# Perspectives on birth and technology:

## *Observations from Kawempe National Referral Hospital in Kampala, Uganda*

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A six-week global health rotation in Kampala, Uganda, offered a profound look into the realities of maternal health care in a resource-limited, high-volume urban maternity center. Kawempe National Referral Hospital, located in the heart of the capital city of Kampala, is one of the busiest maternity centers in sub-Saharan Africa. The hospital welcomes just under 100 babies into the world daily, with its birth census soaring as high as 1,800 a month, and it bustles with constant movement. The rotation at Kawempe provided a unique opportunity to compare the traditional labor and delivery care in Uganda with that commonly seen in the United States, highlighting the significant influence of culture on the structure of the birthing experience.

At Kawempe, midwives are a beacon of maternal health care, overseeing antenatal care, managing vaginal deliveries, and ensuring smooth postpartum recovery. Throughout most of Uganda, midwives are considered primary birth attendants, reflecting the central role that midwives play in maternity care.[1] In contrast in the U.S., according to data published by the American Midwifery Certification Board in 2021, midwives attend approximately 10.3 percent of births, and obstetricians primarily dominate the field.[2] The greater incorporation of midwives into the maternal health care team is key to Kawempe's ability to manage its extremely high patient volume, ensuring efficient care despite resource constraints.

Further variance in clinical approaches to labor and childbirth are reflected in the pain-management practices at Kawempe. Labor analgesia—often in the form of an epidural—is common in U.S. delivery rooms, with over 61 percent of women receiving either an epidural or spinal anesthesia during labor.[3] Elective epidurals were observed to be rarer at Kawempe. While globally the use of epidural analgesia during labor has increased, significant disparities remain. Estimates suggest that at least 66 percent of women in high-income countries, like the U.S., used epidural analgesia for labor pain versus only 1.3–12 percent in the lower income setting.[4] The gap in analgesia usage is presumably due to differences in provider availability, infrastructure, training, and cultural perceptions of childbirth.[4] Though laboring women at Kawempe demonstrated objective signs of discomfort, as made clear by their vocalizations, rates of breathing or sweating, and occasional prayers, they did not appear to be routinely offered elective epidurals. This divergence between Uganda and the U.S. in epidural usage underscores how the complex interplay of clinical resources, cultural norms, and health care infrastructure shapes labor-pain management more than patient need alone.

Discussions between U.S. medical students and Kawempe medical providers about the spectrum of pain-management approaches during birth help to illuminate how cultural context and cultural expectations shape the birthing space and experience. While U.S. medical students interpreted labor through the lens of fear, an emotion commonly reinforced by U.S. media, colleagues at Kawempe instead visualized it as a natural phenomenon. However, that observed cultural difference does not diminish the resilience and strength of Ugandan mothers

Illustration by Eleeza Palmer

in forgoing epidurals. It is essential not to discount the experience of pain or overestimate the tolerance to pain based on an individual's access to analgesia. Rather, the emphasis should be on how inseparable cultural influences and societal constructions are from the labor and birthing experience.

Another observed cultural difference in medical philosophy relates to the prevalence of episiotomies performed at Kawempe. In the U.S., episiotomies seemed to fall out of favor after the American College of Obstetricians and Gynecologists recommended against their routine usage in the mid-2000s, as demonstrated by the drop in the prevalence of the procedure from 17.3 percent to 11.6 percent between 2006 and 2012.[5] However, in the wards at Kawempe, the procedure appeared to be more common as an assistive technique. Observation revealed episiotomies were performed to expedite deliveries and reduce the risk of hemorrhage in higher-risk pregnancies due to the resource-limited environment and potentially decreased cesarean access. While postpartum hemorrhage (PPH) is a significant consideration as a leading cause of maternal mortality in low-resource settings, further research is needed to fully understand the impact of episiotomies on maternal outcomes, including on PPH.[6] The continued use of the episiotomy at Kawempe could reflect a pragmatic approach to providing obstetric care to a high volume of patients with minimal resources.

In Kampala, antenatal care appeared to be deeply rooted in traditional practices. The Pinard horn—a simple, wooden instrument favored by midwives and doulas to detect fetal heartbeats—continues to be a staple in traditional maternity care. Access to ultrasounds is less common in sub-Saharan Africa than in high-income countries due to financial and infrastructural constraints.[7] Upon first glance, the Pinard horn may seem rudimentary. However, its proper use requires significant skill and precision to locate and assess fetal heart sounds accurately. The heavy reliance on such medical technology as the ultrasound in the U.S. makes fetal monitoring simple by comparison. While providers at Kawempe do have access to an ultrasound, they must share it with other providers, and they have a much higher patient volume than is standard in the U.S. Sole reliance on the ultrasound would significantly delay access to fetal-heart tracing for their patients. Therefore, the Pinard horn increases the quality of prenatal care by increasing the availability and frequency of fetal monitoring. Continued utilization of the Pinard horn demonstrates the creativity of Ugandan midwives in adapting to the resource-limited environment.

Those navigating the maternal-fetal health landscape in Uganda confront many other financial and

infrastructural barriers. Patients are sometimes required to pay-as-they-go, covering the costs of each laboratory test and supplying their own medical tools before receiving care. A Swedish medical resident visiting Kampala, Clara Brandkvist, recounts the expectation of Ugandan women to bring "mama-kits," filled with bedding, food, and sterile supplies, to the delivery ward.[8] While upfront payment reduces the risk of surprise medical debt for patients, it can delay the quality of care for those with financial limitations.[9] That phenomenon was commonly observed at Kawempe, where many women struggled to afford routine prenatal services. Such financial challenges not only impede timely care, but also increase the risk of delayed or undiagnosed conditions, potentially compromising both maternal and fetal outcomes.

Beyond the provision of care, Kawempe also differs dramatically in keeping medical records. In the U.S., electronic medical records (EMRs) are often the foundation of clinical care. EMRs facilitate communication between providers, efficiently document past medical history, and coordinate diagnostics, medication, and treatment. However, in Uganda, paper is far more prevalent than screens. In many parts of sub-Saharan Africa, including Uganda, paper-based health records are necessary due to the limited technological infrastructure, inadequate funding, and lack of training complicating the adoption of EMRs.[10] At Kawempe, patients are responsible for bringing their medical notebooks to each visit; otherwise, their physicians must make a treatment plan from an incomplete clinical picture. Patients are additionally responsible for storing these records: their medical notebooks, written by hand, must be well-maintained, or vital information will easily be lost. Though this system increases patient autonomy and security against data leakage, it can jeopardize the continuity and quality of care when the notebook is damaged or forgotten.

While these observations at the Kawempe National Referral Hospital cannot be overgeneralized to stand in for the provision of health care throughout Uganda, they do offer students and physicians insight into health care practices outside the U.S. The global health rotation in Kampala, Uganda, inspired greater appreciation of the deep influence that culture, resource access, and health care systems have on patient care. The experience of maternal-fetal health care at Kawempe reveals a variance in practices and perspectives from that in the U.S., while highlighting the vital roles of midwives and obstetricians common to each. This experience likewise underscores the efficiency, skill, and adaptability of providers in resource-limited environments. More broadly, it underscores the impact that culture can have on health care systems and the importance of more well-rounded understandings of global health. Physicians need to remember that there is no single "right way" to practice medicine. There are simply different approaches to caring for the individualized needs of the patient, needs shaped by circumstances, conditions, and cultural traditions.

**References**

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