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# 75 Hours, 18 Babies, Dozens of Women, and Me: Exploring Gynecological and Obstetrical Care in Bamako

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# **75 Hours, 18 Babies, Dozens of Women, and Me**

*Exploring Gynecological and Obstetrical Care in*

**SIT MALI SPRING 2010**

**ACADEMIC DIRECTOR: MODIBO COULIBALY**

**RESEARCH ADVISOR: DR. DJIBO AMADOU**

**PROJECT LOCATION: BAMAKO, MALI**

## **Abstract**

Mali has the third highest total fertility rate in the world, with each woman having an average of 6.62 children in the year 2009. Gynecological and obstetrical care, therefore, plays a large role in the lives of these women; 70% of women attend at least one prenatal consultation over the course of their pregnancy, and a skilled attendant is present at approximately 50% of all births. In this paper, I seek a better understanding of gynecological and obstetrical care in Bamako, the capital, from the perspective of an Ob/Gyn, which often centers on pregnancy and childbirth. Based on real experiences during 75 hours spent shadowing a gynecologist at a private clinic and residents at a public health center, I have created a model evening of consultations at the clinic and a model day in the birthing room at the public health center.

## Acknowledgements

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Oh, and the other students are pretty cool, too. Thanks guys. You rock.

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## **Introduction**

Women in Mali have, on average, more children than women almost anywhere else in the world. With an average of an estimated 6.62 children born per woman in 2009, Mali has the third highest total fertility rate in the world. Given that the life expectancy for women in Mali is 53.4 years<sup>1</sup>, that fertility rate means that the theoretical Malian woman spends 9.54% of her life pregnant. That percentage is obviously quite high, and it means that women spend large portions of their lives in contact with gynecologists and obstetricians. More than two-thirds of Malian women, approximately 70%, attend at least one pre-natal exam during pregnancy, and 35% attend at least four. Additionally, approximately half of all births take place with a skilled attendant such as a doctor, midwife, or nurse, present<sup>2</sup>.

These large percentages mean that gynecologists, obstetricians, and midwives play a considerable role in the lives of many Malian women, even before taking into account visits unrelated to contemporary pregnancies. These visits, too, can play a large role in women's lives, and I originally wanted to focus my research on them - why do Malian women go to the gynecologist? How do they interact with these doctors? How often do they go? In general, how does gynecology in Bamako work?

Beginning with my first interview with an Ob/Gyn (obstetrician/gynecologist), however, I learned that women rarely go to the gynecologist for reasons unrelated to pregnancy. My observations at Clinique Farako, a private clinic in Bamako, confirmed this statement, which is telling- the number of non-pregnancy motivated visits to

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<sup>1</sup> CIA World Factbook: Mali. <<<https://www.cia.gov/library/publications/the-world-factbook/geos/ml.html>>> Accessed May 5, 2010.

<sup>2</sup> UNICEF Mali Statistics. <<[http://www.unicef.org/infobycountry/mali\\_statistics.html](http://www.unicef.org/infobycountry/mali_statistics.html)>> Accessed May 5, 2010.

gynecologists is much higher in private clinics<sup>3</sup>. According to Dr. Bagayoko, "That is often a problem of intellectual level - you have to know things to go to a specialist rather than a generalist. And a higher intellectual level is, of course, often linked to wealth."<sup>4</sup> A Malian woman's ability to visit an Ob/Gyn would also seem to be heavily influenced by her religious beliefs, however.

There are only 5 female gynecologists in all of Mali, and they all practice in Bamako<sup>5</sup>. Women who wear the veil for religious reasons, then, would seem to have limited options; if men outside of their families should not see their hair, would they be allowed to see their genitals? This seeming constraint was my second point of interest in this project - how does gender play into gynecology? Where do veiled women go for consultations? Where do they go to give birth? Do they often go to consultations alone, or do their husbands accompany them?

### **Methodology and Site Descriptions**

Though much of what interested me about gynecology and obstetrics in Bamako could be learned through interviews with gynecologists and patients, I realized that much more would be impossible to learn that way. I wanted to understand doctor-patient interactions, especially where gender is concerned, and I did not feel that I could properly understand interactions in the time frame provided for the independent study project (ISP) without observing the interactions myself. I decided for that reason that I wanted to shadow gynecologists in Bamako. That way, though I would have observe only a few doctors, I would see as wide of a cross section of patients as possible.

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<sup>3</sup> "Introduction to Gynecology in Mali."

<sup>4</sup> *ibid.*

<sup>5</sup> *ibid.*

In order to get an idea of gender interactions, I hoped to observe at least one female gynecologist and at least one male gynecologist, and ask questions as I observed, to learn what they were doing and why. My ISP would thus be a combination of observation and informal interviews.

I started at Clinique Farako, where SIT takes students when they are sick, because I knew that there was a female gynecologist there. Organizing observations with her was surprisingly easy, probably due to SIT's established contact there. She agreed readily, and I began observing there the first Friday of the ISP period, April 16th.

Clinique Farako is a private health clinic in Badialan III. It is more expensive than public health centers, as well as some other private clinics. However, its clients pay for quality. For an 8,000 F CFA fee, patients can have a consultation with Pr. Sy Assitan Sow. In her air-conditioned office there, she has an exam table with stirrups that is covered with a clean drape between each patient, an ultrasound machine, and a fetal heartbeat monitor, along with numerous other conveniences. The room is calm and quiet, and she is friendly and jokes with her patients. Their medical records are kept for future visits, and there is another ultrasound machine downstairs if Pr. Sy's is not working for whatever reason.

As simple as beginning to shadow at Clinique Farako was, however, finding another gynecologist to observe proved harder. Despite Dr. Djibo's contacts at the Centre de Référence (CSRéf) de la Commune VI, meeting the Chef de Médecine was a challenge. We went to his office five times over the course of the second week of the ISP period before we finally were able to meet with him and get his approval that Friday.



