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Working in Scarcity

At Mawingu, the nurses, doctors, and administrators all dealt with systemic material scarcity and sought to mitigate its effects on their care practices through the implementation of new systems and via small moments of creativity, improvisation, and ingenuity within the broader system. This environment of scarcity pervasively affected providers' motivation levels and morale. Though most of the health care providers working on the wards may not have known the details and extent of the health care system's lack of funds, they certainly saw, felt, and lived the shortage on a daily basis. Scarcity in this and similar settings is always a product of particular historical events and trajectories, as well as state reactions to them.[1] In this instance, particularities of the Tanzanian health system rooted in socialism and the country's subsequent structural adjustment program and its aftereffects have produced material scarcity. Expanding biobureaucracy heightens material scarcity further by making it more difficult to access what is present; at the same time, biobureaucratic expansion begins to limit the space available for affective care practices.

As one of the highest-volume wards at the hospital, maternity was a constant drain on resources, which led to tense interactions—among providers and between women and the hospital staff—delays in care, and the deaths of women and their babies. When scarcity and bureaucracy combined, they synergistically created a system with an insurmountable inertia, resisting comprehensive reform efforts and limiting possibilities for changes that might have improved care for women and the work environment for the nurses and doctors. In the absence of prospects for deep, sustained changes, nurses and doctors innovated and improvised in much smaller ways to keep delivering diverse forms of care every day.

THE MATERIAL NEEDS OF THE SYSTEM

"*Habari za asubuhi, jamani? Hongereni kwa kazi,*" I said as I passed two of the night-shift nurses as I entered the ward after the daily morning meeting. With

FIGURE 6. Supply trolleys after a busy shift. Photo by author, 2014.

these greetings to say good morning, I shook off my lingering drowsiness and headed into the changing room. The small room was crowded with nurses from both shifts, morning and night, as they changed into or out of their uniforms and traded stories both personal and professional. I turned my back and started to change into my scrubs. A cry went up as one of the nurses handed out wedding invitation cards, and another corner of the room erupted as Nurse Mpili demanded to borrow lotion from someone. Someone else shouted out the usual joke about how I didn't have to wear spandex shorts under my scrubs because my thighs weren't as fat as hers, and, laughing, I donned my nonslip, waterproof (amniotic fluid and blood-proof) Crocs. With that, I stepped out of the room and left the cheerful din behind me to start restocking supplies.

Nearly every morning I arrived at the hospital between 7:30 and 7:45 a.m. After the clinical meeting was finished around 8:00 or 8:30 a.m., I headed to the ward. If it was early and the night-shift nurses had not yet finished handing over to the morning shift, I would often find the ward in a state of disarray after a busy night of caring for patients. First thing in the morning there were often wrappers from gloves strewn about, empty boxes, sticky footprints on the floor where tea or IV fluids had splattered, and broken glass ampules from used oxytocin injections. Both the nurses and the cleaning staff on the morning shift embarked on tidying up the ward first thing after the shift handover occurred, so long as there were no women in need of immediate medical attention. Three trolleys in the labor and delivery rooms carried the most immediately necessary and most commonly used supplies (figure 6). I always glanced around to see what was missing or almost out, cleared away the paper wrappings from gloves, and straightened the medications before heading to the nurse in charge's office to collect the missing items we would

need for the day shift. As we all worked together, the ward slowly returned to its normal daytime look, with the smell of bleach water slowly filling the ward as the cleaner, Tatu, worked her way through the space, eradicating all traces of sticky tea spills, drops of amniotic fluid, and spattered blood on walls, floors, and bedrails.

Though in February 2014 when I returned I encountered improved supply levels compared to 2012 and 2013, as the year progressed the availability of supplies did not continue to improve. Some days, the cabinet in the nurse in charge's office would be nearly empty when I went in search of bottles of IV fluids, gloves, or catheters. Under such conditions, the nurses often struggled to provide care. In order to provide adequate care, the maternity ward requires a vast number of material inputs. In fact, it was the most expensive ward to run at the hospital. In May 2012, on my first visit to Mawingu, Nurse Kinaya marched briskly around the ward with me in her wake, leading me on a tour. As the nurse in charge she was aware of the progress the ward had made recently but lamented, "We desperately need more delivery packs. You see?" She gestured to the metal supply cabinet with its door askew and contents jostling for space; two packages wrapped in sturdy green fabric sat alone on the left side of one of the shelves. "We have only those two left and it is only four o'clock," she said, using the Swahili time for 10 a.m. There were five and a half hours left in the day shift, not to mention the evening and night. "How are my nurses supposed to help every mother when we have only three full sets that comply with the requirements? Even the scissors we do have are too dull to cut the cord, we have to cut and cut until blood is spraying you!" Each delivery pack was supposed to include a metal kidney dish, into which the nurse would place the placenta, two forceps for clamping the cord, one pair of surgical scissors, two sterilized umbilical cord ligatures, and two pieces of gauze. All of the materials were placed in the kidney dish, wrapped in two pieces of green cloth (drapers), and tied with a thin piece of cloth. The sets were then sterilized in the hospital's autoclave, located in the main operating theater. The nurses used one delivery pack per mother. Depending on the autoclave schedule and staffing numbers, there could be long delays between when the delivery packs ran out on the ward and when sterile packs became available. Particularly with only a handful of packs in 2012, the nurses had operated mainly without this set of tools, which the hospital, national, and international standards all considered to be the most basic essentials for clean, safe, and skilled maternity care.

While this state of affairs had improved by 2014, maternity care was highly vulnerable to stock-outs and failures of the supply chain. In addition to the delivery packs, each woman who came to give birth needed a number of other supplies in order to receive high-quality care. From admission through the birth of the baby, nurses required an absolute minimum of three pairs of sterile surgical gloves, though they often used many more. Perhaps most critically, the maternity ward was supposed to stock oxytocic drugs, most commonly oxytocin, though ergometrine was often present as a backup. Women received an injection of oxytocin

immediately after they gave birth to help prevent postpartum hemorrhage.[2] Other needed items included personal protective equipment for the nurses, such as boots, gowns or aprons, goggles or face masks, and caps to cover their heads. Also, the ward had to always have IV (intravenous) fluids on hand, as well as cannulas for insertion in a vein to start the IV and "giving sets," the tubing that connects the IV fluid container to the cannula and that regulates the speed of the fluid flow. The dizzying list continues: medical tape, antibiotics, antihypertensive medications (for women with signs of preeclampsia or eclampsia), basic pain relievers for postpartum mothers, ketamine for surgeries, nasogastric (NG) tubes in both infant and adult sizes, resuscitation equipment, vacuum for assisted deliveries, sutures of various types, antiseptic solutions, syringes, magnesium sulfate (for mothers with eclamptic seizures), blood pressure cuffs, stethoscopes, urinalysis dipsticks, cotton swabs, gauze, sterile water, catheters, and urine bags. All of these supplies and more were integral for providing care to women during their pregnancies, labor, and the immediate postpartum period.

