

Natalie Clark

Dipa Joshi

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University of Ghana Medical School Elective Rotation: The Experience, Setbacks and Suggestions

Introduction

For greater than twenty years, the University of Michigan (U-M) has collaborated with the University of Ghana Medical School (UGMS) in obstetrics and gynecology training. This joint effort has demonstrated U-M's dedication as the leaders and the best in medical education both locally and abroad. It has also led to numerous educational exchanges between U-M and UGMS medical post-graduates, as well as between medical students. This report summarizes the travel and educational experiences of its two authors, along with that of two other fourth-year U-M medical students. During period 6 (September 27, 2010 - October 24, 2010), the four students underwent an international elective rotation in obstetrics and gynecology at Korle-Bu Teaching Hospital (KBTH) in Accra, affiliated with UGMS. In this report, we offer a description of and commentary on our experience, as well as suggestions for improving this already strong aspect of the U-M curriculum.

Initiating the Elective: The Experience, Setbacks, and Suggestions

As a medical student, the process of applying for an away rotation can be a daunting task, regardless of the planned destination. Students are faced with scheduling decisions late in their third year, when they are busy with required clerkships and may not be aware of or have time to research international opportunities. That said, the international elective in obstetrics and gynecology at UGMS is long established, and is well known by administrators involved in curriculum planning. A brief meeting with Dr. Tim Johnson, Chair, U-M Department of Obstetrics and Gynecology, placed us on the right path. Through him and his administrative assistant, Jennifer Jones, we were placed in contact with Kofi Gyan, the U-M contact at UGMS. Dr. Gyan arranged our acceptance to UGMS as visiting students, and detailed the logistics of travel, including applying for a visa. Concurrently, we contacted Cindy Murphy, Scheduling

Coordinator, Office of Student Programs. She facilitated the administrative paperwork required from U-M Medical School (UMMS) to be eligible for the elective rotation.

This entire process started in early April, and the intricacies of applying for the elective, and gaining approval from both UMMS and UGMS, concluded in early August. In mid-August, Ms. Jones arranged for us to meet Professor Obed, Chair, Department of Obstetrics and Gynecology at KBTH, and Professor Opare-Addo, Chair, Department of Obstetrics and Gynecology at Komfo Anokye Teaching Hospital (KATH) in Kumasi. Fortunately, the two physicians were visiting Ann Arbor, MI for two weeks, giving us the chance to speak candidly with them. This wonderful opportunity allowed the four students to learn the basic structure of the elective rotation, a broad description of women's health care in Accra and Kumasi, and general information and tips on traveling within Ghana. Having the chance to talk with two of the heads of departments in a candid and casual manner allowed us to become more comfortable with traveling to Ghana and was an invaluable experience in planning our trip.

Given that Dr. Johnson was the impetus behind establishing a partnership with UGMS, meeting first with him was integral to planning our elective. He described the elective for us, placed us in contact with Dr. Gyan, and gave us departmental approval for the trip. We were able to contact Dr. Gyan via email, however, the limitations of internet service in Ghana meant that communicating with him was often delayed by weeks at a time. Thus, as detailed above, the process of initiating the elective took approximately 4 months. To facilitate future students' travel to Ghana, this communication can be accelerated by knowing ahead of time what information and forms Dr. Gyan needs in order to start the process of admission to UGMS.

Concurrently, Ms. Murphy requires some of the paperwork provided by Dr. Gyan, and thus knowing what documents she requires will save crucial time for students in arranging international electives before the proposed deadlines.

After returning from our trip, we understood that the delay we experienced could be avoided simply by easily providing students information on the requirements of application.

Thus, we established a PowerPoint presentation detailing the logistics of applying, traveling to, and experiencing the rotation to the fullest once there. This was presented on October 25, 2010, to first- through third-year medical students interested in pursuing travel to Ghana through the U-M. The discussion was sponsored by the U-M Department of Obstetrics and Gynecology, lasted one hour, and generated engaging questions from the audience. The slides are now available to

all students through the Global REACH office. We hope that this resource will fill in for the unique experience of meeting with Profs. Obed and Opare-Addo, as most traveling students will not have the unique opportunity we had to meet them prior to the rotation.

