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STRUCTURAL BARRIERS TO INFERTILITY DIAGNOSIS IN LOW-RESOURCE SETTINGS: A CASE FROM CAPE COAST, GHANA

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Background

- Infertility affects approximately 1 in 6 couples worldwide, yet access to diagnostic and therapeutic services is profoundly unequal.
- In low-resource settings, limited surgical capacity—particularly for diagnostic laparoscopy—prevents identification of treatable pelvic pathology, leaving many cases labeled as "unexplained infertility."
- Specialized services are concentrated in the capital, Accra. As of May 2025, digital listings identify roughly 98 fertility clinics across Ghana, but most are privately operated, newly established, and lack comprehensive surgical capability. The Greater Accra Region hosts about 21 of these facilities, while the Central Region—home to Cape Coast Teaching Hospital (CCTH)—has none offering diagnostic or operative laparoscopy.

Cape Coast	New Jersey
National health insurance excludes infertility services; thus there is high out of pocket cost from self pay	Family Building Act mandates that large-group insurance plans (>50 employees) covering pregnancy benefits must also include medically necessary infertility services
Sporadic access in Accra/major cities only or through visiting surgical teams	High density of REI specialists
Absence of local laparoscopic services in Cape Coast	Access to GYNs offering routine laparoscopic surgery

- Mandated coverage includes medications, surgery, intrauterine insemination (IUI), and in vitro fertilization (IVF).
- This framework enables early referral, subspecialty evaluation, and surgical treatment for most patients within a covered system. The comparison highlights how insurance policy and infrastructure determine access to fertility care.

Case Presentation

A 33-year-old woman (G0) presented to CCTH with a 10-year history of primary infertility. She reported regular menses (menarche at 14), no dysmenorrhea or dyspareunia, and regular intercourse approximately three times per week. Her partner, age 36, had a normal semen analysis. Transvaginal ultrasound demonstrated a normal uterus and adnexa, and hormonal evaluation (FSH, LH, prolactin, TSH, testosterone) was normal. Pelvic examination revealed a 10-week-sized mobile uterus without nodularity or tenderness.

With normal imaging and laboratory findings, the case was classified as "unexplained infertility." However, CCTH does not offer diagnostic laparoscopy—no gynecologists in the region currently perform laparoscopic evaluation or treatment for infertility. Under ordinary circumstances, the patient would have had to travel to Accra, a four-hour journey each way, incurring substantial transportation, lodging, and time-off-work costs, to access the nearest facility capable of performing such a procedure. These logistical and financial barriers make advanced diagnostic care effectively inaccessible for most patients in Cape Coast.

During a recent global health surgical mission, our team provided temporary laparoscopic capability at CCTH. The patient underwent diagnostic and operative laparoscopy, which revealed dense pelvic adhesions likely secondary to pelvic inflammatory disease (PID) and a dilated, abnormal-appearing left fallopian tube. Adhesiolysis was performed, and left salpingectomy was performed to optimize future fertility potential. The right adnexa appeared normal. Without the mission's presence, these findings would have remained undetected, and her infertility would have continued to be labeled "unexplained."

Discussion

- Underscores how structural limitations contribute to continued infertility in low-resource settings.
- Absence of local laparoscopic services in Cape Coast prevents diagnosis of surgically correctable pathology. Geographic and financial barriers compound the problem, forcing patients to travel long distances to Accra at considerable personal cost.
- In contrast, in New Jersey, mandated insurance coverage and high density of reproductive endocrinology and infertility specialists ensure baseline access to both diagnostic laparoscopy and assisted reproductive technologies.
- Although Ghana's growing number of fertility clinics reflects increasing public demand, their distribution remains highly urban and concentrated, and most lack operative or advanced diagnostic capacity.
- National health insurance currently excludes infertility services, leaving patients reliant on out-of-pocket payment or sporadic access through visiting surgical teams.

Conclusions

- Exemplifies how geography, infrastructure, and policy collectively determine access to infertility care.
- In Cape Coast, the absence of local laparoscopy delayed diagnosis of treatable pelvic disease for a decade; if not for the visiting global health team, surgical evaluation would have required costly travel to Accra.
- This structural gap highlights infertility as both a medical and social justice issue.
- Sustainable solutions must move beyond periodic missions toward investment in local surgical training, integration of laparoscopy into regional gynecologic practice, and policy frameworks that recognize infertility as a core component of reproductive health.