



The Lancet Commission on Global Surgery

Transformation in Somaliland: Edna Adan Maternity Hospital

If you cannot do it with your heart, your hands will never do it.

—Edna Adan Ismail's father¹

Edna Adan Ismail, referred to in the Western press as the Muslim Mother Teresa, created a small revolution when she founded the Edna Adan Maternity Hospital in Hargeisa, Somaliland. From securing buy-in and permissions from the government to acquire land to attending to the health care needs of a poor population, Edna Adan Ismail faced, influenced, and removed numerous barriers to open and run a hospital in a resource-poor country.

As Edna Adan Ismail's reputation grew, foreign agencies promoting health in developing nations reached out to her with assistance. But the impact of globalization and demands of global standards of care from the developed world presented more problems. For example, USAID, a U.S.-based organization, offered to set up a billing system for outpatient treatments and train her staff to run it. In order to receive the free administration—something Edna Adan Ismail knew was greatly needed—the hospital must be audited. The hospital had never been audited, and Edna Adan Ismail had no auditors, nor did she have the funds available to hire auditors. Standards were important, but how could she continue to add and improve hospital operations, educate the local population of health care providers and patients, and meet the objectives and standards of international actors?

Somaliland and Provision of Health Care

The area in the Horn of Africa called Somaliland was British Somaliland before becoming part of the Somali Republic in 1960, and in 1969, a military dictatorship took over. Following the collapse of Siad Barre's government, the Somali Republic fell into a brutal civil war. And ever since Siad Barre's overthrow and Somaliland's declaration of independence in 1991, the state had tried unsuccessfully to gain international recognition as a nation (as opposed to a state within Somalia). It was an Islamic state that had its own flag, national anthem, and passport.

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¹ All information and quotations, unless otherwise noted, derive from case writer interviews with Edna Adan Ismail conducted May 15, 2014.

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In a ranking of the world's 163 "least-developed countries" Somaliland held the 161st place.² The effects of civil war, famine, and tremendous public health problems, particularly among women and children, shaped the destruction of civil society in Somalia and its close neighbor Somaliland.³ Yet by 2003, Somaliland had an elected functioning government able to etch out a modest orderliness and prosperity for its 3.5 million people.⁴

Somaliland was hot and dusty; it experienced occasional flooding, but more often a lack of rain resulting in droughts. Roughly 65% of the economy was dependent on livestock (goats, sheep, camels, and cattle).⁵ And the region relied on remittances from those living outside of Somaliland as well as foreign aid for revenue. Food and medical care were often limited. One out of every three households had to walk or ride more than an hour away from their homes just to get drinkable water.⁶

The average life expectancy in 2003 for a female was 45 years and for a male was 43 years.⁷ According to a report from the World Health Organization, Somaliland was among the worst for deaths among pregnant woman. For every 100,000 live births in 2000, 1,100 mothers died.⁸ Infant mortality rate (those under the age of five) was nearly a quarter of all births in 2003.⁹

The health system faced critical shortages of health care providers and facilities close to communities (see **Table 1**). Before the civil war, there were no medical schools in Somaliland. Since independence, two medical schools were established. There was no opportunity to specialize in medical fields outside of family medicine, so the few physicians with postgraduate medical training or certification received their education outside of Somaliland. Surgery, anesthesia, and other specialties such as obstetrics were performed by general practitioners who learned on the job.

During the civil war, hospitals were looted and equipment disappeared. Siad Barre's regime had heavily land-mined areas in Somaliland, particularly around water and places where livestock grazed, leaving numerous survivors requiring amputations.¹⁰ According to the government there was a severe shortage of gynecological/obstetric, ophthalmic, orthopedic, and surgical/anesthesia equipment.¹¹

² E. H. O. Parry and D. B. Percy, "Anaesthesia and Hospital Links: Strengthening Healthcare through South-North Hospital Partnerships," *Anesthesia* 62 (2007): 18; and United Nations Development Programme, "Somalia Human Development Report 2012: Empowering Youth for Peace and Development," http://www.undp.org/content/dam/undp/library/corporate/HDR/Arab%20States/HDR-Somalia-2012-E.pdf (accessed Sept. 14, 2015): 26.