With that approval, I was finally able to start observing there Monday, April 26, and I spent most of my time there in the *Salle d'Accouchement*.

The CSRéf de la Commune VI is located in the neighborhood of Sogoniko. It consists of a large compound of buildings. Gynecology and Obstetrics has its own subsection of this compound, a large building behind a low wall. Like other CSRéfs, it helps form the second level of care for the Malian people, handling referrals from the health centers managed on the neighborhood level. The obstetrics department also treats women who refer themselves, however. For approximately 15,000 F CFA for a first delivery, and 10,000 F CFA for a woman who has delivered before, women can come to give birth at the CSRéf. The labor and delivery section of the Ob/Gyn building consists of two large rooms, the *Salle d'Accouchement* and the *Salle de Travail*, separated by two sets of double doors. The doors are painted so that it is hard to see into the *Salle d'Accouchement* from the *Salle de Travail*, while the opposite view is unobstructed. The *Salle de Travail* is filled with beds where women in labor wait for their cervixes dilate and women who have just given birth rest with their new children. The *Salle d'Accouchement* has five birthing units. These units are divided with walls that are about 6 feet tall and are open at the front so that the residents and midwives can observe the women. In each unit are a birthing table and a step stool to help women get up onto it. During each woman's labor, these beds are covered with sheets of black plastic that look like garbage bags. Each unit also has a window to the outside, though they are usually closed, and the lower half is painted to obscure the view from outside. When the women go into active labor, they are provided with a bedpan, and their IVs hang from the window closures. They are assisted in this labor by either a resident or a midwife; the

Ob/Gyns are generally busy doing other things. Perhaps the most impressive part of these two rooms, however, is not the physical appearance, but the smell. In both rooms, the scent of body odor mixes with the smell of blood, vaginal fluids, urine, and feces to create a unique and uniquely disgusting cocktail of smells. Even the residents comment on it, and the midwives often spray air-fresheners to try to overpower it, but the scent of the air fresheners only last about half an hour.

Thus, the two medical centers at which I observed were quite different, and presented me with diverse observation opportunities. The varied economic backgrounds of the women that come to these two also increased the diversity of what I was able to observe. What that diversity did not allow me to do was come to a conclusion about gender roles in doctor-patient interactions.

Though at first I thought that would be possible, as I got to know the residents I was observing, the differences in their patient interactions seemed more attributable to their personalities than to their gender. While I was able to watch enough doctor-patient interactions to determine and to become used to the way many of the residents interacted with patients, there were not enough doctors of each gender for me to be able to draw any conclusions.

I shifted away from that focus, therefore, to center more on how gynecology and obstetrics work in Bamako, exploring the medical portions of the interactions rather than attempting to find the influence of gender. For that reason, I have chosen to present the results of my research into the functioning of gynecological and obstetrical care in Bamako in the form of a model night of consultations at Clinique Farako and a model day of births at the CSRéf de la Commune VI.

## **Clinique Farako**

*Unless otherwise noted, I learned information in this section from Professor Sy Assitan Sow, through questions, observations, or information she volunteered. While the events described are based on real situations, the individual patients are fictional creations meant to model typical consultations.*

### **17:20 - Friday**

A dozen women or more already sit in the outdoor waiting room by the time Professor Sy Assitan Sow arrives to begin her evening consultations, and more are arriving every minute. Some are old, some are young, some are almost nine months pregnant, and others are just beginning to show. Some have been waiting for almost an hour; Clinique Farako does not accept appointments, so women who want to be seen early must arrive well before the consultations begin. Ara Diallo, the nurse, has already called a few women waiting for pre-natal consultations into the side room to weigh them and take their blood pressure.

### **17:25**

They often call her Tantie, and she calls them "Ma Fille." The obvious respect and affection her patients hold for Pr. Sy filters through in almost every aspect of their interactions. They tell her almost everything about their lives - from concerns about their husband's actions to health issues that are worrying them, to concerns about other women they know are also patients.

The first patient, Mme Amina Traoré, a woman here for a prenatal consultation, is no different. She enters the room before the doctor has even had a chance to take a seat.

Ara has already the woman's *carnet de santé* on the Pr. Sy's desk, however, and the appointment begins immediately.

"Bon soir, Tantie!"

"Bon soir, ma fille. Ça va? Tout va bien?"

"Oui, oui, Tantie. Mais mon ventre me fait souvent mal."

"Ah, d'accord."

In a few moments, Pr. Sy will write a prescription to help ease Mme Traoré's stomach, but for now she begins by verifying that her weight and blood pressure are within normal limits - high blood pressure (hypertension) during pregnancy can be a symptom of and a warning sign for larger conditions, such as preeclampsia. Mme Traoré has perfectly normal blood pressure, however, so Dr. Sy calculates the gestational age (GA) of the pregnancy. This age is calculated in the number of weeks since the first day of the woman's last menstruation; it is important knowledge, because the GA is what doctors use as a reference for normal growth of the fetus.

After calculating the GA for this pregnancy, 26 weeks, Pr. Sy directs her patient to the exam table, where she lays down. She starts at her patient's head, where she checks the conjunctive blood vessels (the veins inside the lower eyelid) to ensure that Mme Traoré is not anemic. Her conjunctives are pale, however, and when questioned she admits that she has not been taking the iron pills Pr. Sy prescribed for her at their last visit. This earns her a scolding.

"Eh! Et pourquoi pas? Ma fille, tu dois prendre les comprimés. C'est pour le bébé, aussi."

As her patient agrees, Pr. Sy moves on to measure the fundal height. This measurement, taken in cm from the pelvic bone to the top of the uterus, is used to measure the growth of the fetus. In general, fundal height is considered a relatively accurate predictor of fetal growth after a GA of 16 weeks, though the accuracy declines again as the pregnancy reaches term. Between 16 and 32 weeks, the fundal height should be between the GA minus four and the GA plus one. After 32 weeks, fetal growth slows and fundal height becomes a less accurate predictor of growth<sup>6</sup>. Mme Traoré's fundal height of 24 cm is well within the normal range of 22 cm - 27 cm (see Appendix I for fundal height curve).