During a C-section or laparotomy, as in the case of a woman with a ruptured uterus, in addition to IV fluids, cannulas, catheters, and surgical blades, the operating theater needed a machine to help monitor the woman's vital signs while she was under anesthesia, and either drugs or other means of resuscitation in case something should start to go wrong.[3] Without resuscitation equipment, women died on the operating table and babies did not recover from the effects of severe asphyxiation. In other cases, lack of antibiotics before and after surgery increased the woman's chances of contracting a life-threatening infection. All of these supplies came from the Medical Stores Department (MSD).

Government health facilities all had an account with MSD that they used for ordering, and they largely relied on central government funds to purchase the materials needed to keep the facility running. Mawingu Regional Hospital went for eleven months in the fiscal year 2014–15 with only a fraction of promised funds from the government, meaning they lacked the cash to purchase supplies from MSD.

Practically, because of the high, and ever-increasing, patient load on the maternity ward, each day the hospital was spending nearly three times as much on maternity services as it was able to bring in in cash from services provided in all other departments; this deficit was supposed to be closed by government funds. When I asked the regional medical officer about this situation, he explained, "What you are seeing is that more and more people are coming here because they see that the care we are providing is high quality. It used to be that not a lot of people were coming here, but now many of them come even if they should be going to the health centers or the district hospitals because they see the care here is better and it's more in demand, so we are using more medicine and equipment." Poor services at lower levels drove demand at Mawingu.

THE HOSPITAL BUDGET

Each year, the Hospital Management Team (HMT) and the Regional Health Management Team (RHMT) created an annual plan and budget for the hospital's goals and operating expenses. They forwarded this plan to the Ministry of Health and Social Welfare and the Ministry of Finance for approval. The Ministry of Health then disbursed funds into the hospital's accounts. Some of this money went into the hospital's account with MSD. When this account was empty, in the absence of supplies being issued on credit, the hospital had to use the cash collected to pay for more supplies.

The daily clinical morning meetings at the hospital always started with a reading of the accounts from the day before. This included going department by department and reading out the number of patients served, the cash collected, and the amount of money used for patients in the exempted categories. The maternity ward was far and away the largest source of exemptions, with a patient flow that surpassed that of any other ward or department. This was the main reason the amount of money spent on exemptions was always around three times the amount of cash brought in on any particular day. For example, on February 9, 2015, the report said that on the preceding day the total cost of the exemptions was TZS 1,273,127. Of that, TZS 1,073,000 came from the maternity ward, and the remaining 200,000 was from services provided to the elderly, children under age five, HIV patients, and the destitute, combined. The total cash collected for February 8 was TZS 380,000, and the total cost of services provided for that date was TZS 1,650,000. This was representative of the trend—free services were generally three times the amount being brought in through daily cash collection of user fees. Even so, this level of cash collection was an increase over the past and an improvement. This all combined to mean that the hospital was operating at a loss every single day. The shortage of money was a constant topic of conversation within the hospital's morning meeting and among the administrators, as well as a source of rumor and gossip for the nursing staff not present in the meetings.

After watching the declining supply situation on the maternity ward that had started in late 2014, I asked the regional medical officer in May 2015 about the supply problem at the hospital. His response took me on the detours and wanderings to which government funds were subject; at one moment money was released from the central government just one month before the end of the fiscal year, and shortly thereafter the central government informed the RMO they had an outstanding debt with MSD nearly equivalent to the disbursed amount. While the hospital had requested TZS 286 million for the preceding fiscal year, which was coming to a close, they had gone nearly forty-five weeks with just TZS 6 million. He explained: "There they tell us we had a debt of about 80 million shillings, so now we have 30 million shillings to buy new medications and supplies. But up until then we really only had 6 million shillings to run the hospital. . . .

You see the exemptions every day, it's hard to continue to run a hospital with only 6 million shillings for the year. We've already made an order to MSD; we should get more supplies soon." The RMO's meandering explanation demonstrated the complicated ways in which funds flowed through the bureaucratic fiscal systems of the health care sector, enhancing the feelings I had, echoed by many nurses, that the entire process was rather opaque and subject to detours, as when the RMO told me the money "went somewhere." The fiscal year ended in June, and by March 2015 the Tanzanian Treasury had released only 58.4 percent of the fiscal year's budget; it was not just a problem for Mawingu.[4] In the absence of the required ministry funds, the RMO said sometimes the amount of money the hospital received was only enough to cover the hospital's most basic bills, such as electricity and water, which had to be paid for the hospital to continue operating.

In addition, bureaucratic guidelines that the central government distributed and updated through periodic circulars put strict limits on how the hospital was allowed to spend the money collected each day from patients. The regional medical officer explained that though the hospital had succeeded in increasing the amount of money it was collecting from patients on a daily basis, Mawingu would never be able to collect as much money from user fees as regional hospitals located in more prosperous areas of the country or serving large numbers of insured patients. In his characteristic way of speaking in metaphors, to drive his point home, the RMO emphatically asked me, "How can you say these two people are competing in the same sports game when one has good shoes and equipment and the other is there barefoot? It's not a level playing field. Just the same, even to compare us [at Mawingu], to say that we are competing with another hospital and are capable of the same results, is not an easy thing!"

This concern with the availability of cash for health care services in the Rukwa region emerged repeatedly in meetings and informal discussions among the hospital staff members, particularly after the hospital increased the fees for services. Nurses repeatedly said they were afraid patients from the region would forgo follow-up care, such as bandage changing, to try to save their money, such was the level of poverty in the area. The lack of family resources to pay for health care, even when the fees were still low in comparison to other regions, was also a common theme and a very real barrier to care in the villages I visited. People unfamiliar with this region would often suggest that the hospital just try to increase its collections, or make a better budget, or lay out better plans. This, however, was far easier said than done because of the structural constraints of the region's economy, bureaucratic cost-sharing guidelines that were outdated and that severely limited how the hospital could use its funds, and national-level supply chain problems and financial shortages.