Arriving at the Elective: The Experience, Setbacks, and Suggestions

Arranging visas and travel to Accra was a relatively straightforward process. The Ghana Consulate in New York, NY required only two weeks to review our visa applications and return our passports. Purchasing airline tickets was also straightforward using online booking, and cost approximately \$1,300 USD, \$1,000 of which can be reimbursed through Global REACH. The four of us who traveled to Ghana during period 6 arrived in twos, one day apart. All four travelers were informed that they would be met by a hired driver at the Kotoka International Airport, and subsequently transported directly to KBTH. Upon arriving at the airport, the first set of travelers could not locate their driver, and thus hired a taxi to travel to KBTH. The two authors were indeed picked up by the driver, taken to a foreign exchange bureau to exchange U.S. dollars (USD) to Ghanaian cedis, and also taken to the market to purchase food and supplies. However, the driver was unclear as to where the International Student Hostel (ISH) was within KBTH and dropped us instead at the local medical student hostel. This was easily corrected using local taxi. The entire trip had a set cost of \$60 USD, whereas a simple taxi from the airport to KBTH cost the other two travelers 20 cedis (approximately \$14 USD). We were not informed of the cost of this driver service, and given the exchange rate, there is a significant difference in the cost of a hired driver and a taxi. Although pick-up by private driver is less stressful, we would recommend that future students hire a taxi with the knowledge that transport to the ISH should not cost more than 20 cedis.

Similarly, the cost of lodging at the ISH, as well as of registration for the elective through UGMS, should be detailed to students prior to departure. Only one student was informed of these costs by Dr. Gyan and thus was the only participant who had adequate cash in USD to pay the ISH warden and UGMS registrar as required. In our October 25 presentation, we detailed all of these costs so that students may be informed when creating their budget for the elective. In brief, lodging costs \$105-\$211, tuition \$270, and registration \$225 requiring students to bring upwards of \$700 USD in cash to become situated their first day in Ghana. However, these costs are likely to change in coming years and it is imperative that students

receive paperwork detailing registration and lodging expenses from Dr. Gyan or another UGMS employee before departing for Ghana.

Undergoing the Elective: The Experience, Setbacks, and Suggestions

On our first day, the four students were each assigned to particular clinical teams. Each clinical team has the same basic structure and responsibilities, but carries out these responsibilities on different days. We learned about how Ghanaian medical education differs from that in the United States. In Ghana, students start medical school directly after high school and embark on a six-year curriculum that encompasses courses in the basic sciences, public health, and core-clerkship experiences. After graduating, students become physicians and complete two house officer years in which they rotate through specialties and manage patients on the wards. After a two-year position as a house officer, physicians then apply to residency in the field of their choice. This system is seen in many British Commonwealth countries, including India, and contrasts with the American system in which students typically complete four years of undergraduate studies, followed by four years of medical school, after which they are directed to their specific field of choice once they become resident physicians.

Initially, a fourth-year medical student from the U.S. may have difficulty defining their role on the clinical team at KBTH. Typically, American fourth-year medical students have completed sub-internships where they function as “acting interns” and manage their own patients under the guidance of a senior resident. Additionally, they are likely to be applying to residency programs, thus giving them the educational equivalent of being somewhere between a sixth-year Ghanaian medical student and a second-year house officer. This can occasionally create an awkward situation for the student trying to define their expected roles and where they fit on the Ghanaian medical team. Given that medical education is structured differently in Ghana, American medical students do not carry their own ward patients, and perhaps appropriately so. The patient population in Ghana is much different from that in Ann Arbor, and demands extensive knowledge of Ghanaian-specific disease processes and management, as well as larger systems issues affecting the provision of health care. Much of this education is drawn from observing on rounds, where we learned, for example, how to manage pregnant patients with sickle cell crisis, as well as patients with post-partum hemorrhage. We also learned how physicians must personally ensure that a patient is delivered blood from the blood bank, or how

patients may remain in the hospital for days before being able to afford the lab test that necessitates their stay. This remarkably rich learning environment offered us much food for thought and discussion as well as a comprehensive review of general obstetrics and gynecology.

Independent and Official Evaluation: The Experience, Setbacks, Suggestions

Despite spending less than a full month at KBTH we learned a wealth of knowledge, particularly about differing systems of medical care. We may have more fully taken advantage of the educational experiences offered at KBTH if we developed attainable clerkship-specific goals prior to arriving. Goals in another form, as intended learning outcomes (ILOs), are already an integral part of the UMMS curriculum, and can be applied to this elective rotation. Here, we offer some suggestions for ILOs that future students may use to guide and enrich their experience.

