

## REVIEWS

Julie Livingston, *Improvising Medicine: An African Cancer Ward in an Emerging Cancer Epidemic* (Durham: Duke University Press, 2012), 228pp, paperback and cloth, ISBN 978-0-8223-5342-3.

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Julie Livingston's *Improvising Medicine* is an ethnography that examines the oncology ward in Princess Marina Hospital in Gaborone, Botswana. Here Livingston participated as an ethnographer – taking on the roles of language and biomedical translator, social worker, driver and nursing assistant – thereby enabling her to witness and knit together the experiences of patients, families, nurses and doctors. Oncology has the potential to build long-term relations as patients cycle in and out for radiation treatment. In the social environment of this single national oncology ward, Livingston examines how such actors create a moral space for healing and also death, while examining how they must improvise medicine in the face of scarce resources and personnel. The result is a riveting piece of scholarship that draws readers in as they visualise the tumours, the deformities and open necrotic wounds of advanced cancer patients, and learn of the frustrations, pain, anger, care, hope and laughter present on the ward. Though biomedicine likes to think of itself as universal, as 'a global system of knowledge and practice', this is a story very much situated in a specific place with unique circumstances and characters. Yet *Improvising Medicine* offers wider lessons for global health, cancer research and treatment, and palliative care.

Livingston documents the emergence of a new cancer epidemic, one precipitated by the HIV/AIDS epidemic and a robust national antiretroviral programme. In Botswana almost a quarter of the adults have HIV. Both the disease and the antiretroviral drugs are immune-suppressing and thus can make bodies more susceptible to viral cancers, particularly cervical cancer and Kaposi's sarcoma, and other diseases like tuberculosis which also increase the risk of lung cancer. Thus many people who are surviving HIV are now dying of cancer.

The building of the oncology ward in Botswana that opened in 2002 in anticipation of this epidemic has also unveiled the presence of other cancers related to longstanding occupational hazards such as exposure to asbestos, radiation and toxic waste as well as the impact of new consumption patterns in Southern Africa of fatty sugary foods and tobacco. Though low- to medium-income countries seem to have lower cancer rates, they account for more cancer deaths worldwide. This higher death rate, also mirrored in a middle-income country like Botswana, reflects local aetiological challenges as well as weak healthcare infrastructures that do not support early cancer detection. Thus most persons who come to Botswana's public oncology ward come with late-stage cancers when curative treatment is not always an option, or drastic measures such as amputation must be performed.

Despite this emerging epidemic, African cancers still remain mostly invisible to the outside world. There are a number of reasons for this. Most high-income countries think of cancer as a disease of affluence. In contrast, when they think of Africa and disease, they think of cholera, malaria, HIV/AIDS, malnutrition and infectious diseases. They think of problems accessing primary care, not the need for tertiary care. Yet the majority of viral cancers happen in the Global South with only a small percentage occurring in the north. This is due in part to the success of vaccines for Hepatitis B and certain strains of the human papilloma virus. In epidemiological studies cancer in the Global South is rendered invisible, in turn affecting future research and the development of new vaccines and anti-cancer medicines. Thus the HPV vaccine targets two viral subtypes that predominate in cervical cancers in the US, but not those that primarily affect HIV infected persons in Africa (39).

While one can clearly point to market interests, and Livingston does, she also explains that this is a problem of missing scientific data. Because cancer is often misdiagnosed, or not recognised until it is symptomatic and problematic, its incidence remains under- or un-recorded. This results primarily from a lack of laboratory equipment and personnel necessary for early (and late) cancer detection impacting on both current and future cancer sufferers. Indeed Botswana only began a cancer registry in 1999, and initially had issues collecting accurate data. Cancer statistics on the continent most likely understate the situation given that they are old and projected out from a few sites to the wider population (9). Livingston notes that cancer only seems visible to the global health community when it fits their stereotypes about Africa, as with cancers based on sexually transmitted diseases – a notion exploited by local doctors when possible to exact monies and resources (33). In order to change the face of African cancer research and treatment, Africans must have resources to make local conditions and cancers knowable to a wider community. Instead, what is currently produced as clinical knowledge is unsuited to most African contexts.

The experience of cancer patients in Botswana is driven by the lack of personnel and resources. They do not usually have access to the cutting-edge biotechnical research of the Global North, yet universal healthcare ensures that they do access off-patent cancer drugs developed in the 1970s and '80s. Yet access to resources and medical care are very much dependent on the personalities and efforts of individuals and their abilities or willingness to improvise or intervene. For example, Dr P. the German oncologist successfully rehabilitated an old ultrasound machine and pursued access to Gleevec (an expensive cancer fighting drug) through a Novartis corporate philanthropy programme (42). Likewise his willingness to perform injections of chemotherapy, to read ultrasounds, x-rays and lab slides, and take home paperwork often enabled him to perform the work of many people.

Sometimes these local conditions have led to medical innovations, such as the development with the University of Pennsylvania of a see-and-treat approach for cervical lesions given that obtaining pap smear results could take up to six months (44). It has also meant that success may be measured in terms of the shrinking of a tumour or preventing or halting the metastatic process rather than pain management and palliative care. Given the lack of beds, those who were beyond treatment were

often sent home to die, regardless of whether or not they had people or resources to take care of them. Though nurses often sought to advocate on behalf of such patients, doctors tended to see this as a social problem beyond the logics of medical treatment (156).

Botswana's cancer epidemic has also been shaped by local experiences of the AIDS epidemic as well as cultural notions of amputation and pain. Previous explanations of the immune system and long-term use of AIDS medicines primed some patients for the descriptions and treatments of cancer – which often seemed more harmful than helpful. Amputation, however, often involved greater considerations beyond mere mobility, often infuriating the oncologist who would yell, 'Life or limb!' Expressing pain was deemed culturally inappropriate and most patients accepted paracetamol (Panado) for pain management. Though morphine and codeine are inexpensive drugs, they were usually in short supply, leading Livingston to argue that biomedicine often overlooked issues of pain within the Botswana context by confusing cultural non-expressions of pain for indifference to pain. Like the invisibility of cancer, the global health movement concerns itself less with issues of pain partly because it does not measure it.

One can understand why Livingston was awarded a MacArthur Fellowship in 2013 shortly after the publication of this book. *Improvising Medicine* does what the best ethnographies do: it brings the reader in to bear witness to a terrible epidemic and to understand the perspectives of the various actors involved. But it also seeks to understand how the local and the global intersect, how local structural inequalities lead to lapses in global knowledge, and also how global ideas about the local impact research agendas as well as access to resources.

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