³ According to the World Health Organization (WHO), life expectancy in Somaliland was 45 years of age. "WHO-AIMS Report on Mental Health System in Somaliland Region of Somalia," 2006, http://www.who.int/mental_health/somaliland_who_aims_report.pdf?ua=1 (accessed Sept. 9, 2015).

⁴ WHO, "Our Common Interest: Report of the Commission for Africa," March 2005, http://www.commissionforafrica.info/wp-

content/uploads/2005-report/11-03-05_cr_report.pdf (accessed Jan. 28, 2015).

⁵ Government of Somaliland "Somaliland In-Figures," http://somalilandgov.com/new/wp-content/uploads/2012/05/somaliland_in_figures_2010.pdf (accessed Feb. 1, 2015).

⁶ UNICEF, "Children in Somaliland," 2011, http://www.unicef.org/somalia/SOM_resources_childrensomaliland.pdf (accessed Sept. 9, 2015).

⁷ Andrew Leather et al, "Working Together to Rebuild Health Care in Post-Conflict Somaliland," *The Lancet*, July 20, 2006, 368: 1121.

⁸ Leather et al. This figure includes all of Somalia and Somaliland.

⁹ Leather et al.

¹⁰ Physicians for Human Rights, Landmines: A Deadly Legacy, (New York: Human Rights Watch, 1993): 224.

¹¹ http://somalilandgov.com/new/wp-content/uploads/2012/05/somaliland_in_figures_2010.pdf.

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	Public Health	Private Health*	
Hospitals	12	2	
Beds	1,586	107	
MCH Centers**	54	-	
Physicians	75	16	
Nurses	216	16	
Midwives	18	33	
Auxiliary Staff	228	_	

Table 1. Health care facilities and staff in Somaliland, 2003.

Data source: http://somalilandgov.com/new/wp-content/uploads/2012/05/somaliland_in_figures_2010.pdf.

Providing medical services to the people who lived in Somaliland was challenging as well. Nomadic populations made it difficult to help those in need. In addition, women needed permission for surgery from either their fathers or husbands. 12 Sometimes refusal was based on the belief that doctors were trying to swindle them for more money or on misinformed medical views such as the idea that surgeries such as C-sections ruined a woman's chance of regular birthing further down the road. 13

History of Global Public Health and Surgical Intervention

For years, international aid organizations such as the World Health Organization (WHO) and USAID Global Health Initiative had devoted resources and educational opportunities to developing countries to improve public health. Offering immunization, prenatal/postnatal care, infectious disease prevention (e.g., malaria), and other global health programs, much had been accomplished to improve the lives of needy populations worldwide. The traditional approach to community health had a heavy focus on prevention. For example, reducing the incidence of cleft palate—a disfiguring affliction that affected breathing, eating (many children who had the condition became malnourished), speaking, and hearing—by improving prenatal maternal diet. Lekking preventive medicine expertise, many global health programs focused recruitment on health care professionals from general medicine fields, not surgery.

With time, it was recognized that creating a functional health care system required both preventive and active treatment; often surgical. ¹⁵ The surgical approach to global health care required a combination of surgical health care providers and anesthesiologists. In the cleft palate example a low-risk surgical procedure to fix the affliction would improve breathing and eating thus effectively avoiding malnutrition as a disease. Surgical intervention in the form of emergency obstetric care, acute general surgical care (particularly abdominal emergencies), and trauma care (including orthopedic fracture fixation) in addition to planned surgical procedures such as cleft lip and palate repair were considered staples to easing global disease challenges.

^{*}Figures include Edna Adan Maternity Hospital.

^{**}MCH stands for Maternal and Child Health.

¹² Women also needed permission to buy medicine or attend a health clinic.

¹³ Matt Shine, "Woman Making a Difference: Amal Ahmed Mohamed," *Somaliland Times*, March 14, 2014 http://www.somalilandtimes.net/sl/2014/632/17.shtml (accessed Mar. 4, 2015).

¹⁴ Susan L. Carmichael et al, "Reduced Risks of Neural Tube Defects and Orofacial Clefts with Higher Diet Quality," JAMA Pediatrics 166 (February 2012), http://archpedi.jamanetwork.com/article.aspx?articleID=1107698 (accessed Jan. 2, 2015).

