type 2 decisions allow space for utilitarian ethics, which hold that the right action is the one with the most positive consequences.[3]

A number of simulations can be used to explore the nuances of the dual process model. In the Trolley Problem, a subject must choose whether to flip a switch causing a runaway trolley to kill one person rather than five people.[4] In the dictator game, a player decides how to allocate a fixed sum of money between themselves and another player.[5] And in gambling simulations, subjects are asked to assess the risk of bets involving gains and losses.[6]

While most people subjected to the Trolley Problem choose to divert the track so that five lives are saved instead of one, one study found that participants were more likely to kill the five people under time pressure.[4] This is in line with the idea that Type 1 decision-making relies more on deontological thinking. Participants may have been relying on the rule that killing someone is always wrong rather than calculating the outcomes and making the consequence-based decision to save five people, even if it meant killing one. In a study modifying the Dictator Game in much the same way, researchers found that faster decisions tended to be more self-centered, with players showing decreases in altruism under time constraints.[5] Additionally, studies of betting simulations demonstrated that when confronted with time pressure, people made less risky decisions, and focused more on the negative dimensions of the situation. This aversion led to irrational decision-making where individuals avoided bets with favorable odds due to an exaggerated fear of loss.[6]

In some ways, these frameworks have helped me understand what happened to Jamie. The time pressure that contextualized his dismissal may have caused the doctors to rely on quick, rule-based Type 1 thought. It may have encouraged a reliance on deontological ethics, which promote strict adherence to the rules rather than an outcome-based assessment of what would happen if Jamie returned to buying street drugs. The time pressure may have decreased the amount of altruism that went into the decision to discharge Jamie and encouraged the doctors to make the risk-averse choice for themselves and their clinic.

These tendencies may have contributed to my own decision not to interrupt the schedule and voice my concerns after the fact. It may have heightened my estimation of risk in deciding not to suggest some kind of personal follow-up when I still had connections to the clinic. While these frameworks help the rational part of me make some sense of what happened, it still feels like

an individual's humanity can get lost among the simulated dictators, and gamblers, and railway bystanders. After all, what I wanted was for Jamie to be seen as a person outside of protocol, and I thought that as health care workers, we would be able to overcome our inherent predispositions for the sake of our patients.

Research shows that we don't. A study of oncologists worked to identify key causes of burnout and compassion fatigue. Among variables such as workload, work-family conflict, and occupational characteristics, they found that the key predictor of both burnout and compassion fatigue was time pressure.[7] In a study of nurses' risk assessment and clinical decision-making, time pressure reduced their ability to detect the need for action and their tendency to intervene.[8] In the paper, "Time and the Patient-Physician Relationship," the authors explored the wide-reaching effects that busy schedules and shortened appointment times have on primary care practitioners. They pointed to the correlations between shorter appointments and less preventative care, higher malpractice rates, and elevated job dissatisfaction among many other outcomes.[9]

So if time pressure makes clinicians' decision-making less competent, healthy, and ethical, why was our clinic so time-focused, and why are fifteen-minute appointments and full schedules increasingly common? The foundational reason for this change is the mounting demands on physicians and their time. Scientific and technological advancements have increased the complexity of patient care, communication, and documentation. Fee-for-service systems incentivize seeing more patients while payment models devalue non-billable aspects of care that take time, such as communication and evaluation.[10]

However, studies have shown that fifteen-minute appointments do not negatively affect broad metrics of patient care. One cohort study of 173,758 primary care visits assessed found no difference between 15-minute and 30-minute appointments in repeat visits or emergency room attendance. It also showed that shorter appointments were associated with lower rates of hospitalization, imaging, and laboratory services at rates expected when accounting for their patients' lesser complexity.[11] Another study assessed appointment lengths associated with patients' subjective experience ratings. They found no correlation between appointment length and contentedness with communication, trust and confidence, or overall satisfaction.[12] There is a large body of work demonstrating that 15-minute appointments are satisfactory for most types of care.

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A closer look at those studies reveals that the initial paper only concluded that shorter duration appointments were a non-inferior option for "select low-risk patients."[11] The second made note that while patient experience overall was not correlated with appointment length, longer consultations were needed for clinical effectiveness and patient safety for complex patients.[12] Some people just need more time.

Jamie was most certainly complex and not low-risk in any way. And yet, these generalizations were applied to him without room for exception.

When setting up schedules, writing policies, and drawing conclusions, there is not the same 15-minute clock running and no time pressure great enough to activate those Type 1 thoughts. While creating the systems that will influence daily patient interactions, we are fully capable of the Type 2 utilitarian thought needed to come to the more complex, consequence-based conclusions. But as those final two studies show, utilitarian systems that do the greatest good for the greatest number often don't reach our most vulnerable neighbors.

I set out to write an essay on why full schedules and fifteen-minute appointments lead to worse outcomes for patients and make practitioners choose the wrong path for the trolley, but I ended up settling on a more nuanced conclusion. Research shows that the current systems may technically be the correct answer to the Trolley Problem, but viewing the set-up as a single choice doctors have to make isn't correct. We are not called to the role of calculating a person's worth, we are called to tend to the injured. No matter the outcome, we will be the people treating those hurt on the track.

When we set up systems that optimize efficiency and base them on broad metrics of success, we can't forget the generalizations they rely on. Utilizing shorter appointment times and high patient volumes may not be an issue in and of itself, but when the time pressure is increased to the degree that there is no longer room for discretion, some patients will fall through the cracks.

While it is easy to calculate the fact that five lives are worth more than one in a hypothetical scenario, seeing the humanity of each person and understanding the many unmeasurable dimensions of the human experience is a vital part of providing care. In the clinic, patients can't be quantified and calculated, even with

metrics as seemingly innocent as minutes. There are days when spending extra moments with the crying patient really is worth more than the wait times of countless others on the schedule. And even more than that, there are ways to change the systems in place to accommodate the patients who need more than six-and-a-half minutes of hand-holding.

Building in gaps for catch-up, including the option for variable appointment times, and minimizing factors that contribute to "no-shows" have all been suggested as ways for physicians in busy practices to have enough time with each patient. Adjusting panel sizes for patient complexity, using payment systems that compensate based on time, or giving incentives based on outcome have also been suggested as ways to contribute to systemic change.

But even when we find ourselves stuck in a busy schedule, assailed by a storm of productivity metrics and best-practice policies, it is essential to find the time to see each patient's personhood. In an industry that builds knowledge with large sample sizes and treats with generalizable algorithms, seeing the humanity in each encounter must be a conscious daily practice. Even when the research shows us the best method for most actions, we can't view our patients as simulated gambles or strangers on the road, and we can't view our own actions as the consequences of set pathways. There are moments we have to acknowledge the unquantifiable experience in front of us, take the extra few minutes to listen further, ask more questions, and hold their hands until they're ready to let go. Those are the extra minutes that will save a life.

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