

DIAGNOSTIC CAPACITY: THE MISSING INGREDIENT

I believe I know why the general surgeon is the second most important figure in many African hospitals. The most important is the bedside nurse who gives her charges constant care and attention. If the surgeon can't fix a body part by repairing it if it is cut, torn, or leaking, or removing it if it is diseased, then patients get little help from other physicians. The general physician is not often in a position to assist much. He or she may have had excellent training with a good knowledge base and relevant clinical experience, however that is not enough to get the job done. The health-care professional has 2 essential needs for consistent optimal outcomes: essential diagnostic capacity and essential treatment.

MJoTA has medical therapeutics - that is, treatment - as its focus. The journal was born in the biomedical writing department of the university proud of being the first United States school of pharmacy, Philadelphia College of Pharmacy, now known as University of the Sciences in Philadelphia. It is well connected to the United States pharmaceutical industry that has brought major advances in the treatment of medical conditions. The industry invests billions of dollars in research and development for improved treatments; more selective, less toxic, and more efficacious. We Americans have an almost religious conviction that for every illness a pill can be taken to make it better. But we forget an important detail: the health-care provider to whom we entrust our care must have properly diagnosed our condition before the proper treatment is possible. This is so axiomatic, so obvious, that we take it for granted. In resource-poor countries, however, diagnostic support may be all but non-existent; and clinical outcomes are often compromised, even when the local dispensary is well stocked.

Pathologists and laboratory technicians are strange creatures. They are the bats of medicine, neither birds nor mice. They are neither surgeons nor treat-

ing physicians. They work in quiet, dark places, in basements or remote buildings. They prefer the solitude of the lab and morgue to the bustle and drama of the emergency room and surgical theater. The surgeon and nurse may be the hands and heart of the hospital, the corps of clinical officers and other health-care providers may be its eyes and ears, but the pathologist is its brain. The pathologist translates incoming raw health-care data into information that the health care provider can use to make sense of a clinical situation.

A cachectic patient in the emergency room has a fever and is unable to sit or walk without support. The attending clinical officers know that the situation is dire but they cannot differentiate diabetic ketoacidosis, primary renal failure, or renal failure from dehydration. Nor can they readily distinguish malaria from bacterial endocarditis. Without adequate laboratory support, health-care providers frequently are in the dark: they can only guess and figure the statistical probability of a particular condition over another, the guesses may not favor the patient. Under these circumstances, the patient's fate would not be much worse with a traditional healer. Field physicians and their patients know this can be true, although compassion and decorum usually prevent them from uttering the obvious.

Developing countries are desperate for effective medications, particularly in the areas of HIV/AIDS and tuberculosis. But far more humans die as a result of inadequate health-care infrastructure. The laboratory should be the crown jewel of the health center and hospital. Every health center laboratory should have resource-appropriate tools and well-trained personnel to help clinicians render the right diagnosis. Programs that seek to improve health outcomes should recognize this in their funding priorities.

by MS Rudman MD



Swamp in Maryland, USA. Photo courtesy of OL Egoro-Ighalo.