¹⁵ Caris E. Grimes et al, "Cost-Effectiveness of Surgery in Low- and Middle-Income Countries: A Systematic Review," World Journal of Surgery (2013).

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Edna Adan Ismail: Laying the Foundation

Edna Adan Ismail was born in Hargeisa, in British Somaliland, to a physician and his wife (see **Exhibit 1** for map). Her father ran a hospital and was the most senior national health care professional in the country. From a young age, Edna Adan Ismail would accompany her father to the hospital and watch him. In addition to being a respected physician, her father believed strongly in the value of education. He paid for a teacher to hold classes on the veranda of the family's home for the boys in the neighborhood. By hanging out on the porch and listening to the lessons, Edna Adan Ismail learned to read and write at six years of age. Her parents took notice and decided to seek a formal education for Edna Adan Ismail by sending her to school in Djibouti, a city in French Somaliland. Edna Adan Ismail's first foreign language became French:

My parents wished me to have an education and encouraged it and put opportunities in place for me to learn to read and write. The wider family and the people at that time thought that my parents were not doing the right thing for their daughter. "It's not good to educate a girl. Nothing good will ever come out of a girl who's educated. She will become brazen. She will do things that will embarrass you. She will bring shame and she will dishonor you."

I didn't know why and how I was going to become all those bad things that they said education would make me. And from that age, I became determined that I was going to prove to everybody that education was not going to be a harmful thing but instead a positive thing. I was not going to fail. I was not going to bring disgrace upon my family. I was not going to shame anybody because I could read and write. I was not going to dishonor my family.

Edna Adan Ismail spent nine months of the year in Djibouti and three months at home in Somaliland on holidays, and each year she knew a little bit more than she did the year before. Her informal education continued as well. For example, when she was 11 years old, a terrible drought called the red dust spread in Somaliland. While she was at home that summer, her father went east to Erigavo, Somalia, to look after people who had lost their animals, become displaced, and been forced to live in refugee camps. Before he left, he provided Edna Adan Ismail with a list of tasks to perform and instructions to follow to make sure his hospital continued to operate in his absence. Edna Adan Ismail took her list to the hospital and would ask, "Have this patient's sutures been removed?," "Was this catheter replaced?," "Has this child been given his medicine?" Edna Adan Ismail didn't understand the words she was saying or the procedures she was talking about, but she went about asking. When her father returned to Hargeisa, unshaven and exhausted, Edna Adan Ismail reported on progress. "I often heard him say something like 'I wish I had a better pair of scissors than this,' or 'I wish I had a better something else,"" Edna Adan Ismail said. "And that's when I promised myself that one day I would have the kind of hospital my father would have liked to work in." As Edna Adan Ismail spent time at the hospital with her father, she learned more and her commitment grew:

There was an old man who was brought from the bush with a huge abscess. He didn't smell very good. He was dirty. He was poor and very sick, and dad was going to take a tooth out to drain the abscess. Dad asked me to hold the kidney dish. So I did and I must have made a face about the smell. But Dad was in this person's face, in his mouth, and was cleaning it and he seemed oblivious to the smell. When the man left, Dad closed the door and said, "Don't you ever show that ugly face to my patients again. If you cannot be respectful to my patients, stay out of my hospital."

By 1952, Edna Adan Ismail had completed her primary education in Djibouti and returned home. At the same time, a British gynecologist joined the hospital where Edna Adan Ismail's father worked. She didn't speak Somalian, so Edna Adan Ismail became her interpreter. "She was a great role model," Edna Adan Ismail said. "And with her I saw my first deaths, my first births, many firsts." A year later, the first school for girls in Somaliland opened in Burao and Edna Adan Ismail joined as a pupil-teacher. The arrangement was that Edna

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Adan Ismail would help the British teachers in the mornings, and they would provide her a secondary education in the afternoons.