Intended Learning Outcomes

1. **Knowledge.** To:
 - a. Understand physiology and management of normal pregnancy.
 - b. Understand pathology and management of common obstetric and gynecologic disease processes affecting Ghanaian women.
 - c. Understand issues in health care provision at a systems level in Ghana.

2. **Skills.** To:
 - a. Gain hands-on experience managing laboring patients, including normal vaginal deliveries.
 - b. Observe and participate in breech and twin deliveries.
 - c. Gain hands-on experience with assisting in cesarean sections.
 - d. Learn to the best of ones' ability common words in the common languages (such as Twi) spoken by patients in and around Accra. This is to further develop communication skills.

3. **Attitudes.** To:
 - a. Reflect on your roles and responsibilities as a medical student and future

physician in learning about diverse populations and medical systems, and addressing global disparities in access to care.

These suggested ILOs can be accompanied by a more rotation-specific list of suggested competencies. Suggestions for this simple checklist include:

- Learn the intricacies of prenatal care and attend prenatal clinics for KBTH patients
- Learn how to manage the following diseases prenatally, intrapartum, and postpartum: sickle cell disease, malaria, HIV/AIDS, anemia
- Learn how to diagnose, classify, and manage postpartum hemorrhage
- Successfully perform Leopold's maneuver
- Successfully locate fetal heart tones using a fetoscope
- Observe and participate in normal vaginal delivery
- Observe breech vaginal delivery (participate if possible)
- Observe twin vaginal delivery (participate if possible)
- Observe and assist in cesarean sections
- Learn how to diagnose and manage ectopic pregnancy
- Learn how to diagnose and manage pelvic inflammatory disease
- Learn how to diagnose and manage vesicovaginal fistula
- Observe (and assist if possible) in total abdominal hysterectomy
- Observe (and assist if possible) in myomectomy
- Observe (and assist if possible) in ovarian cystectomy
- Observe at least one gynecologic-oncologic surgical case
- Observe at least one urogynecologic surgical case (e.g., vesicovaginal fistula repair)

This list is just a starting point and there are many other opportunities for learning that can be detailed for future students.

Beyond ILOs and required competencies, UMMS students can maximize their learning experience by pairing with local students. Partnering with local Ghanaian medical students or house officers would be a helpful practice, particularly with those students and physicians who plan to exchange at the University of Michigan and therefore have a vested interest in this

exchange. This partnership can serve as a mutually beneficial cultural brokerage. We would recommend that the student contact their assigned partner prior to departure, and that they arrange a meeting on the day of arrival so that visiting American students can have help with learning the layout of the hospital, the structure of the teams, and common educational experiences on the wards. This would not only make the transition to rotating in Ghana much easier, but would also make the American student a more useful and integral part of the Ghanaian medical team. From a cultural standpoint, this pairing would provide a point person for each partner, a person who can suggest events to attend, places to shop and eat, and other experiences that would culturally enrich students' travel and provide a greater cultural context for medical practice in either Ghana or Michigan.

At the time of writing, all international fourth year medical rotations through the University of Michigan are graded on a pass/fail basis. As noted above, given that medical education is structured differently in Ghana, American medical students do not carry their own ward patients. There is a significant learning curve during the clerkship in Ghana such that students must first adjust to living in Ghana, and learn a new health system. As such, it is particularly appropriate to maintain the pass/fail grading standards. However, we believe that it is crucial that students develop independent ILOs and independently guide their experience and development as a clinician while in Ghana. The formal evaluation sheet that is provided by U-M is an acceptable platform for evaluation. This form is filled out by senior residents at UGMS. We recommend that evaluators also add individual comments on a student's performance and commitment to learning within a new medical system.

Conclusions

The opportunity to travel to Ghana as part of an established elective is a privilege to which few American medical students access. The current elective rotation in obstetrics and gynecology has attracted students each year, who return to U-M with a depth of understanding and experiencing that is intangible in their future careers. We hope that the suggestions offered in the report can further enhance this invaluable experience.

Summary of Suggestions

Initiating and Arriving at the Elective

- Have students interested in the rotation read through the PowerPoint presentation to help understand and facilitate planning the elective rotation.

Undergoing the Elective

- Offer a list of required clinical competencies that can direct students to particular experiences.
- Partnering with a local student.

Independent and Official Evaluation

- Offer students Intended Learning Outcomes (ILOs) to guide their educational experience.
- Pass/fail evaluations with individualized comments and concerns