After measuring the fundal height, Pr. Sy begins listen for sounds of a fetal heartbeat using a fetal heartbeat monitor. If this monitor did not work, she would use an ultrasound machine. The ultrasound machine provides a visualization of the heartbeat, and can penetrate deeper into tissue than the fetal heart beat monitor. This monitor magnifies the sound of the heartbeat to make it audible. Both provide a count of BPM (beats per minute). Fetal heart rate is faster than that of adults, but should range between 120 and 160 BPM. The 140 BPM shown by Pr. Sy's fetal heartbeat monitor is thus normal, and so she moves on.

The next step is to examine the cervix. At 27 weeks, Mme Traoré's cervix is still long, posterior, and closed by a mucus plug, as it should be. Many women's cervixes begin to shorten as their pregnancies reach the point at which Mme Traoré finds herself, which puts them at a risk for premature labor or preterm premature rupture of membranes

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<sup>6</sup> Dr. Aly-Abbara, Ob/Gyn. Paris, France. "Hauteur uterine." <<[http://www.aly-abbara.com/echographie/biometrie/hauteur\\_uterine.html](http://www.aly-abbara.com/echographie/biometrie/hauteur_uterine.html)>>. Accessed May 3, 2010.

(PPROM), both of which pose potential problems for mother and child alike. Premature labor could mean that the newborn's organs are not yet developed enough to support life outside the womb, and PPRM increases a risk of infection that could harm the mother and the child. As she moves away from Mme Traoré's lower half, Pr. Sy also examines her feet, looking for signs of edema, a type of swelling created by liquid collecting in parts of the body. Edema can, along with hypertension, be a symptom of preeclampsia and other complications. Mme Traoré's feet are not at all swollen, however, so Pr. Sy tells her she can get down off of the table, and both women take their places back at the desk.

Once there, Pr. Sy verifies that Mme Traoré has not lost her iron supplements, encourages her again to take them, and writes a prescription for Spasfon, an anti-spasmodic medication that helps relieve stomach pain in pregnant women. That done, she tells Mme Traoré the date for which she should schedule her next appointment, one month from now, and sends her on her way.

### **19:03**

A woman comes in, concerned because she has not been able to get pregnant and she has already been married for over a year. Her husband has two children already, she reveals, so she does not believe that he is the reason they have not been able to conceive. Pr. Sy asks when the woman's last menstruation was, notes it down, and then prescribes Clomid, a fertility drug. Clomid is a brand name version of a product called clomifene (or clomiphene). It stops the negative feedback of estrogens in the third week of the woman's hormone cycle. This negative feedback decreases the amount of luteinizing hormone (LH) and follicle-stimulating hormone (FSH) produced, which causes the corpus luteum, the follicle which has released an egg, to degenerate. It also prevents other follicles from

ovulating (See Appendix II for a regular hormonal cycle chart). By preventing this feedback, Clomid increases chances of a successful ovulation in women having trouble ovulating, and thus increases chances of a pregnancy<sup>7</sup>. Pr. Sy instructs the woman to start taking the pills on the third day of her next menstruation, and continue taking them two times a day until she has finished all 10 pills in the box.

### **19:10**

The next consultation is Mme Afissatou Camara, who pregnant for the fifth time, is coming in for her third ultrasound. She is 32 weeks and 5 days pregnant. Generally, women have 3 ultrasounds over the course of their pregnancy: one at the very beginning to confirm the pregnancy, ensure that the embryo is growing within the uterus, and determine the number of fetuses present; one between 22 and 24 weeks GA, to monitor fetal growth, look for morphological deformities in the fetus, check for fetal movement, determine the sex, and examine the placenta and amniotic liquid; and one between 32 and 34 weeks GA. This final ultrasound does serves many of the same functions as the second, but also helps determine that the fetus has shifted into the correct position for delivery and that the placenta is correctly positioned to not cause problems during labor or delivery<sup>8</sup>. Pr. Sy first determined that the fetus is well positioned for delivery, with the head in the downward direction, towards Mme Camara's pelvis. She then uses the diameter of the fetus's skull and the length of its femur to determine the age according to the ultrasound machine, which has been programmed to calculate age as a function of

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<sup>7</sup> Hardman, J.G., L.E. Limbard, P.B. Molinoff, R. W. Ruddon, A. G. Goodman (eds.) Goodman and Gillman's The Pharmacological Basis of Therapeutics. 9th ed. New York, NY: McGraw-Hill, 1996, p. 1425.

<sup>8</sup> Dr. Abbara, Aly. Ob/Gyn. Paris, France. "L'Échographie obstetricale." <<[http://www.aly-abbara.com/livre\\_gyn\\_obs/termes/echographie\\_obstetricale.html](http://www.aly-abbara.com/livre_gyn_obs/termes/echographie_obstetricale.html)>>. Accessed May 4, 2010.

fetus size. For Mme Camara, the ultrasound determines a GA of 32.54 weeks, which, correlating almost exactly to the GA as calculated based on her last menstruation, is good news. When Pr. Sy discovers that the doctor who had done the second ultrasound did not tell Mme Camara the sex of her fetus, she shows her that her fetus is male, and then points out its head, eyes, and heartbeat (see Appendix III for sample ultrasound images). Mme Camara giggles happily, "Il est bien formé, n'est-ce pas?"

## **20:40**

After several more consultations, a young woman comes in. Maya Fofana tells Pr. Sy that for the past few months, she has had intense itching in her genital area. Pr. Sy asks Maya if there is pain when she urinates, and the answer comes back, "Oui, parfois."