Edna Adan Ismail: The Nurse, Midwife, and First Lady

In 1954, Edna Adan Ismail applied for and won a scholarship to England and was on her way to earn a nursing training (first at the Borough Polytechnic Institute—now called the London South Bank University—then the West London Hospital, St. Mark's Hospital, and Clare Hall Hospital). Deciding to continue her studies, Edna Adan Ismail trained as a midwife at the Hammersmith Hospital as well as Lewisham Hospital, then returned home to become the first qualified female nurse midwife in Somaliland. The 250-bed Hargeisa Group Hospital Edna Adan Ismail worked at had only one doctor, and he put Edna Adan Ismail in charge of the female section. A year later, a surgeon joined the group, so the hospital was able to offer medical, maternity, and surgical services. "Throughout my professional years, I gathered ideas around how I would like things to be done in my hospital when I would eventually have my own," Edna Adan Ismail said.

On the personal side, Edna Adan Ismail met and married politician Mohamed Haji Ibrahim Egal. Egal became head of government for British Somaliland for one year until the country became independent in June 1960, after which Somaliland joined Italian Somalia to become the Somali Republic. In 1967, Egal became Prime Minister of Somalia. Edna Adan Ismail acted as Somalia's first lady, greeting and meeting such dignitaries as President Lyndon Johnson and his wife, Lady Bird, and the chancellor of West Germany and his wife. In 1969, Siad Barre overthrew the civilian and democratically elected government and renamed the area the Somali Democratic Republic. Egal was removed, detained, and eventually released. By that time, Edna Adan Ismail and Egal were divorced and she had remarried an economist. When that marriage also broke down, she married a former military officer who later became the Somali ambassador in the Sultanate of Oman. Edna Adan Ismail's brother was also working in Oman and he had a Swiss architect friend. Every Friday, Edna Adan Ismail would invite them to lunch so she could get help from the architect on sketches for the hospital she wanted to build. It would have birthing rooms, an operating room, and a library.

Unable to work in Oman, and growing increasingly bored with the life of a political spouse, Edna Adan Ismail often went to work as a consultant for the WHO, for whom she had previously worked, and UNICEF.

Finally, in 1984, Edna Adan Ismail returned to Somaliland (which was still united with Somalia) and applied for a license to build her hospital in Hargeisa. The license for Hargeisa was refused, but Edna Adan Ismail was granted a license for a hospital in Mogadishu, Somalia. "It took me a couple of years to get it past Siad Barre," she said. "I was never Siad Barre's favorite—I was always a thorn in his flesh and they did everything to obstruct me, to prevent me from doing it, and I just insisted and persisted." Government officials asked a lot of questions, including: "Why do you want to build a hospital?," "Who do you think you are?," "Are you showing off?," and "Are you calling the government incompetent, incapable of building hospitals? Nobody ever builds hospitals, only governments do that." But the municipality wanted the hospital and gave Edna Adan Ismail the land as long as she agreed to pay the taxes.

With plans and permits in hand to start building her hospital, Edna Adan Ismail worked piecemeal, one step at a time. She also became skilled at seeking opportunities. For example, one morning as she left her mother's house in Mogadishu, the road she normally traveled was flooded. So she drove on a road she rarely used. She noticed bulldozers and trucks carrying dirt and later returned to the area. "They were excavating and all those trucks were full of dirt," she said. "Where was the dirt going?" Edna Adan Ismail asked one of the workers and discovered it was being dumped in Gesira, Somalia, a few miles away. She asked if they wanted to dump the dirt on her property, which was much closer. Eager to save money, they agreed:

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They were happy and they said, "The only thing is, every time we dump about 10 or 15 loads, the tractor has to come and level it and you have to pay for that one." I said, "Okay." So it became a joke in Mogadishu. "We saw a tractor following you—why were you running away from the tractor?" I think I ended up paying a couple of hundred dollars for something that would have cost me tens of thousands of dollars. My next step was to build a wall, so I returned to work for WHO and used my salary to do the perimeter work—a two-meter-high stone wall roughly 15,000 square meters.

Edna Adan Ismail had completed the road to her hospital and secured access to water and electricity when a policeman with a gun, sitting on the wall of her hospital site, stopped her. He told her she was not allowed to go in as he had orders to shoot. "I had the deed," she said, "but he had the gun."

