

UNC-Malawi cancer pathology laboratory is a model for Sub-Saharan Africa

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Since 2011, the University of North Carolina has partnered with the government of Malawi to establish a pathology laboratory in the nation's capital, building on an existing decades-long collaboration. The laboratory has provided an invaluable service to patients and has also built capacity at a national teaching hospital, according to an analysis of the first 20 months of operation published online by *PLOS ONE*.

"A robust platform for [cancer care](#) and research now exists in a setting where it did not previously, and can serve as a model for similar interventions throughout sub-Saharan Africa," said Dr. Satish Gopal, MD, MPH, study author and member of the UNC Lineberger Comprehensive Cancer Center's Global Oncology Program.

In July of 2011, UNC and the Malawi Ministry of Health established a pathology laboratory at Kamuzu Central Hospital in Malawi's capital city of Lilongwe. Relying on a largely Malawian staff (Fred Chimzimu, Coxccilly Kampani, Prof. George Liomba), supported by UNC collaborators, the lab has now assessed more than 3,600 specimens.

The lab became one of only two pathology labs in the nation of 16 million, helping to relieve diagnostic delays that contributed to late diagnoses and early deaths for Malawians suffering from [cancer](#). Cancer has become a growing health problem in Sub-Saharan African countries like Malawi, with disease rates more than doubling since 1999 due to factors such as HIV which increases risk of many cancers, population aging, and the widespread adoption of Westernized lifestyles,.

Importantly, staffing of the Malawi laboratory relies on Malawians, including Prof. George Liomba, a senior Malawian pathologist formerly with the College of Medicine in Blantyre, who has analyzed more than 95 percent of specimens after joining UNC full-time in 2012. While telemedicine technology purchased by UNC Lineberger has allowed for weekly consultations between the Malawi lab and UNC pathologists and physicians in North Carolina, Dr. Gopal said that the early experience has shown that a sustainable laboratory must rely on Malawian health care workers.

"Telepathology has been an important tool for collaboration, rather than a primary mode by which diagnostic interpretation are rendered. Importantly, it cannot be a substitute for training a sufficient number of Malawian pathologists and laboratory technicians to provide essential diagnostic services," said Dr. Gopal. In this regard, UNC has directly supported the training of technicians abroad who have now returned to Lilongwe to staff the lab.

Sustainability will be a major focus for the laboratory in the coming years, according to Dr. Gopal. Beyond the need for training local staff and physicians, the laboratory is developing locally appropriate fee schedules, and starting to provide diagnostic services to hospitals in surrounding areas outside Lilongwe. While external funds can provide the necessary support for training and equipping cancer facilities in the region, the ultimate goal must be independence from external support.

Additionally, the expansion of a cancer workforce in Africa is crucial, as the projected burden of cancer will continue to rise in the region. Pathology laboratories such as the UNC-Malawi partnership can begin the process of collecting data to allow governments to have a fuller picture of the prevalence of cancer in the region, in order to guide cancer control efforts at the local level.

Provided by University of North Carolina Health Care

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