

disease attributable to trauma. Emergency care is a high-impact and cost-effective form of secondary prevention. In response, the World Health Organization (WHO, 2005), the World Bank (2007), and the African Federation for Emergency Medicine (AFEM, 2013) have advocated integrating pre- and in-hospital phases of trauma care to strengthen the trauma “chain of survival.” Experts reports that integrated care systems may reduce the burden of disease from trauma, but their prevalence in SSA remains unreported. The primary objective of this study is to determine the prevalence of complete trauma care systems in SSA, and secondarily, where incomplete trauma care systems exist, to categorize and describe those components.

Structure/Method/Design: Three investigators separately conducted a comprehensive review of published and “gray” literature using combinations of search terms, including “trauma, injury, trauma care, system, acute, emergency, emergency medical services, prehospital, road traffic injury, sub-Saharan, Africa.” Other inclusion criteria included publication year (2000-2013), and relevance to emergency and health care systems. Articles were categorized by country and by phase of pre- and in-hospital emergency care.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): 154 and 32 reports from the published and gray literature, respectively, satisfied the inclusion criteria. Five distinct phases of care emerged from the literature review: system activation, first-responder care, formal prehospital care, emergency transportation, and facility-based emergency/definitive care. Of 47 World Bank LMICs in sub-Saharan Africa, only one country, South Africa, reported the existence of trauma care systems with all five phases of care. The literature indicated the existence of fragmented, functional components or phases of trauma care systems in several countries, including Botswana, Ethiopia, Ghana, Nigeria, Kenya, Mauritius, Rwanda, Tanzania, Uganda, and Zambia. Examples of the phases identified include system activation (SMS text messaging, public transport vouchers, centralized toll-free access numbers), first-responder care (organized and informal community-based volunteers), prehospital care/transport (two-wheel, three-wheel, and four-wheel ambulances, air ambulances), in-hospital emergency/definitive care systems (accident and emergency centers/units).

Summary/Conclusion: Our review identified five distinct phases of trauma care operational in various systems across SSA. If meaningfully integrated in a locally appropriate manner, they could comprise an African trauma chain of survival. South Africa was the only country with all five functional and integrated components. Further advocacy and development for integrated trauma care systems are needed across SSA to help relieve the burden of disease from trauma.

The wooden skull: An innovation through use of local materials and technology to promote the teaching and learning of human anatomy

K. Mugagga; Kampala International University -Western Campus Uganda, Human Anatomy Department, Na, NA/UG

Background: The increasing numbers of medical institutions and medical professional students is a global reality which positively addresses Medical Education Partnership Initiative [MEPI] theme 1 [Increasing quantity and quality of health professionals] and more globally supporting the Mellenium Development Goals [4,5,6]. This, however, attracts major challenges particularly the facilitation of the teaching and learning processes which must deliver desired outputs like student centredness, more activity at the classroom level, and individualization among others [Harden RM & Laidlaw JM, 2012].

At present, large classes at medical institutions justify innovations like fabrication and utilization of wooden skeletal models as a sustainable mechanism in solving the problem of scarce and ethically restricted human teaching models.

Structure/Method/Design: Wood pieces [50-cm length and 20-cm diameter] were cut from a Jacaranda mimosifolia tree and prepared for the carving process. Six wooden models of human skull were fabricated by three wood carvists under guidance of one medical illustrator and three human anatomists. Two experimental groups of randomly selected biomedical science students [60 active and 60 control] were separately taught using wooden and natural skull models respectively and comparatively assessed using the standard natural skull specimen. The assessment used the standard traditional written, practical, and oral medical exams about the anatomy of the human skull.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract):

1. Six wooden skull models were produced and used for the experimental study with biomedical science students
2. The analyzed comparative scores between the active and the control groups showed no significant difference [$P \geq 0.05$]
3. More than 90% of the active group participants strongly approved the validity and reliability of the wooden skull model. some of the statements of approval were:

“The model has almost 95% of all features which are prominently clear thus can be ably used for learning” [Muramagi Nathan, MBChB 2.2, BMS/0299/113/DU]

“I find the carved skull easy to study and learn” [Kiggundu Paul, MBChB, 2.1, BMS/0003/113/DU]

“All major features are visible and easily identified, therefore can be used for study purposes” [Kabatabaazi M, MBChB 2.1, BMS/0024/113/DU]

“With this model every 2 or 3 students should have a model available for practice” [Sr.M.Evelyn N, MBChB,2.1, BMS/0252/113/DU]

Summary/Conclusion: The wooden skull model can perfectly be used to facilitate teaching and learning of the anatomy of the human skull

Defining the clinical role of adapted digital light field photography as a point-of-care tool in the treatment of Kaposi's sarcoma

G.R. Prager¹, J.M. Knapp², Y.-T. Liu³; ¹University of California-San Francisco School of Medicine, San Francisco, CA/US, ²Jefferson Medical College, Philadelphia, PA/US, ³University of California-San Diego, Cancer Genomes and Networks Program, La Jolla, CA/US

Background: In Mozambique, HIV-induced Kaposi's sarcoma (KS) is the most frequent form of malignancy seen at the Maputo Central Hospital (MCH). Point-of-care diagnostic tools are currently not employed in the treatment and monitoring of these patients; the efficacy of KS treatment is currently monitored visually and documented with written qualitative descriptions. Pre-treatment photographs are rarely taken to establish a baseline. A precise, quantitative method for measuring the course of KS after chemotherapy would improve the prognostic capabilities of the treating physician.

A clinical story may be told through the lens of a camera. As a proof of concept, our study proposed to determine the utility of a digital light field camera, a novel technology made by Lytro, at the bedside to track therapeutic responses to KS treatment.

Structure/Method/Design: Digital light field photography is capable of capturing a target at different focal lengths and thereby can