As it turned out, Edna Adan Ismail's land was next to land that belonged to the Custodial Corps, the government arm in charge of correctional facilities. The government had plans to build a prison and had mistaken Edna Adan Ismail's land for its own. There was little to nothing she could do except go from one official to another showing her deed and making her argument. Her construction came to a halt. Edna Adan Ismail remembered:

Finally I went to the Minister of Interior, who was Siad Barre's son-in-law. I bust in, I was a bit noisy, and told him the problem. Then I looked out of his office window and noticed the Juba Hotel about 500 meters away. And I said, "If the Juba Hotel claimed this office was their land, would you accept it?" He said, "Oh, why?" I said, "Because this is what you are telling me. You're telling me that the Custodial Corps people own my land when the distance between my land and the Custodial Corps is the same distance between your office and that hotel. So when that hotel comes to own your land here, I will accept that the Custodial Corps can take over my land. There is almost half a kilometer between the two of us. I am not in their land and they are planning to take my land." He asked if I was sure and I said, "Of course I'm sure. You're the Minister of Interior. You should know these things. Why don't you get the town planning map and come measure the distance. I give you my word that if my land falls inside the perimeter of the Custodial Corps land, I'll stop building my hospital construction." And that is how I got my land back.

Regaining the rights to her land took Edna Adan Ismail two more years—time that she used continuing to work for the WHO as a regional nurse and midwifery advisor to pay for the building of her hospital. Although nearly completed, the hospital never opened. Edna Adan Ismail evacuated her family from Mogadishu in 1987 because of the war. The warlords took over her hospital and destroyed it all: "Everything I had in Mogadishu including our homes and properties," Edna Adan Ismail said. "One day archeologists will go to Mogadishu, find Roman coins, and they will say 'The Romans were here,' but their evidence will be my Roman coin collection."

Starting Over

For the next four years, Edna Adan Ismail continued to work for the WHO. The desire to build a hospital stayed with her. There were so many things that needed fixing in Somaliland—malnutrition, poverty, lack of infrastructure, security, illiteracy, poor sanitation, lack of fresh drinking water—but Edna Adan Ismail could not take on all of them. Having dedicated her life's work to midwifery and obstetrics, Edna Adan Ismail's ambition was to build a maternity hospital. "Because I'm a midwife I know about pregnancies and childbirth and their complications," Edna Adan Ismail said. "I know the results that a lack of proper prenatal and postnatal care and facilities produces—30% to 40% of pregnancies have some kind of complication to either the mother or child, so we lose many of them." In 1991, she returned to Somaliland, and in 1993, she met with her first husband, Egal, who had become the president of Somaliland. She described their meeting:

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I decided that I've got to do it, build another hospital in my home, for my people. This is the least I could do. I told him that I wanted to build a hospital. "What? Again? What's with you and hospitals? Edna Adan Ismail, you're not young anymore. You are retiring and you want to build a hospital? You can't do that. Why do you want to build a hospital when you're about to retire?" I said, "Well, because this is what I've always wanted to do."

I asked him if he liked being the president of a country that had no maternity hospital. "Because if you did have a country that had maternity hospitals, I would go and retire somewhere and not bother about building one. But since you don't, be grateful that there is a crazy old woman who wants to give you one. And don't take two years to make a decision like Siad Barre did." And of course he was allergic to Siad Barre so anything that Siad Barre did, he did not want to do. That clinched the deal.

When it came to negotiating the land Edna Adan Ismail could have, the offer was not what she had hoped. Egal gave her land that had been an execution ground during Siad Barre's rule. Both disappointed and angry, Edna Adan Ismail returned to Egal's office and said, "I want to give you a hospital and you want to give me a trash dump? A hospital is supposed to be clean, sterile. You want to give me a place that was used for killing people?" She left Hargeisa and returned to Djibouti. But she couldn't shake the idea from her mind. Edna Adan Ismail realized that the land offered for the construction of her hospital was in a poor part of town, but had no other option than to accept it. She believed in self-motivation, appreciated a willingness to take risks, and acknowledged her own weaknesses and strengths. She returned to see Egal, accepted the land, and negotiated with him to provide the bulldozer for cleanup of the area. "They sent me the municipality bulldozers and carted away 32 truckloads of trash, free of charge!" she said.

