

EM in Lesotho

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Background:

Lesotho is a small, largely rural country in southern Africa and is a true enclave, completely surrounded by South Africa. This mountainous country is the home to the Basotho people (a Bantu people) and was a British territory from 1868 until 1965. The current political structure is that of a parliamentary constitutional monarchy.

Geography:

Altitudes in Lesotho range from 4,500 to over 13,000 feet. High mountains cover about two thirds of the country, and snow is common in the winter months. The capital city Maseru has a population of roughly 200,000 people and is home to the flagship government hospital. The remainder of Lesotho's two million people live in medium to very small rural towns with the majority (81%) of the country's population living in remote rural villages.

Economy:

Eighty-six percent of Lesotho's population is engaged in subsistence agriculture. Despite this, agricultural products make up only 14% of the \$5.5 billion GDP.¹ Thirty-five percent of the actively employed male work force is employed in South Africa, largely in the mining industry. Besides labor, Lesotho's other major resource is water. The recent construction of two major hydropower facilities has allowed Lesotho to become almost entirely self-sufficient in electricity production and sell the power and water to the Republic of South Africa. However, in Lesotho, only 7% of households have access to electricity. Poverty is a major problem in Lesotho, with 56% of the population living on \$2 per day or less, and the unemployment rate is 45%.²

Healthcare in Lesotho:

Healthcare delivery in Lesotho is challenging as a result of the fact that 81% of the population lives in remote rural villages, often several hours walk over rough mountain paths from the nearest clinic. Access to healthcare in Lesotho is also limited by poverty and by lack of personnel. Basotho individuals pay directly at the point of service for their healthcare, and Lesotho has only one doctor per 20,000 people (compared to approximately 1 in 400 in the US).³

The healthcare system in Lesotho is composed of health posts and health centers at a primary level, with 16 district hospitals comprising the secondary level of care. Tertiary care is made up of the referral level Queen Elizabeth II Hospital in Maseru, Mohlomi Mental Hospital, Bots'abelo Leprosy Hospital and Senakatena AIDS clinic.⁴ If a patient requires services which are not available within Lesotho, they may be referred to South Africa for further care. Health posts are run by volunteer community health workers and provide outreach type care, such as condom distribution and immunizations. Health centers are staffed by nurse clinicians, who provide outpatient primary care. The large district hospitals provide a variety of outpatient services, including both primary care and specialized clinics (such as HIV/AIDS and tuberculosis (TB) clinics), as well as inpatient services, operating theaters, labor and delivery and emergency rooms. In addition to the government run facilities, there are eight Christian Health Association (CHAL) run hospitals and 79 CHAL run health centers throughout the country. CHAL facilities are sustainable mission projects and serve approximately 40% of the population.

Contributing to Lesotho's difficulties with retaining medical personnel, Lesotho has no formal medical education aside from nursing schools. Most Basotho who attend medical school do so in South Africa, and

few return to practice in their home country. Many of the physicians practicing in Lesotho are trained in South Africa with the remainder coming from other African countries. The majority do not stay on a long term basis.

The impact of HIV/AIDS in Lesotho:

Many of Lesotho's health problems are related to poverty, TB and the HIV/AIDS epidemic. According to Lesotho's ministry of health and social welfare, TB accounts for 31% of institutional deaths, pneumonia 29%, diarrheal diseases 14%, HIV/AIDS (which clearly contribute to the above causes of death as well) 9%, pneumoconiosis associated with pulmonary TB 6%, upper respiratory infection 5%, diabetes 3%, head injury 3% and incomplete abortion 0.5%.⁵ Nutrition is also a major cause of disease in Lesotho, especially affecting children, with 13% of inpatient admissions resulting from nutritional deficiencies in children aged 0-4 and 3.5% of admissions for all age groups.⁶

Lesotho has the third highest HIV infection rate in the world with 29.8% of the general population HIV positive.⁷ TB is very common (~550 cases/100,000 people) and is a leading cause of death according to Lesotho's ministry of health and social welfare. In Lesotho, the majority of HIV transmission is heterosexual and mother to child.⁸ The reasons for high HIV rates in southern Africa are multi-factorial, including poverty and social instability, high levels of other STDs, sexual violence and high mobility (particularly migrant labor).⁹ Many men from all parts of Lesotho travel to South Africa to work in mines where they live in single sex housing and are away from their wives and families for months at a time, often having interactions with professional sex workers. Many of the miners are at elevated risk for developing pulmonary silicosis (25%), and combined with HIV (34%), have a 16% per year rate of acquiring TB. Additionally, labor laws in South Africa require migrant labor workers to return to their country of origin for two weeks yearly, often bringing HIV and TB with them.¹⁰

The average life expectancy had declined from 50 years in 2000 to 34 years in 2005, but has improved to 40 in 2007,¹¹ coinciding with increased access to free antiretroviral therapy (ART).¹² Without the HIV/AIDS epidemic, life expectancy would be an estimated 75 years.

Emergency Medicine in Lesotho:

Lesotho is in the early stages of developing emergency medical care. Emergency medicine is not established as a specialty, and pre-hospital care consists of ambulances run by individual hospitals with no medically trained personnel aboard and no central dispatch. Many hospitals lack fuel to run ambulances. Only in cases where patients have phones and can call the hospital directly to request an ambulance are they sent. The patient is usually required to pay for the ambulance service, thus discouraging their use. As a result, there is little to no availability of medical stabilization prior to arriving in a hospital. As in many other developing countries, most patients are brought to the hospital by taxi (minibuses) or on foot. Given the rough topography of Lesotho, wheelbarrows lined with blankets and carts pulled by work-animals are sometimes used to carry patients long distances to roads. In large accidents, South African ambulances may be sent across the border to retrieve the few patients that have health insurance (often those employed by South African mines).

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The main governmental hospital, the 16 district hospitals and many of the mission hospitals have emergency rooms which are stocked with basic medical equipment such as oxygen, IV fluids, bag valve masks and IV medications such as epinephrine and atropine. These are often part of the outpatient departments of hospitals, where there are no appointments. During business hours, patients line up in the order in which they came, unless they are unable to walk or are clearly seriously ill or injured. Triage vital signs are infrequently performed, which leads to the common occurrence of very ill patients waiting several hours to be seen by a physician or nurse clinician. Most hospitals lack means to intubate and ventilate patients on an emergent basis, reserving the use of ventilators to the operating theaters. There is no standardized approach to critically ill patients. Access to pharmaceuticals varies by hospital, and there are few, if any, working pumps to run IV drips. Many antibiotics and oral anti-hypertensive agents are available. Oxygen is an expensive, limited commodity and is only given to those in clear respiratory distress.

Areas for future improvement:

Medical care in Lesotho is largely framed by the nation's challenges with HIV/AIDS, TB, poverty and topography. There are many potential interventions that may be taken in order to improve health outcomes. The most important factors in improving health in Lesotho are reducing poverty and increasing access to primary/preventative care, such as access to free/low cost ART and TB treatments. Improvements to roads and transportation infrastructure would likely have the largest impact on Lesotho's pre-hospital care. The development of a pre-hospital medical system with a centralized ambulance service and trained medical personnel may make a significant impact on health outcomes in densely populated areas of Lesotho. Potential hospital based improvements include the development and implementation of triage and improvement in nursing to patient ratios. Triage vital signs would be highly beneficial in ensuring that ill patients are promptly attended to.

Recently, a residency program in family medicine was started, which will hopefully lead to better retention of doctors in Lesotho.¹³ With these efforts and continuation of HIV/AIDS and TB prevention and treatment campaigns, Lesotho should have continued increase in average lifespan and improved health outcomes.

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