Pr. Sy sends her to the exam table, where she lays down. The first observation confirms what Pr. Sy had suspected; Maya has a yeast infection. A white residue covers the crease at the top of Maya's thighs, and also coats the inside of her labia. Inserting a speculum reveals abnormal amounts of white discharge, a slightly different color and consistency than normal vaginal fluids. Yeast infections are caused by overgrowth of the fungus *Candida albicans*. *C. albicans* is always present in the vagina in small quantities, but various factors, such as stress, illness, poor diet, or use of certain medications can increase the risk that they will multiply to an abnormal extent. Maya's symptom of itchiness is the most common manifestation of a yeast infection, but pain during urination, pain during sex, soreness, or a thick white discharge that looks like cottage cheese are also symptoms. Yeast infections don't cause long-term damage, but are usually quite uncomfortable for the women who have them. They are treated with creams or tablets, or with suppositories placed into the vagina. They can also be treated with a



single dose of an antifungal pill, fluconazole<sup>9</sup>. Pr. Sy prescribes an ovule suppository to treat the infection and a cream to relieve the itching, and Maya leaves.

### **21:30**

Several patients later, a Mme Djeneba Diarra comes in with her three-month-old daughter. Though she had menstruated in the month after she gave birth, she has not had her period since. She had come to see Pr. Sy the week before, and an ultrasound had revealed that her uterus was enlarged, suggesting a pregnancy. However, to confirm the pregnancy, Pr. Sy sent her to get a blood test, and she has returned with the results. These results confirm Pr. Sy's suspicion; Mme Diarra is pregnant. The results of the blood test show that her hCG (human chorionic gonadotropin) levels have reached 3,130 mIU/ml. Any presence of this hormone would suggest a pregnancy, but an elevated level such as the Mme Diarra's corresponds exactly with the 5 weeks since her last menstruation; at this point in pregnancy, her hCG levels should be between 18 and 7,340 mIU/ml<sup>10</sup>. Mme Diarra seems a little excited to be pregnant again, but also nervous for her daughter. After a light scolding from Pr. Sy for not using contraceptives, she goes home to tell her husband the news.

### **22:10**

With five patients left, Pr. Sy is almost done. The next patient is a young woman, newly married, whose menstrual cycle has been irregular for the past few months, varying between very long cycles and very short cycles. After doing a two-hand pelvic exam, in which she touches the uterus from within the vagina and above the abdomen to

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<sup>9</sup> "Vaginal Yeast Infections." *U.S. Department of Health and Human Services, Office on Women's Health*. Updated September 9, 2008.

<sup>10</sup> "Human Chorionic Gonadotropin (hCG): The Pregnancy Hormone." *The American Pregnancy Association* <<<http://www.americanpregnancy.org/duringpregnancy/hcglevels.html>>>. Accessed May 5, 2010.

verify there was no unusual pain that could be a symptom of a larger problem, Pr. Sy prescribes the woman Pilplan, a birth control pill easily available in pharmacies. She explains that the woman's ovulation cycle has probably gotten out of sync somehow, and that the pill should help bring her back to a normal cycle. Pr. Sy tells the woman that the menstrual cycle that begins just after she finishes the pills should be normal, and that if it is not, she should come back.

### **23:40**

Finally finished for the night, Pr. Sy returns home. After she finished her own consultations, she went downstairs to consult on a problem with which a mid-wife in the birthing room had asked for help. She has been working for over six hours straight, after a day working at the university. Tomorrow morning she will get up early go to a different clinic to do more consultations there.

### **Centre de Référence de la Commune VI**

*Unless otherwise noted, I learned the information in this section from the doctors, residents, or midwives at the CSRéf de la Commune VI. Like the patients in the section on Clinique Farako, these women and their babies are imagined examples showing real conditions and problems.*

### **8:30 - Monday**

Mme Aissata Karabinta has been newly admitted to the *Salle de Travail*. She started having contractions early this morning, and came to the Centre de Référence when they became stronger and closer together. Like all newly admitted patients, she is first led to the *Salle d'Accouchement*, where a resident does a preliminary exam. Once she arrives

in that room, she removes the many layers of clothing she is wearing, including her head covering. Like many women, she will leave most of this clothing off until after she delivers, simply wrapping herself in a *pagne* until she is ready to leave. She does not seem bothered by the fact that this resident is a male, and neither do any of the other women who come in to deliver, despite their varying levels of religious coverings.

He begins by taking her blood pressure, which is normal, before having her lie down on the birthing table. Once she is lying down, he measures her fundal height (see Appendix I). At 35 cm, it is also perfectly normal. While he is working, he is also asking her questions about her gestational history, through which he discovers that this is her first pregnancy, and that she has no history of hypertension or diabetes. He then uses a horn-shaped fetal stethoscope to listen to the fetal heartbeat. In doing this, he also verifies the position of the fetus by pushing on Mme Karabinta's abdomen. The fetus is well positioned, with its head pointing down into Mme Karabinta's pelvis and its back to her left side. Once he has found the fetus' back, he pushes the fetal stethoscope against the portion of it lower in Mme Karabinta's abdomen, and continues pressure with his ear, letting go of it with his hand once he has found the fetal heartbeat. He counts the number of beats per minute, using his cell phone as a timer, to verify that they are within a healthy range. At 145 BPM, they are, so he moves on to the vaginal exam. During this exam, he determines how dilated her cervix is and whether her amniotic sac is still intact, and verifies again that the fetus' head is pointing down. Mme Karabinta is dilated to 3 cm, so she still has a few hours to go before the active stage of her labor begins.

The resident then writes her a prescription for the things her family needs to buy at the pharmacy, and sends her to lie down in the *Salle de Travail*. His list includes a

syringe, an IV, a glucose serum, and a pair of sterile gloves; there is currently a shortage of gloves at the Centre de Référence, and so unless the patient provides sterile gloves the employees have to use some of the small number non-sterile gloves the administration provides. Many employees, whether midwives, doctors, or residents, bring their own gloves with them to avoid having to rely on the administration's supply, which is often insufficient.