Before putting all her efforts into building her hospital, Edna Adan Ismail rebuilt her family home in Hargeisa. A few years later, she retired from her job in Djibouti and sold everything she owned—including her Mercedes and jewelry—except for a few items she gave her brother with instructions to give it to her first niece to get married.

With cash in hand and acting as her own foreman, Edna Adan Ismail sought out subcontractors to construct her hospital in 1997. Her one stipulation was that anyone working for her would not chew khat on the side. What workers did in their own homes was none of her business, she said, "But selling your skills when you've been chewing khat is like selling me a shirt with one sleeve." She had to fire one or two workers before everyone knew she meant business, and "that's how my hospital got finished in four years." During that time, Edna Adan Ismail stayed and worked alongside her employees. Between supply trips to Dubai, United Arab Emirates, and supervising electricians and plumbers, Edna Adan Ismail would recruit volunteers to help with construction. At one point as they were adding plumbing to the hospital, Edna Adan Ismail ran out of money. "I called my brother and asked if he would be willing to give back the jewelry," said Edna Adan Ismail. "He said 'Sure,' and drove up from Oman to Dubai so I could sell it—and that's how I paid for my plumbing, and today when something breaks, I say, "Come on...you know that was my sapphire!"

Building a structure with plumbing and electrical outlets was only the beginning, as the facility would need access to running water, a waste-management system, and a reliable electricity source. To function as a hospital, it would need oxygen, medical/surgical equipment and supplies, a communication system, not to mention furnishings. Ensuring that would happen included stepping aside and trusting those willing to take on responsibilities to go ahead—even if it didn't work out. For example, Edna Adan Ismail connected with a *New*

¹⁶ According to the WHO, for thousands of years, the khat plant has been chewed. It provided a mild euphoria similar to drinking strong coffee. Paolo Nencini et al, "Khat Chewing Spread to the Somali Community in Rome," *Drug and Alcohol Dependence* 23, no. 3 (1989).

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York Times reporter, Ian Fisher, who wrote about her hospital in 1999.¹⁷ After reading that article, a former schoolteacher gathered a few other people in Connecticut and Minnesota to start a nonprofit, The Friends of Edna Maternity Hospital, and the funds it raised were used to fund the hospital.¹⁸

Staffing a Hospital

As the hospital facility took shape, it hit Edna Adan Ismail that the bricks, mortar, and the building were not going to save lives. She needed people with skills:

You can save a life under a tree, in a tent, in an ambulance. But if you do not have the expertise, you can have the most beautiful building in the world and it will not be a hospital, it will not save a life. In my naïveté, I thought that I would have enough midwives and enough nurses and enough doctors to work in the ideal facility that I was building, but the reality turned out to be that there were no qualified nurses, no doctors, no midwives.

So as construction of her hospital continued, Edna Adan Ismail started training nurses. Among the first people to reach out to Edna Adan Ismail about staffing her hospital was a group of volunteers from HOPE Worldwide followed by a team from the Tropical Health and Education Trust (THET) in London. They met in what was her office at the time, under the shade of a tree, and offered to bring in a medical team to help Edna Adan Ismail set up. To start her training, Edna Adan Ismail established an examination committee and developed a curriculum with volunteers from UNICEF and the WHO. Then she involved the minister of health and minister of education to approve and invigilate the exam. At first, Edna Adan Ismail wanted to train nurses for free, so she advertised on the radio and 306 students applied (see **Table 2** for educational facilities). According to the entry requirements, prospective students had to be at least 18 years old, have secondary school education, and be physically healthy. Edna Adan Ismail and her team interviewed and short-listed 92 women who then sat for a written exam invigilated by the government. Edna Adan Ismail took the top 41 applicants for a three-year training program (see **Figure 1**). Edna Adan Ismail said:

I soon discovered that nothing should be free in life because some of my students would arrive late. So I started to charge them one and a half dollars a month. When I change \$1.50 into our money, it's several thousands of shillings. And if you use a small denomination, paper notes, it's a big pile of money. If somebody was late or underperforming, I'd find out how long she had been with us. Say it was three months—that's four and a half dollars. I'd get four and a half dollars' worth of Somaliland shillings, clear my table and put this mountain of money on it, and call in the student. "Look at what your mother is spending on you thinking that she has a daughter who's worth investing in. You're lazy. You're arrogant. You're wasting her time. You're wasting my time, the teacher's time." And she would look at this mountain and I'd say, "Your mother could have done anything with her money, but instead she spent it on you. How am I ever going to get you to look after the sick when you cannot even look after your own self? You're unreliable. If you really want to be a nurse then you've got to be consistent—you're going to be responsible for people's lives. You've got to be kind. Many people are going to depend on you. Young ones. Old ones. But you cannot even look after your own time."

Sometimes they would tell me they lived far away so I'd tell them to wake up earlier. I started charging time for being late. You're late for one minute, you stay for one hour longer. You're late for five

¹⁷ Ian Fisher, "Hargeisa Journal; A Woman of Firsts and her Latest Feat: A Hospital," *New York Times*, November 29, 1999, http://www.nytimes.com/1999/11/29/world/hargeisa-journal-a-woman-of-firsts-and-her-latest-feat-a-hospital.html (accessed Apr. 16, 2015).

¹⁸ See http://www.ednahospital.org/ (accessed Sept. 9, 2015).

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minutes, you stay for five hours longer. You're late for more than that, you lose your day off. So just come on time.

Table 2. Education fac	cilities, Soma	aliland, 1998	3–2003.
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	Grade 1–8	Grades 9–12	Vocational	Universities
1997–98	165	3	2	1
1998–99	144	5	3	2
1999-00	174	13	4	2
2000-01	294	15	4	2
2001-02	307	16	4	2
2002-03	353	20	4	2

Data source: http://somalilandgov.com/new/wp-content/uploads/2012/05/somaliland_in_figures_2010.pdf.

Figure 1. Edna Adan Ismail and students at Edna Adan Maternity Hospital.



Source: Edna Adan Ismail. Used with permission.

Edna Adan Ismail sought total transparency in her efforts to develop nursing training at her hospital. She visited other countries and met with government officials to learn about standards, procedures, and curricula they had in place. "I want my country to go through the same process as every other country," Edna Adan Ismail said. But Somaliland was not like all other countries. And although Edna Adan Ismail's idea and ambition was to open a maternity hospital, the need was much greater. By 2002, Somaliland had been separated from Somalia for 11 years, but it remained an area deeply affected by what had been a brutal dictatorship, wars, and natural disasters such as drought. In addition, Somaliland had an historical, cultural, and traditional practice that many other countries did not—female genital mutilation (FGM). Edna Adan Ismail's training needed to include knowledge of what to do when mutilated children arrived at the hospital bleeding.

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From Maternity to Surgery and Everything In Between

The hospital opened on March 9, 2002 (see Figure 2).



Figure 2. Edna Adan Maternity Hospital.

Source: Edna Adan Ismail. Used with permission.

"Many people made many promises and a very small percentage of promises get fulfilled," Edna Adan Ismail said. "But Andy Leather, who worked at King's College, and 11 people—anesthesiologists, pediatricians, general surgeons, and administrators came for two weeks." The day they arrived, the first C-section was performed on a woman who was obstructed. HOPE Worldwide also sent nine people whom Edna Adan Ismail called the "magnificent nine." In addition to treating patients, they developed the hospital's very first patient charts. Edna Adan Ismail learned that having a laboratory, a blood bank, and safe anesthesia equipment were all essential. Within a few days, however, Edna Adan Ismail realized her maternity hospital would become a general referral hospital—often with more male patients than female patients. She recalled:

You're got to be realistic. If you're going to have a maternity hospital, you're going to need a laboratory. You're going to need an operating theater for that cesarean section. You're going to need sterilization facilities. You're going to need electricity. You're going to need water. You're going to need trained health workers. I had those things.