All of these constraints led the hospital to try to manage funds and reallocate them whenever possible. It often meant suspending extra pay for the staff members and delaying other crucial activities, such as car maintenance for the hospital ambulance or repairs to buildings.[5] The nurses often told me they counted

on on-call and extraduty allowances as a consistent supplement to their (low) salaries. The loss or delay of these payments was always a source of much indignation and complaining. On the other hand, if these payments were released, the entire hospital seemed to be in a good mood.

The RMO told me that they tried to prioritize extraduty or on-call allowances, particularly for the physicians, when the money was available because "This way doctors can be able to do their work, not say, 'Oh, I'm not coming right now [to the hospital] even if I'm called because I haven't been paid.'" When the government issued new regulations regarding the use of funds, or increased the required amount of extraduty allowances, the hospital prioritized paying the doctors; the nurses suffered the cuts.

COLLECTING CASH AND THE EXPANSION OF BIOBUREAUCRACY

Often, the nurses told me, and I witnessed, delays in care occurred as family members tried to find the monetary resources to buy medications or essential equipment for their patient. Some mothers waited on the ward for several days before receiving the first dose of a prescribed drug. Emergency C-sections resulted from a number of clinical conditions, which commonly included preeclampsia or eclampsia and obstructed labor with suspected fetal distress. In these cases, providers, women, and their family members could not wait. Surgeries could not commence without ketamine, the anesthetic drug most commonly used, or sutures, or IV fluids, or a catheter and urine bag. Hospital protocols for the distribution of such supplies changed multiple times throughout my stay at Mawingu. For many months, the cabinet in the office of the ward nurse in charge housed all of the ward's supplies save those for anesthesia. At another point, all the supplies were no longer allowed to be housed in the wards, but the ward staff had to report to the pharmacy with prescription forms signed by the physician who had ordered the procedure or medication. This change was related to the implementation of a new accounting system at the hospital in September 2014. While in many ways this computerized system helped to significantly, and rapidly, increase the amount of money the hospital was able to collect each day, and thus was crucial for the hospital's continued operation, it also brought a host of new complications. The new system affected the maternity ward in ways that were unique and unheard of in other wards. This was primarily because prior to the new cash collection and accounting system the maternity ward staff, as providers for an exempt group, had never dealt with receipts or the collection of funds from the women who came to give birth.

Before the automated system, nurses on each ward that did not serve exempted categories of patients collected money from clients as the need arose. This meant the corner of a patient's file often sported a stack of multicolored rectangular pieces of paper that served as receipts for payments for ward admission, a bed, laboratory tests, wound dressing, medications, IV fluids, and more. This system

often created confusion, particularly for patients, who were unaware of the prices of services and supplies and did not know who was legitimately allowed to collect cash. Many community members felt this collection process encouraged corruption and bribes because it was unclear who was supposed to be paying what, to whom, and when. Nurses could arbitrarily deny care, citing unpaid balances, and delay potentially lifesaving services. Nurses, on the other hand, told me they would provide care for a woman before looking for the receipts if they felt she really was in the midst of an emergency. But many nurses were unsure of the current prices to charge patients and whose responsibility it was to do the actual collecting. Poor communication during shift changes compounded the confusion. From an administrative perspective, this system more than once resulted in patients and their relatives sneaking away from the hospital at night or during the chaotic visiting hours, leaving their debts unpaid. The hospital had already incurred the cost of the physical and human resources expended and now had very little recourse for recouping the loss when a patient "absconded" without paying (hence the nighttime searches of my car).

To produce its financial benefits, the new system drastically changed how the maternity ward staff members conducted their work and requisitioned and accounted for supplies or services rendered. Though officially the women on the maternity ward never had to pay for care, the administration began to require a daily tally of the supplies used in the course of caring for each patient. The maternity ward nurses primarily saw this as yet another burden and part of a more general proliferation of required documentation and bureaucratic expansion, generated by the hospital itself and outside forces. Now, before a nurse could take a patient's samples to the laboratory for testing, she had to go to the accounting window to get a receipt, have it stamped with the word "Exempt," and have the person in this office staple it to the lab test requisition form; only then could she proceed with the sample to the lab. The process of actually getting blood test results could be significantly delayed at the accounting window, especially during the hospital's busiest hours.

I once experienced this delay at night when I wanted to take blood samples to the lab for a patient we thought might need an emergency blood transfusion. The person on duty was a medical attendant who had previously been assigned to the maternity ward. Her time on the maternity ward was short because the nurses thought she was argumentative, generally difficult, and not a good worker. She would frequently deny responsibility for tasks or refuse to do work that she thought was beneath her. This particular medical attendant then had started working at the cash collection window and had brought to that work the same argumentative and unhelpful attitude. Regardless of the patient waiting back on the ward, she would take her time, pecking out names and the ward number with one finger on the computer's keyboard. Before beginning to stamp any of the pages she would wait for all of them to emerge slowly from the printer. These types of inefficiencies seem

relatively harmless on the surface but could add up to life-threatening delays for mothers and babies when combined with all the other opportunities for delay. Such delays resulting from the procedures for procuring supplies did not necessarily *produce* scarcity: after all, eventually a patient would receive the prescribed tests or medications. But the expanded bureaucratic measures now in place made it ever more difficult for the nurses to access what supplies were available, compounding their work and, often, frustration levels. In effect, the biobureaucratic expansion, best seen here via the new accounting system, produced a scarcity of time for clinical patient care. It also produced a scarcity of emotional reserves for affective caring as nurses had to engage with petulant gatekeepers and as physical time away from the ward prevented additional intersubjective care exchanges.

On the maternity ward, yet another notebook appeared with the advent of the new accounting system. As the nurses recorded in this new notebook the supplies used for each woman, they felt the effects of biobureaucratic expansion through the added tasks of documenting the number of syringes and pairs of gloves used each day in service to each patient. They felt it also in their interactions with the medical attendants who controlled the processing of receipts and "Exempt" stamps and, by extension, critical laboratory tests, medications, and vitally necessary equipment for patient care.