### **9:00**

Mme Inna Dembélé came to the CSRéf in the middle of the night last night, and recently dilated to 10 cm, the dilation necessary to begin active labor. She does not have diabetes, has normal blood pressure, has had two previous normal deliveries, and the fetus is positioned with its head down, so there are few risk factors for this birth. She already has an IV of glucose solution, which a resident injected with oxytocin to help speed the labor about 30 minutes ago, when she moved into the *Salle d'Accouchement*, at which point she was dilated to 7 centimeters. A midwife comes over to assist with the delivery, and another goes to Mme Dembélé's family to get the bucket of *pagnes* she brought with her.

As the baby's head appears, the midwife uses the *pagne* Mme Dembélé wore into the room to push together the perineum (the skin between the vagina and the anus), to keep it from tearing. A tear would increase the risk for infection, the pain of delivery, the length of recovery, and the likelihood that another tear would occur in a later delivery, so this pushing together is a relatively crucial action. With her other hand, the midwife helps stretch the other parts of the vagina around the baby's head, to allow it to pass through more easily. All this time, she is also telling Mme Dembélé to push, and yelling at her to

keep her legs bent and her knees pointed toward her head, slapping at them and clucking disapprovingly when Mme Dembélé tries to let them drop. She seems eager to make this phase happen as quickly as possible.

### **9:05**

After a few moments of pushing, the baby's head has exited its mother completely. At this point, the hardest part for the mother is over. The midwife rotates the baby's head 45°, lining it up with its shoulders. That done, she pulls down and out, freeing one shoulder, and then up, freeing the other. As the shoulders come free, a burst of amniotic fluid releases, barely missing the midwife. Once the shoulders are out, the rest of the newborn exits easily, and the midwife places Mme Dembélé's new son on her chest. She seems more glad the labor is over than amazed at the new life that has just come into the world, but she still holds tight to her son.

At this point, the second phase of labor, active delivery, is over. With Mme Dembélé holding her new child, the midwife uses a suction bulb to clear his nose and mouth, and he begins to cry, weakly at first, and then more loudly. Once she is satisfied with the infant's breathing, the midwife clamps the umbilical cord, and then ties it with a piece of string closer to the baby. It is important to wait for the infant to breathe on his own because the umbilical cord is his source of oxygen until it is cut, and so he needs to be able to provide his own before it is removed. She cuts in between these two clamps, and hands the baby to another midwife, who receives it, wraps it in one of the *pagnes* that the mother brought with her, and carries it to the scale to be measured and weighed.

That same midwife then comes back and, after wiping the woman's thigh with an alcohol soaked cotton ball, injects her with oxytocin to prevent post-natal hemorrhaging.

The first midwife then delivers the placenta after verifying that it is not still attached to the uterine wall by pushing on the uterus and watching whether the umbilical cord pulls back into the vagina. If this were the case, the delivery of the placenta would be a very involved process for the midwife. When she sees that the umbilical cord doesn't pull back in, however, she begins to pull it out, and pushes on the uterus until the placenta begins to exit the vagina. At that point, she pulls gently on the placenta and turns it to ensure that all of it comes out. If pieces of the placenta are left in the uterus, it prevents the uterus from contracting all the way, which increases the risk of hemorrhage. However, the midwife delivering for Mme Dembélé is experienced and well trained, and she succeeds in evacuating the whole placenta. After ensuring it has really all been evacuated, she proceeds to massage the uterus to make it contract.

Meanwhile, a resident has begun helping another woman give birth in the next birthing area over, and as Mme Dembélé's groans of labor diminish, another woman's replace them.

### **9:25**

The midwife who weighed Mme Dembélé's baby returns to make her a diaper-like wrapping, to keep her from bleeding on the clean *pagne* she will wrap around herself before walking back to the *Salle de Travail*. She walks with Mme Dembélé to a bed there, then brings her her child and lays it next to her. Mme Dembélé will rest for a few hours and then, assisted by her family members, return home.

### **9:30**

While Mme Dembélé is resting, a resident takes an incoming patient's blood pressure and discovers that she has significantly elevated blood pressure, 170/110. Her feet showed edema, as well. The resident orders a blood test to determine if there is protein in her urine, to determine if her hypertension is due to preeclampsia. This test is crucial because preeclampsia is not the only reason a woman might be hypertensive while pregnant. There are four types of hypertension during pregnancy, not all of which are cause for concern. If the woman has always been hypertensive, even before pregnancy, a continuation of that typical blood pressure is not a concern. However, even women who normally have high blood pressure can suffer from preeclampsia, so it is important to know their normal blood pressure. Finally, for some women, blood pressure simply increases during pregnancy. While this can cause problems as well, it is not nearly as big of a problem as preeclampsia, so it is important to distinguish between the two. Testing urine for protein is a typical way to test for preeclampsia, because preeclampsia damages the small blood vessels in the kidneys, causing protein to appear in urine. Any result of 2+ or higher generally means that the hypertension is caused by preeclampsia.

This woman's result is a 2+, meaning that she is experiencing preeclampsia. The residents tell a doctor, who tells them to continue the treatment they have already begun - take the woman's blood pressure every 5 minutes to ensure that it is getting lower, and for each five minute span that it does not, giving her an injection of medication that should lower blood pressure. After 40 minutes, her blood pressure finally descends back to 135/80, which is considered within the normal range. While she will still be under surveillance until she delivers, the woman will be left alone for a while.

