



Lessons learned from working in emergency departments in Cape Town, South Africa: A final-year medical student's perspective

To the Editor: During my final month as a medical student I worked in the emergency departments of a variety of primary/secondary hospitals as well as on a paramedic-based ambulance in Cape Town, South Africa. Having matched in Emergency Medicine at the UCLA-Olive View Medical Center Program, I was excited to gain exposure to the practice of my future specialty in a new country and see first-hand the differences between our systems.

South Africa's health care system consists of an 'under-resourced and over-used' large public sector and a private sector with abundant medical resources catering mainly to the middle and upper class.¹ The public health care system aims to ensure health care that is affordable and accessible to all. It is stratified into primary, secondary and tertiary hospitals. Patients usually present to the primary health care clinics in their respective districts and may be upgraded to a secondary or tertiary hospital depending on their medical needs. The emergency medical system (i.e. paramedic ambulances) may transport patients directly to any of these levels.

Lack of resources is a critical issue facing health care in South Africa, specifically emergency departments. However, I began to see a positive effect of this deficiency. While it has negative consequences in terms of patient care, it seems paradoxically to have had a significant positive effect with regard to general medical education and medical resident training. The challenge facing emergency medical physicians is to harness the system's positive effects while mitigating the negative.

The lack of medical resources affects patient care in many ways including significant delay in diagnosis. Whether waiting 2 days to obtain an X-ray of a suspected fracture because the radiology department is closed at night and over weekends, or telling a patient to return on Tuesday for a sputum culture to rule out presumed active tuberculosis because that is the only day available for testing – valuable time is wasted. Secondly, an obvious increase in morbidity and mortality seems to be correlated to this resource deficiency. Trying to intubate a patient with an unstable airway having a seizure using a benzodiazepine as the sole medication; suturing a patient's facial laceration with 2-0 silk since that was the only resource available, or watching a patient with a unilateral blown pupil secondary to massive head trauma denied access to a head CT scan, in which patient outcomes, which is the cornerstone in medicine, were significantly compromised, support this thesis.

Now let's examine the paradoxical effect these deficiencies have on medical education, especially physical assessment

and diagnosis skills. The medical residents rotating through the various trauma units that I worked in seemed to be very proficient in patient assessment and diagnostic skills that seem to have been lost among the plethora of lab tests and imaging studies available in the USA. For example, during a busy shift in one of the local trauma units, a patient presented with a 3-day history of vomiting and hand cramping. With no chemistry panel and ionised calcium level we had to rely on physical exam and a positive Chvostek's sign to diagnose and treat the patient's hypocalcaemia secondary to his metabolic alkalosis. In another instance, a resident used the presence of xanthelasmas on a dermatological examination and cholesterol deposits on funduscopic examination to diagnose a patient with hypercholesterolaemia without a standard fasting lipid panel. Though we learned about these physical manifestations of disease, we rarely look for them secondary to the comfort of our readily available diagnostic tests.

What insight has this experience given me with regard to improving our ability to be better clinicians in our emergency departments in the USA? Though a lack of medical resources has had a profound impact on the quality of patient care in South Africa, it has also stimulated the development and application of a variety of diagnostic skills essential to the practice of medicine.

I challenge my colleagues to treat their patients to the best of their abilities while remaining within the realm of their training. Don't order unnecessary tests, go back to the basics of those physical and diagnostic skills that we learned in medical school. When in doubt, order that MRI, CT, or chemistry panel. One of the greatest luxuries we have as emergency medicine physicians in the USA is immediate access to these resources when it is necessary. However, I am going to make a conscious effort to apply the valuable lessons learned while working in the trauma units of South African emergency departments.

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1. http://www.southafrica.info/ess_info/sitemap/#health