One might argue that all health care providers in a government system are "street-level" bureaucrats,[6] but these newly empowered medical attendants were, additionally, embodiments of the growing biobureaucracy. In a classic study of the relationship between location in an organization and access to power, David Mechanic argues that "within organizations one makes others dependent upon him by controlling access to information, persons, and instrumentalities. . . . Power is a function not only of the extent to which a person controls information, persons, and instrumentalities, but also of the importance of the various attributes he controls."[7] Despite having the least access to formal power within the hospital's organizational structure, the medical attendants became quite powerful with the expanded bureaucratic procedures involved in producing more accountability and improved cash flow. The computerized system simplified certain interactions, perhaps increasing transparency and subsequently reducing allegations of bribery or corruption on some wards. However, the system's unintended consequences included opening new spaces of inefficiency and new opportunities for delay, miscommunication, and social maneuvering by the gatekeepers.

With the increased demand for services in the hospital came this concomitant growth of the bureaucratic systems employed to track, order, and process the new patient flow through the facility. The implementation of the automated accounting system was another example of the biobureaucratic proliferation that has accompanied the expansion of health care services globally. The biobureaucracy was now operating at the level of the individual hospital via the new systems the administrators implemented, while at the same time embedding the hospital

and its systems within the broader health care sector, subject to much higher-level biobureaucracy that outside powers—including the Ministry of Health but also foreign nongovernmental organizations (NGOs) and the World Health Organization—imposed on the hospital. The spaces for providing truly intersubjective care were being compressed from all sides. Accountability for supplies, money, and procedures operated facing both internally and externally.

DELAYS IN CARE AND SOCIAL TENSION

With the new accounting system implemented in 2014, the process for getting all the necessary equipment eventually became much more convoluted, especially for those women on the maternity ward who needed Cesarean sections. The nurses could not start preparing a woman for surgery, even if they were certain she would require a C-section, until the doctor had officially written up prescription forms for all of the specific, individual supplies. This resulted in multiple pieces of paper, which the nurses had to take to the cash collection window and then to the pharmacy window.

One night, when I was on the ward conducting interviews, it became clear one of the women was going to need an emergency C-section. Because only three nurses were on the ward and all were occupied, they sent me to the pharmacy with the doctor's prescription forms to collect the IV fluids, sutures, and pre-op antibiotics needed to prep her for surgery. "*Hodi, hodi dada!*" (Knock knock, sister), I called out in Swahili to alert the dozing medical attendant, Hilda, to my presence as I stood behind the metal grate at the pharmacy counter. She roused herself and slowly ambled over, shaking the sleep from her body as she did so. "Ah, so maternity needs something. How is it there tonight? Let me see the forms," she said before I could answer her inquiry about the state of the ward. "Ah, this one I don't have here, not in this size. Let me see." She peered at the form and turned to go into the back room.

"Please hurry, it's an emergency C-section. We need to prep her as soon as possible. The doctor is already here and waiting," I added to her back for good measure, though it seemed it would not make much difference in her pace.

"You need to go to the cash window and get the receipt, I can't give you these things without the receipt," Hilda called as she disappeared. I rushed over to the cash collection window, where I started again with another medical attendant, explaining that I needed an exemption receipt for the supplies for the maternity ward so that I could go back to the pharmacy and pick up everything. Once this was done, after some slow, pecking typing, I verified the exemption stamp in bright blue ink on the proffered receipt and walked the fifty feet back to the pharmacy window.

Without hurry, Hilda returned to the counter first with the antibiotics, then with the sutures, and eventually with an armful of IV fluids, adding to the pile she had started while I was at the cash window. She muttered to herself about how

she would account for the difference in sizes because she was out of the half-liter bottles and could only give me the liter bottles, though this was not what the doctor had prescribed on the form. I jiggled my leg impatiently as she pulled out a pair of ill-fitting reading glasses, opened the dirty log notebook with its furled edges and began to slowly flip to today's page. I worked to suppress a sigh as she began to fill in each supply on its own line. Finally, she asked for my signature as the person who had received the dispensed supplies. With this task done, I rushed back to the ward.

At times even the most basic supplies were out of stock, particularly IV fluids or catheters, and the nurse would return to the ward empty-handed. At this point the surgery could not proceed, and nurses or the doctor would direct the woman's relatives to quickly go outside the hospital gates in search of the needed supplies. This resulted in further delays as relatives sought out money, then an open pharmacy store, and then the correct items. Sometimes the instructions the nurses had given the family were not explicit enough and the relative came back with the wrong size or strength of a medicine or catheter, which then the hospital staff could not use.

Nurse Halima, an RN, expressed to me the difficulties of the work environment at Mawingu. She was a young nurse who had been working at the hospital for less than a year at the time of our interview, and she had spent the first several months of her employment working on the private ward, Grade I. Often smiling, she was light-skinned and plump, one of the only Muslim nurses on the ward. Well educated and from a family of many other nurses and doctors in Dar es Salaam, she had an air of cosmopolitanism and quick-wittedness about her. Her short time at the hospital had already been sufficient for her to perceive the lower economic means of Rukwa's population, as compared to other regions, as well as the monetary constraints at play in the hospital:

> The supplies really are bothersome for the success of the work. [It] can be that you have studied how to do this procedure, but you can't do it, and because why? Because of the shortage of those supplies that you need to do work. And if you use more than is necessary, that is, more than has been put in the budget, it means you will do what? You ruin the entire system. . . . You find someone comes, she needs to be cared for, you fail to care for her like is necessary. And many people from here [Rukwa] they don't have any [economic] means. To say, maybe, go, buy something, bring it for your patient, maybe, for example, you say Ringers Lactate [one of the two most commonly used intravenous fluids on the maternity ward], right now there isn't any, if you tell [the relatives] to go find Ringers, they will be distraught, they don't have any money, and the baby there will continue to get tired. So this environment is difficult. But at the end of the day the [relatives] can't criticize that there are no supplies, they will blame you, like, "You, nurse, what have you done?" Or that you have caused something. But to look if the environment in which you work is difficult—they can't look.

When something was out of stock and relatives had to purchase it at a private pharmacy, it was often the nurses who took the blame. More than once, while I was present, the hospital patron held meetings with the maternity ward nurses to address patients' allegations of corruption or extortion.