Preeclampsia is dangerous partially because of its own manifestations (high blood pressure, kidney damage, etc) but also because of the larger condition for which it is a warning sign. Eclampsia, extremely rare in the United States, is a much more common problem in Mali. It is quite dangerous, and can lead to seizures and comas for the mother, and severe distress for the fetus. Though individual symptoms can be treated, the ultimate solution is to deliver the fetus. This is often accomplished through an emergency cesarean section. In order to be able to accomplish a cesarean section, anti-hypertensive medications and anti-convulsion medications must be administered. Once the woman is in a stable state, if she is not already in a labor that is too advanced, she will be taken to have an emergency cesarean. In the absence of a placenta, most eclamptic symptoms resolve themselves, though any permanent damage will remain.

#### **11:55**

Activity seems to come in waves in the *Salle d'Accouchement*, and today is no different. After a flurry of births this morning, there have been a few hours of calm. However, Mme Karabinta, who arrived this morning in her first labor, has dilated to 8 cm, and has moved to a birthing table from the *Salle de Travail* next door. A resident hangs her glucose solution and connects it to the IV that had been put in her hand early when her relatives brought the bag of prescriptions back, then tells her to lay down.

#### **12:15**

Mme Karabinta has fully dilated, and a resident arrives to help her deliver. Her delivery will go almost exactly the same way as Mme Dembélé's did, except that instead of holding the perineum together, the resident will make an incision diagonally down from the vaginal opening, to widen it and allow the baby's head to exit more easily. This



operation is called an episiotomy, and it will be sewed up after Mme Karabinta has been completely delivered. The theory behind this operation is that when a woman gives birth for the first time, her vagina is not elastic enough to allow the baby's head to pass through without tearing. However, if an incision is made prior to this tear, it will be a clean cut, easier to repair and less likely to re-tear. This clean cut will result in less scar tissue, which will leave the vagina more elastic for future births.

### **1:15**

Mme Karabinta, after having had her incision sutured and having rested for a while, walks to the *Salle de Travail*, as Mme Dembélé also had. Women who have had episiotomies are allowed to rest longer on the birthing table, but still not nearly as long as women in the United States have before having to walk.

### **17:00**

The cycle of waiting and births continues all day, and even long into the night. The long pauses are punctuated occasionally by births or by crises such as the woman with hypertension. Sometimes the staff of the Centre de Référence can handle these crises, as they did earlier, and sometimes they send the women by ambulance to CHUs, such as Point G or Gabriel Touré. This cycle continues 24 hours a day, seven days a week, as the team of doctors, residents, and midwives also cycles through. There is always another woman in labor, always another baby waiting to be born, and so the staff of the Centre de Référence will always have something to do.

### **Concluding Thoughts**

My observations at Clinique Farako and at the CSRéf de la Commune VI confirmed my original belief that gynecology and obstetrical care play a crucial role in

the lives of many Malian women. Though Dr. Bagayoko was correct in warning me that the vast majority of visits to gynecologists center around pregnancy, he didn't mention that many of these visits, at least at Clinique Farako, would also center around women wanting to become pregnant and having trouble, women who want to stop becoming pregnant, and women who have just given birth. Thus, while pregnancy was a constant central theme, there were many variations on that theme, and every night there were at least a few visits that had nothing to do with pregnancy. However, whatever the nature of the visit, Pr. Sy treated all the women with respect and patience, and handled them as gently as possible.

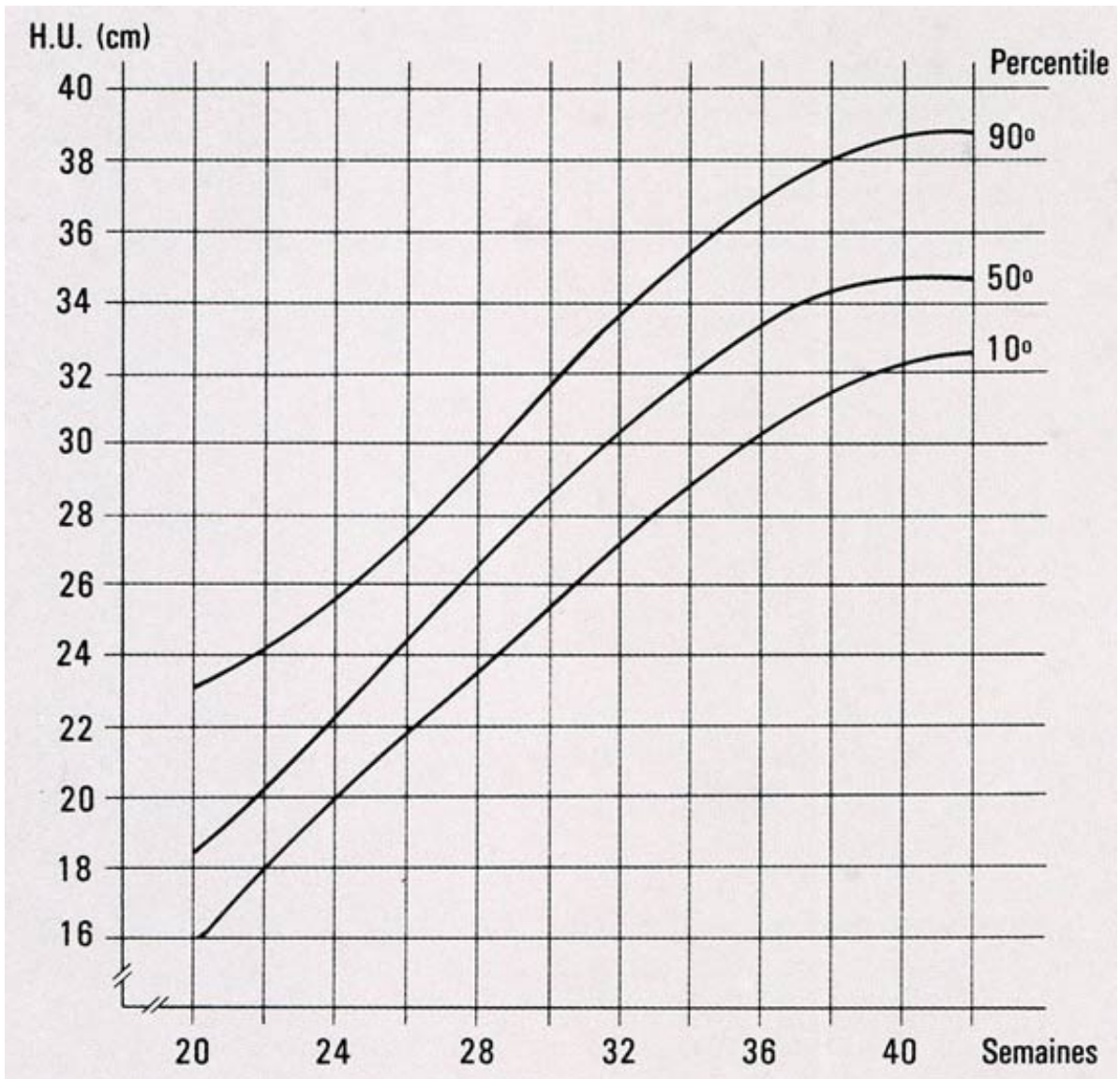
At the CSRéf, in the *Salle d'Accouchement*, everything was always about pregnancy, but the large numbers of women, as well as the nature of childbirth, meant that there was almost always something new or unexpected going on. This constant stream of activity, as well as the long hours, also meant, however, that the employees there were continuously stressed. Perhaps for that reason, they were usually not nearly as patient or understanding as Pr. Sy. They often seemed to want each birth to go as quickly as possible, and would become frustrated with women they thought were complaining too much or not trying hard enough. These frustrations were possibly augmented by the frequent lack of equipment; due to the shortage of gloves, it was often a struggle to be able to treat each woman, and sterile compresses and local anesthetic for sewing up episiotomies were often in short supply as well. In addition, the single blood pressure cuff available for all the women in labor went missing halfway through my time shadowing, which meant that each time a resident or midwife needed to take a woman's blood pressure, he or she had to go to another part of the CSRéf to borrow theirs. In short, while