In other countries, maybe they have the luxury to say this hospital will only deal with orthopedics. Anybody who has nonorthopedic problems can go to that other hospital, but in my situation, the first nonmaternity male patient we had was an 80-year-old man who was knocked down by a donkey cart outside in the street near the hospital. He fell, cracked his skull, and was bleeding. This is a hospital, so they brought him in like a sack of potatoes and just dumped him—there was blood all over the place and he was dazed, had a concussion. We're not going to worry about whether or not he's pregnant. We've got to stop that bleeding. We took care of the laceration, we sutured him up, and we didn't even know who he was. We had to send out messages that if anybody was missing this man who is wearing garments of this color, he is here with us in the maternity hospital. Eventually his relatives came and found him. Of course, we treated him free of charge.

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When the doors opened in 2002, it cost \$20 to have a baby at Edna Adan Ismail's hospital. "You're a woman, you're in labor, you'll pay \$20," Edna Adan Ismail said. "It's not a lot of money and we're the only hospital that feeds the patients." Once the baby was born, patients were charged \$3.50 a day for nursing care, the hospital stay, food, and care for the baby. Patients could pay more for certain extras—a private room cost \$10 per day and a fan \$5 a day. Twenty dollars a day was not much for some, but a fortune for others as the majority of the people were poor and these were the ones she wanted to help anyway. Because the majority of patients the hospital treated had no money, Edna Adan Ismail used a sliding scale for charges based on ability to pay. "If we wait and hold our breath to treat only the ones with money, we would be falling asleep standing up," Edna Adan Ismail said. "We would have nothing to do." The hospital kept handwritten logs on the number of patients seen, treatments provided, and payments received.

When the volunteers returned home, Edna Adan Ismail had only two doctors, both provided by the United Nations (UN). After six weeks, she fired one of them (even though the UN was paying him) for getting drunk on the roof. "Not having a doctor is better than having a bad doctor," Edna Adan Ismail said. She enlisted a part-time Somaliland physician two days a week and then the UN provided a female physician from Rwanda. There was some pushback from patients who didn't want to be seen by a female doctor, but Edna Adan Ismail had no patience for that complaint—"Disease doesn't know that the treatment they're getting is from the hand of a man or the hand of a woman so...do you want to get well?"

Many patients had no access to clean water or to proper sanitation. There were mothers having baby after baby after baby, without any break in between. There were young children who had not been vaccinated and protected from preventable childhood diseases. "The people who need us are those who are floating around with tumors they've had in their bodies for years," Edna Adan Ismail said. "The people who need us are the ones who have had accidents or deformities that they should not be having if they had been properly fixed and set—these are the people who need us." Edna Adan Ismail's views and mission scope quickly changed with experience:

I am a great believer in preventive and public health, but reality has taught me that today's emergency needs a solution today. You cannot have only medical services—there's got to be medical and surgical facilities. The role of surgery in the health system of any nation is crucial because it is not an option that we can either take or leave. Most of it is life preserving interventions. It's an important part of health care.

The Audit

Having built her hospital on a shoestring, Edna Adan Ismail deeply valued the assistance that aid organizations, both governmental and nongovernmental, offered. She needed and wanted to continue those relationships, but from time to time the rich world seemed to underestimate the difficulty the poor world had measuring current practices against global standards. "This is my country and I'm very concerned that things should be done properly," Edna Adan Ismail said. And in a country where people often had to walk several kilometers for medical aid and where basic medical supplies were difficult to obtain, Edna Adan Ismail aimed for quality. Aside from what a few patients were able to contribute by paying for services, the hospital was kept running mostly through donors who offered or agreed to fund particular programs (e.g., to pay for an incoming class of midwives or buy an anesthetic machine). For each particular program funded, the hospital kept exact accounting for monies in and expenditures but there was no year-end balance sheet or consolidated accounting for hospital operations as a whole. She would figure out a way to meet the auditors' requirements. It was simply one more thing.

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 $Exhibit\ 1$ $\begin{tabular}{l} \textbf{Transformation in Somaliland: Edna Adan Maternity Hospital} \\ Map\ of\ Somaliland \end{tabular}$



Source: "Somaliland CIA map PL," posted to public domain by "Masur," March 5, 2010, https://commons.wikimedia.org/wiki/File:Somaliland_CIA_map_PL.jpg#file (accessed Oct. 5, 2015).