There is indeed a history in Tanzania, dating especially to the late 1980s, of underpaid and overworked health care providers accepting or demanding bribes from patients and their relatives,[8] but the majority of the time I was at the hospital the supplies were, indeed, out of stock when nurses said they were; this was not simply a ploy for money. Still, more than once, patients or their relatives offered me bribes, trying to slip me a few bills in their palm as they shook my hand. As they tried to hand me this money, a woman's relatives would explain that they wanted to make sure I looked after her and helped her. Other times, as I was assisting during a delivery, I watched as a new mother tried to give one of the nurses money as thanks for her care. In most cases, the nurses refused the money, telling the mother to put it back in her handbag. Occasionally, if the mother continued to insist, the nurse would take the proffered bills. The nurse usually acquiesced after an impressive show of resisting the offer, telling the mother that it was simply her job, as the nurse, to help and that she was not allowed to take payment. After this display, the nurse would sometimes give in to the woman's continued insistence and accept the small amount of money. Surely, at times my presence might have engendered this show, but in other cases the performance might have proceeded even without me in the room. Nurses were simply not all the same in how they interpreted formalized nursing ethics and their own moral boundaries, differentially shaped as these were by years of experience, personality, religious beliefs, better or worse working conditions, and other influences.

Once I watched this happen when a woman handed money to the nurse in charge at the time, Kinaya. Citing the Nursing Code of Ethics, Kinaya explained to me that nurses were not supposed to take money of any sort but that it was allowable if they reported the money to the shift's nurse supervisor and used it for collective or ward purposes. In that instance, she sent one of the cleaners to buy a crate of sodas and some cookies for all the ward personnel to share. Despite her proclamation about not accepting bribes, Kinaya accepted the money and none of the nurses complained; even something as simple as a free soda during a long shift was a welcome bonus.

I was nearly always uncomfortable when I saw a woman reaching for money or saw money inside her bag of belongings, because I always wondered what the nurses would do. I can only know what I witnessed, and my presence most likely either removed these exchanges to other locations or reduced them, so I would not see and note that these nurses had done something unethical by their professional standards. But I did think it was not a far stretch of the imagination to picture a nurse, alone on the night shift, accepting, after a long delivery, some few bills that might pay for a ride home after her twelve-hour shift. Surely, low salaries, much-delayed promotions, and reduced extraduty pay would have led many nurses to see bribes or money of thanks not as something it would be unethical to accept but as their due and fair share for the hard work they had put in. Likewise, Kinaya, while still the ward nurse in charge, had told me that sometimes vials of oxytocin or

other small supplies went missing. She told me that she thought she knew who the culprit was and that this nurse had been stealing from the ward's stock to resell the medications in her own private pharmacy to supplement her government salary.

One day on the maternity ward I was casually discussing the issue of possible misunderstandings and perceived corruption with Nurses Peninah and Rukia. As I sat in one of the rickety wooden chairs and Rukia leaned her elbows on the desk, Peninah, in her usual bold, frank manner proclaimed, arms akimbo, "You know, me, I think it's really the fault of the hospital—from the beginning there, if in the past they were training [patients] that 'you, if you go to the big hospital, it's necessary that there are these and these and these and these necessary items or you will have to pay,' they would prepare early, but right now it has come suddenly that things have run out and they got used to if you go to the hospital everything is free, and now they have been told, 'Go buy this.' She will see you, you are telling her to buy it and that you are eating [the money]!" Rukia murmured her agreement, and another bystander muttered, "Ehh" by way of confirmation. Even I was somewhat convinced by Peninah's certainty, despite knowing that the responsibility for the situation extended far beyond the hospital walls. Peninah was suggesting that broad government campaigns advertising free services for pregnant women did not convey to women that the only care that was free was that available in the hospital; if supplies were out of stock in the hospital, necessarily, the hospital could not provide them and the patient had to procure them elsewhere. However, because of the government's unnuanced messages, many people thought they would never need to pay for anything at the health facility if they were pregnant. When suddenly nurses or physicians started asking them to buy supplies outside, patients and their families easily suspected corruption.

The saying "to eat money" (*kula hela*) is a common expression connoting corruption or bribery. These misunderstandings between the nurses and the women they cared for were often a source of annoyance but also consternation because the accusations went against the formal ethical codes that most of the nurses ascribed to and sought to practice daily. But in the setting of hospital scarcity, the nurse's proverbial "hunger" leading to the need to "eat money" might be derived from low wages, limited or no promotions, and her difficult work environment that lacked the supplies she needed to care for patients. To lessen these hunger pains, she might slip a few vials of medicine into her pockets or some pairs of surgical gloves into her purse, seeing these actions not as corruption but as her due, a way to compensate herself when her employer could not sufficiently do so.

Most of the nurses were offended by the suggestion that they might be corrupt and were particularly incensed anytime they heard the long-popular rumors about health care workers withholding blood from desperate patients or their families in exchange for exorbitant payments. The blood bank often had only a limited supply and therefore encouraged family members to donate a unit of blood as a replacement unit for the one their patient was receiving. However, the lab employees did

not always communicate this clearly or the relatives did not always understand and, instead, heard that they were being charged for blood or that the lab personnel were withholding the desperately needed unit until someone donated. In the Prologue, I described the care and ultimate fate of one woman who died from a lack of blood. Sometimes the urgently needed units were unavailable in the blood bank, or, if they were, family members saw no need to donate. This could mean that for a woman like Paulina, whose life was threatened by an absolutely unforeseen surgical complication during a scheduled, nonemergent C-section, death was the result.

Figure 7 shows a poster that was up in the maternity ward when I returned in 2016, reading, "Blood isn't sold, it's always free"— a direct response to these misunderstandings and previous blood-selling practices.

Additionally, blood has long been associated with various rumors of extractive and/or occult practices.[9] Blood is a powerful ritual substance but also representative of social ties via kinship, sexual relations, and reproduction.[10] This deep history may not enter immediately into the minds of a younger generation of men and women currently in their childbearing years, but it most certainly colors the overall landscape. Against this background, blood has significant meaning, and hospital personnel could quite conceivably be using it for nefarious ends, in addition to the straightforwardly corrupt act of charging money for units of blood needed for a patient's transfusion. Anxieties related to blood extend far beyond any misunderstandings of hospital procedures because of this fluid's broader meaning in this and surrounding areas of East and Central Africa.

In the same conversation about supplies and perceived corruption, I suggested to Nurse Peninah that I thought the government had started making services free for pregnant women because they had seen that a lot of women in poorer areas were not giving birth in health facilities. In response Peninah told me,

> Indeed, it was that that started this, I've seen, but instead its second effect, those people [government officials/policy makers], they didn't see it. They are coming to discover it right now. Now it [the money] has finished. How will you tell that person that doesn't have any means there in the village, "Hey, there is no equipment for service"? Will she understand you? She doesn't understand you! Again, us, we that deal with patients, we're seen to be bad [people]! Better that person who sits at administration, they don't see him, but us, we who tell her to go buy, she tells you you're delaying her because she was looking for supplies.