the staff at the CSRéf was not nearly as good-tempered and patient as Pr. Sy, their jobs were also more complicated on many levels, and many of them had considerably less training. Their lack of calm could thus be attributed to the shortage of resources, to the overabundance of patients, or to their comparative lack of experience.

I worked with both genders at the CSRéf, and the residents reacted mostly in similar ways to crises, which implies that the reasons for which Pr. Sy is so calm and comforting to her patients is not a function of her gender. The obvious difference, then, is the economic gap between the two locations at which I observed - the CSRéf, where even a pair of gloves is a struggle, and Clinique Farako, where Pr. Sy has her own ultrasound. Given the lack of other facilities as comparison, it is impossible to come to a definite conclusion on this point, but it would be very interesting to see how an influx of resources would effect the doctor-patient interactions at the CSRéf.

Whatever the economic differences between the two clinics, the staff in both locations was more than willing to teach and share information. Each service seemed genuinely concerned for the health of the patients, whether they showed that concern through frustration or patience.

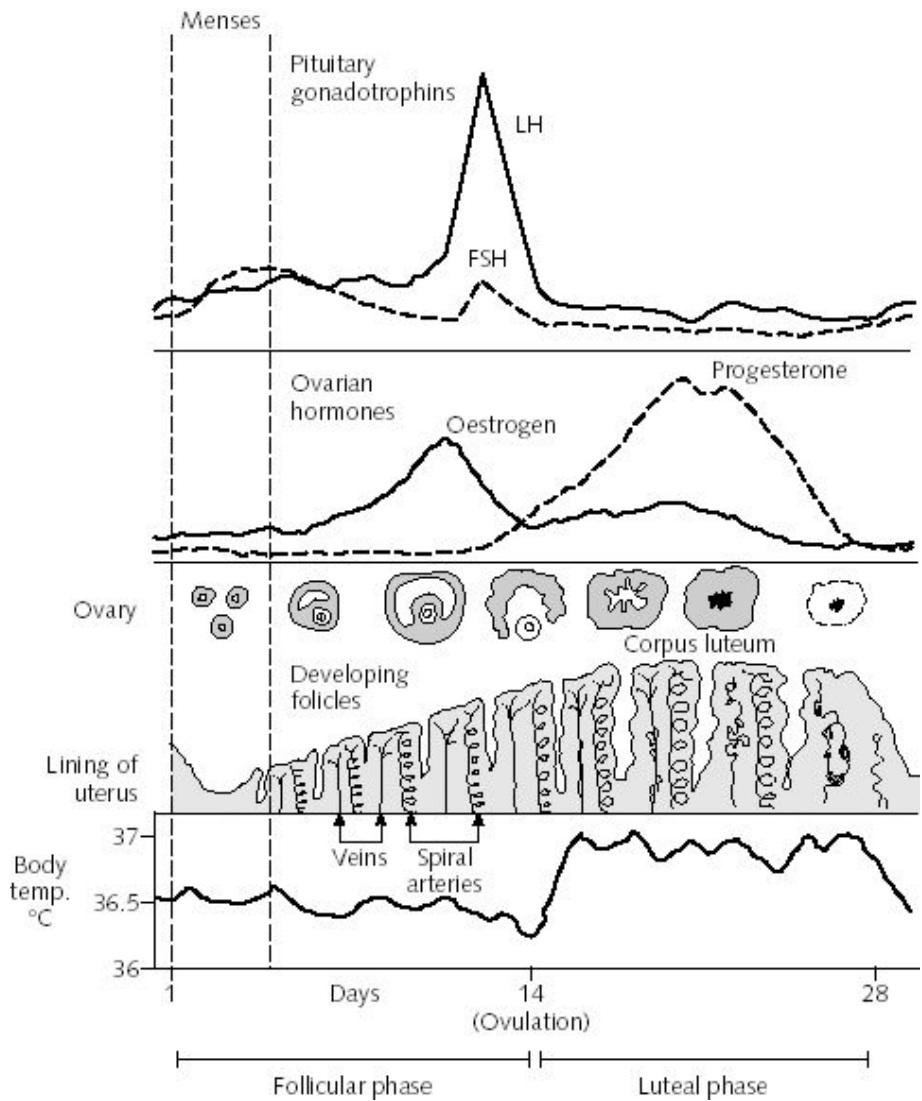
## Appendix I. Fundal Height Curve



HU: Fundal Height  
Semaines: GA

Source: J. Lansac, C. Berger, G. Magnin : Obstétrique pour le praticien - p:38 ; 3e édition  
- Masson - 2000