She went on to give an example of how these delays might affect the care of a woman who had come to give birth: "Just say that she's in her first pregnancy. Yeah, if she'd had contractions she would have already ruptured [her uterus]. But the blame will come back to the nurse who stays with the patient; you're told first you delayed treatment, second why didn't you inform someone? But you're waiting for important supplies." It is very uncommon for a woman in her first pregnancy to

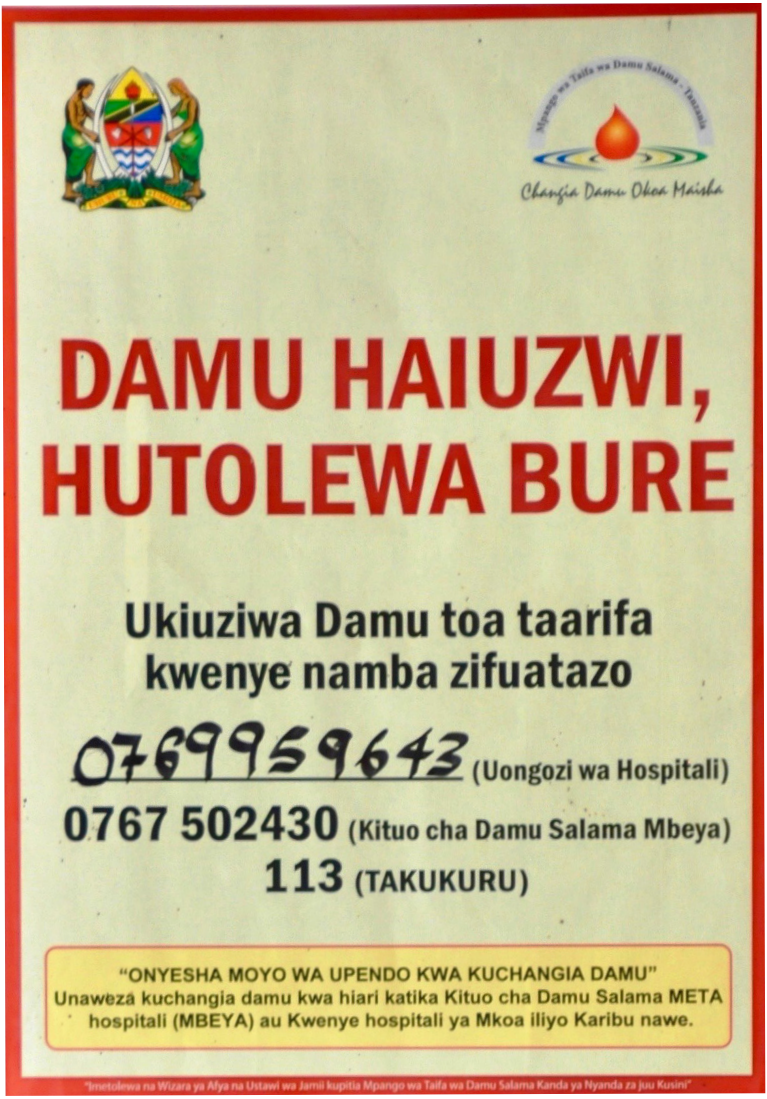

FIGURE 7. Sign reading, "Blood isn't sold, it's always free" in red and below it, "If you are sold blood, report it at the following numbers." The numbers listed include the "hospital leadership," the "Safe Blood Center" in Mbeya Town, the zonal headquarters, and the number of the Bureau for the Prevention and Combating of Corruption. Photo by author, 2016.

have a ruptured uterus, and Peninah used this as an extreme example of delay—a woman in her first pregnancy must be experiencing severely obstructed labor and a long delay in initiating a C-section if she reaches the point of uterine rupture. In

her example, the woman's uterus did *not* rupture only because she was not having contractions. Nurses were visible and therefore within reach when women, their relatives, or hospital administrators sought to attribute responsibility for a woman's death, poor care, or other unexpected outcomes of her stay at the hospital. In actuality, they had little control over the availability of supplies, depending instead on lengthy and bureaucratic ordering procedures.

This particular conversation with Rukia and Peninah occurred in February 2015 but was only one of many times when nurses complained about the lack of supplies, as well as the way patients blamed them for causing this shortage. Helle Max Martin's work on health care services in Uganda suggests that accusations against nurses rooted in a lack of supplies are not a phenomenon limited to Tanzania; while nurses or doctors see referring patients to outside pharmacies as a necessary by-product of more systemic shortages, patients might read this same act as "corruption, greed or indifference."[11] Women's and their relatives' expectations that care would be free and available at the hospital was often an ideal constructed against the background of their experiences with stock-outs in their village dispensaries. They assumed that the regional hospital, the top level of care in the area, would be able to provide the needed care and equipment lacking in their communities. This expectation was often why they had incurred the expense of the transportation to, and stay in, town near the hospital if they had traveled from outside the urban district.

WORKING IN SCARCITY

Several of the nurses on the ward said that Dr. Joseph, the medical officer in charge, had been working hard to improve the availability of supplies and that they appreciated these efforts. However, the efforts did not always make supplies materialize, and nearly half the nurses reported they did not have the supplies they needed to do their jobs. During ward meetings with both the doctors and nurses, we often discussed supplies and equipment, returning over and over again to the needs that never seemed to be met. For example, nearly the entire time I was on the ward, the suction machines the nurses used to suction secretions out of newborns' airways were broken or only occasionally worked. Another time, it took nearly six months to get batteries for the electronic handheld fetal heart monitor on the ward.

After witnessing frequent stock-outs at the end of 2014, and the hospital's growing fixation on documenting supplies used, I asked all the nurses about their experience of their work environment, hoping to understand more about how they viewed the shortage of medications and supplies. Nurse Rachel lamented:

> Now you are told there are no medicines. We arrive at work, you will find me, I'm on the maternity ward there in the labor room, you find that the mother you're helping

> there, even to start a drip [IV], there's nothing. You find the labor ward has dextrose, D5%, now there you encounter a mother there who has eclampsia, PPH [postpartum hemorrhage]. How do you help her?[12] Truthfully, this environment is very difficult. . . . Many times you find we encounter the women here, they have problems. There are no supplies. It's necessary for them to buy a thing but they don't have any money. This, it becomes a problem. The mother, you just look at her. I stay there with her, all right, it is only God that helps a person to give birth or not, the baby has come out, it hasn't cried. Really, honestly, the environment is hard. I don't like it.

Almost universally the nurses and doctors felt the lack of essential supplies and equipment was the number one impediment to providing better care. They also repeatedly suggested that improving this situation would be the best intervention the hospital administration could make to motivate the providers working at the hospital. While the nurses were concerned with having the tools they needed to provide the technical aspects of care, Rachel's description also highlights her sympathy for the woman who could not afford to send a relative running to a private pharmacy to buy supplies. Aside from staying with the mother, Rachel was unable to provide other forms of care to the woman in her charge.

SUPPLIES AS THE FOUNDATION OF COMMUNITY TRUST

Faced with the nurse's demand that they purchase supplies in a private pharmacy, many community members concocted explanations that went beyond stock-outs because they did not understand how the government supply chain operated and therefore did not know that a large government facility might *actually* be out of critical supplies. The fact was that supplies were so short at Mawingu, in early 2015 as to drive the regional medical officer to comment one day during the morning clinical meeting, "*Jamani,* friends, the hospital will soon be nothing more than a guesthouse! We will be full of beds but no other services. We must improve in cash collection, otherwise we are finished!" Despite the reality, the belief that such a large facility, or any facility backed by the central government, could never *truly* be out of supplies was pervasive in communities outside Sumbawanga Urban District. Village leaders and community members repeatedly told me they did not believe that the government health facilities really did not have medicines available while private pharmacies continued to have them in stock—the private purveyor of drugs was so small, and the government was so big [powerful], how was it, then, that the small person could get supplies the government could not? A focus group participant in the village of Ngorotwa in Kalambo District told me exasperatedly, "They tell you 'Go, buy those drugs' and honestly, if you follow up in all the dispensaries, you find that these drugs don't go [there]. Now, the government, I don't know. If you go to the private pharmacies you find there the strong

drugs. . . . Now why is it that the government fails to bring these for us here so we can be treated here? . . . They themselves [the government] see that we have become fruit to be harvested in the drug shops, rather than bringing us [the drugs] at the dispensary."

A second participant chimed in with "Even amoxicillin, it's just one container! Now, for this entire village, you find there's just one container. . . . The doctors, they have their own drugstore, yes, that's the business that we see, that." The insinuation that doctors or nurses were selling government-provided drugs for private gain was a pervasive concern. In this particular community, there was palpable distrust of the government's services and its local representatives—the health care providers at the health center.[13]

As the conversation in Ngorotwa continued, several of the participants agreed that their health center, and most dispensaries, were nothing more than buildings if they did not have these medications and other supplies readily available. In communities, in contrast to the regional hospital, I did not witness firsthand any examples of corruption. But this was surely related to my conspicuous presence as a foreign visitor to whom the health care workers were not accustomed. In discussions, many men and women in communities provided examples of times they had been seeking care and were charged for an item or service that should have been free. For many years, the health care sector, together with the police, was said to be one of the most corrupt sectors in the country; I heard this as part of a more general public discourse on corruption. Anticorruption efforts have been ongoing in Tanzania, but reducing corruption continues to be a challenge for the government.[14]

This exchange in Ngorotwa demonstrates how, through repeatedly failing to have supplies, health facilities worked to undermine the legitimacy of the state itself. Here, then, was a failure of the state's care for its citizens via one of its institutions with which people interacted the most, and always in times of need and states of vulnerability—sickness, pregnancy, injury. When the state failed to meet these fundamental needs, people were forced to resort to extremes and great personal expense, including selling their land, in order to make up for the state's lack of care.

Clearly, the unavailability of medicines and supplies was prevalent at all levels of health care services in Rukwa. However, patients and their family members continued to expect the regional hospital to have medications and everything else necessary for their care. The lack of drugs aggravated the relationships between patients and health care providers. Availability of supplies may be one of the most crucial elements for establishing the high quality of services available and for reinforcing the legitimacy of the hospital and of the state itself.

SUPPLIES AND DEATH

Women coming to the hospital from the community as patients trusted that once they reached Mawingu they would receive the high-quality care this tertiary facility seemed to promise. These promises became more tenuous as the supply chain

and financial resources buckled under the strain of increased patient loads and bureaucratic delays. In the course of providing care for pregnant women, even how far a provider had to go in the room, the ward, or the hospital to obtain supplies could mean the difference between death and survival. Sometimes the supplies were readily accessible, but the nurses or doctors did not appropriately use them or lost valuable time while trying to make decisions on the course of care. In other instances, the hospital simply lacked the needed equipment to save a woman's life. These cases were fewer and further between because complications necessitating the specialized and unavailable equipment were much less common. As with other aspects of the health care system in Tanzania, the partial and incomplete nature of supplies and equipment was most visible when a catastrophe occurred. Easily forgotten at other times, these system weaknesses were always present in the background. The death of Kinakia exemplifies not only the importance of material supplies but also the underlying precarity of pregnancy that led some women to tell me, "When you are in labor, the grave is open."

Kinakia was just twenty-six years old and in her third pregnancy when she arrived at Mawingu on the evening of March 3, 2014. Providers at her local dispensary had referred her to the regional hospital after she had spent many hours in labor and garnered the vague diagnosis "poor progress of labor." Her records from the dispensary were incomplete, but she had no known history of problems during this pregnancy or her previous two. It took one hour after her admission for a maternity ward doctor to review her. Once Dr. Deo arrived, he agreed with the initial findings of the doctor in the outpatient department who had reviewed Kinakia upon her arrival from the village. Her cervix was about eight centimeters dilated, and both clinicians felt the baby was in a nonideal position, a face presentation. Kinakia's blood pressure was slightly elevated, leading Dr. Deo to suggest preeclampsia. When Dr. Deo took her history, Kinakia told him she had been coughing up blood and bleeding from her nose for the past day and that this had been accompanied by difficulty in breathing. The baby's vital signs appeared relatively stable at that time, but it was clear Kinakia needed an emergency C-section. Because of her history of difficulty breathing, Dr. Deo wrote in his pre-op orders that they should have suction equipment in the theater and that he suspected she was suffering from "severe aspiration pneumonia."