## Appendix II - Normal Female Hormonal Cycle



Source: [www.answers.com/topic/menstrual-cycle](http://www.answers.com/topic/menstrual-cycle)

### Appendix III - Sample Ultrasound Images

Image 1: Femur

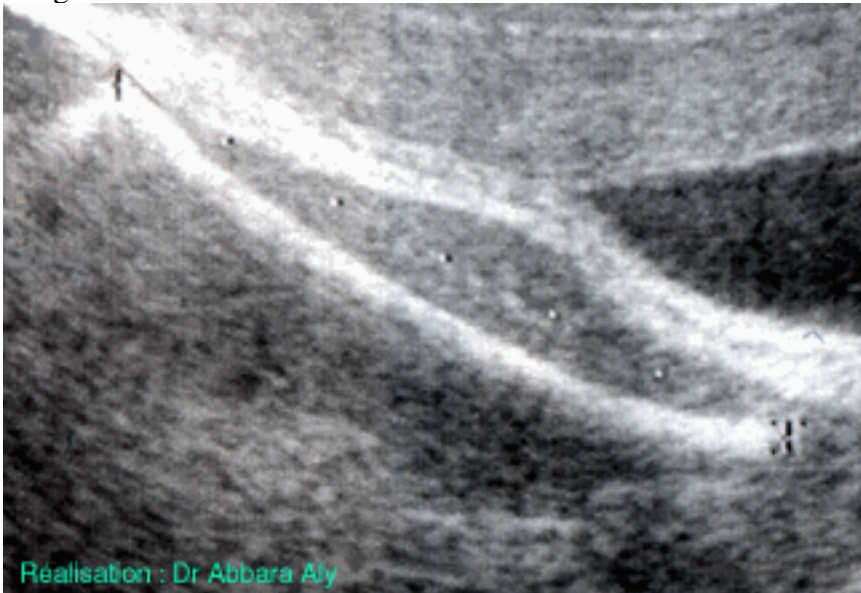
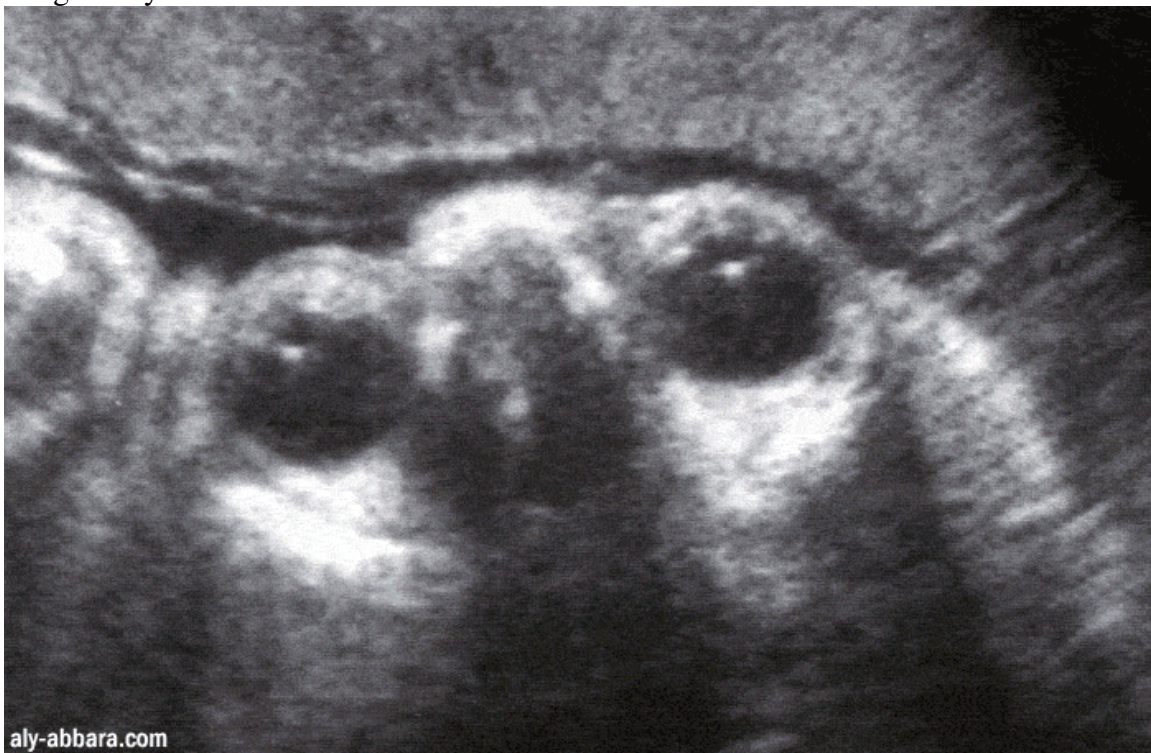


Image 2: Eyes



Source: Dr. Abbara, Aly. Ob/Gyn. Paris, France. "Atlas d'échographie en gynécologie - obstétrique." <<[http://www.alyabbara.com/echographie/Atlas\\_echographie/atlas\\_echographie.html](http://www.alyabbara.com/echographie/Atlas_echographie/atlas_echographie.html)>>. Accessed May 4, 2010.

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