The surgical notes in her file give no start time for the surgery, but in the subsequent maternal death audit meeting the participants wrote that Kinakia had died approximately three hours after she had arrived at the hospital, so it is reasonable to guess Dr. Deo commenced operating at about 8:30 p.m. His notes on the surgery take up just over half a page, a stark chronicle of the last hour of Kinakia's life. Her preoperative diagnosis states, "obstructed labor secondary to face presentation" and, on the following line "?? Eclampsia." She had spinal anesthesia, as opposed to the more usual general anesthesia, so she would have been awake during the surgery. After reporting that she had given birth to a male baby weighing 3.5 kg, Dr. Deo's notes continue: "Soon after the delivery of the baby, the mother stopped breathing.

Resuscitation was done with no success. A lot of whitish mixed with blood secretions were coming out from the nose and mouth. Vitals: Nil. No cardiac activity. Pupils dilated, fixed. No sound of lungs. [Diagnosis]: Death. Possible cause of death: Pulmonary/Respiratory failure secondary to severe aspiration pneumonia."

In the morning meeting the day after her death, the physicians and nurses debated the actions taken and not taken in the theater the previous night. One asked why they had not tried to insert an endotracheal tube, to intubate. Another suggested Kinakia had not received enough IV fluids and that this lack, when combined with the spinal anesthesia, might have caused her to become hypotensive, resulting in the secretions that had suffocated her. Dr. Deo asserted that they had been unable to intubate because the one person who knew how to do it, Nurse Salome, had not been on duty on the night shift. And even if they had been able to get Salome to the hospital, they did not have any muscle relaxants available, which they said would have been necessary to help with the procedure.

Four months later, in the maternal death audit meeting to discuss cases from the preceding six months, we talked about Kinakia's death. Nurse Salome was, this time, present to discuss what had occurred and what might have been done that night to save Kinakia. Salome said, "Even up to now, we still don't have the equipment for ventilating patients there in the theater! There is a new machine, but it is still missing those other pieces to make it work!" Four months after this death, so clearly connected to an inability to intubate and resuscitate Kinakia, the hospital had not ensured the availability of some of the lifesaving tools that should have been in the operating room. The ventilation machine, too new and complicated to use without training from an outside expert, continued to sit in the corner. It also subsequently came out that the new machine was missing the needed oxygen concentrator and therefore could not function even if someone were to receive training on its use. Salome continued, "And we are talking about training people on intubating, but I can't teach anyone if there isn't any equipment to intubate in the first place!"

The ethically responsible decision on the part of the hospital and its administrators would have been to immediately find a way to acquire the missing equipment and conduct on-the-job training. But Dr. Charles and Dr. Deo could perform routine C-sections without any of these more specialized drugs, machines, or equipment. Therefore, the hospital staff members and administrators were able to continue to overlook the absence of these supplies as their everyday environment necessitated they prioritize spending money and effort in ways that would affect many more patients. This environment facilitated and demanded that the hospital prioritize spending on basic necessities instead of specialized, rarely used tools and techniques. Kinakia's death had momentarily brought these supplies back into the spotlight, but the immediacy of her death soon faded. Four months later, in the meeting hall, the administrators wrote in their action plans that the hospital needed to acquire the right parts for the oxygen concentrator and conduct on-the-job training related to the use of the machine and intubation techniques. Even

in subsequent death audit meetings, we never heard a report on what the responsible parties had accomplished, so I never learned how long it took for the hospital to obtain the missing equipment. Luckily, no other pregnant women needed it, at least not in 2014.

"TELL THEM WE'RE LIKE MALNOURISHED CHILDREN"

One afternoon, I was on the maternity ward to conduct pile sorts and to try to convince the nurses to schedule formal interviews with me later in the month. I had only two months left at Mawingu and was eager to hear from as many nurses as possible. As we were chatting, the nurses told me I should do more surveys so I could show the hospital administration the results and they might be convinced to change things at the hospital to be more supportive of the nurses. Nurse Lucy interjected, "Tell them we're like malnourished children! We eat *ugali* and beans to build our bodies because we're used to it, but it's not healthy!" Lucy drew on the common staple foods of even the poorest Tanzanians to demonstrate that one could survive in a workplace lacking supplies and support but that it wasn't the sort of environment that would enable the nurses to do their best work.

Overall, the environment of health facilities in the Rukwa region and, undoubtedly, Tanzania more generally, strained health care providers in a number of ways, leading to low morale and motivation. They were often under severe financial, physical, and emotional stress as they continued striving to provide high-quality care that complied with hospital and Ministry of Health guidelines for pregnant women. Many of the nurses and some of the doctors told me they found it hard to build "good" lives for themselves, in which they were able to meet the needs of their families, such as school fees and other daily necessities, because of a lack of money and few opportunities for advancement and recognition in the workplace.

The bottom line, as the RMO and Dr. Joseph, the medical officer in charge, pointed out, was that money was always a problem. Poor cash flow and slow disbursal of funds from the central government meant the hospital was unable to further invest in infrastructure, training, or hiring of staff members. Individuals working within this system were not necessarily uninterested in or incapable of providing high-quality care—very often a confluence of structural factors delayed, deterred, or demotivated, thereby affecting how women and their babies experienced the hospital and how the nurses, doctors, and administrators understood what it meant to be a government health care provider in the Rukwa region. The ways in which the central government's bureaucratic procedures intersected with, and caused, scarcity at the regional hospital, combined with biobureaucratic expansion, took providers' attention away from caring for women in ways that complied with guidelines. When supplies were scarce and the reality of care could not meet the ideal, standard operating procedures version of care, bureaucratic

documentation helped to hide the improvisation in which the hospital staff members engaged. For instance, official documentation about umbilical cord cutting elided the absence of scissors or surgical blades, as well as the danger to health care workers presented by using a needle to painstakingly cut through the cord. All that appeared on paper was that the cord had been cut.

Sometimes the delay in care or in receiving a medication or procedure resulted in the woman's death; other times she died as a direct result of a lack of a specific piece of equipment, such as an adult-sized Ambu bag for resuscitation, or the lack of a way to remove the fluids from her lungs which she aspirated once on the operating table. Providers' previous experiences of the bureaucracy, the shortages, and the system that forcefully resisted any change came to shape their work in a way that suggested that the environment itself precluded many forms of care, such as some of those required by "high-quality" care guidelines and codified standard operating procedures.