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7-Day treatment for acute pyelonephritis

The antibiotic resistance of Enterobacteriaceae, the most common cause of urinary tract infections, has increased worldwide. The treatment options are becoming increasingly few, necessitating the rational use of the available antibiotics. An important way to tackle antibiotic resistance is to reduce antibiotic consumption—e.g., by shortening the duration of treatment. In a recent randomised control trial in Sweden, women (aged ≥18 years) who were not pregnant and had a presumptive diagnosis of acute pyelonephritis were randomly assigned to oral treatment with 500 mg ciprofloxacin twice daily for 7 days or 14 days. Cumulative efficacy at long-term follow-up was equal in each group showing that acute pyelonephritis in women, including older women and those with a more severe infection, can be treated successfully and safely with oral ciprofloxacin for 7 days. Short courses of antibiotics should be favoured in an era of increasing resistance.

Ciprofloxacin for 7 days versus 14 days in women with acute pyelonephritis: a randomised, open-label and double-blind, placebo-controlled, non-inferiority trial. Lancet 2012. doi: http://dx.doi.org/10.1016/S0140-6736(12)60608-4.

Developing prehospital care systems in Africa

Injury and other medical emergencies are becoming increasingly common in low- and middle-income countries (LMICs). Many to most of the deaths from these conditions occur outside hospitals, necessitating the development of prehospital care systems. A survey of emergency medical service (EMS) leaders and other key informants in 13 LMICs in Africa, Asia, and Latin America showed that commercial drivers, volunteers, and other bystanders provided a large proportion of prehospital transport and occasionally also provided first-aid in many locations. The most frequently cited barriers to further development of prehospital care were inadequate funding, lack of leadership within the system and lack of legislation setting standards. Expansion of prehospital care in these regions could make use of the already-existing networks of first responders by increasing their effectiveness, such as more widespread first-aid training, and better encompassing their efforts within a formal EMS system.

Research led efficacy of EDs in developing countries

The emergency department (ED) is an essential component of the medical service offered in any hospital. Yet, the published information about patients’ profile and utilization of emergency services in both developing and developed countries is scarce. In this descriptive study of a university-based tertiary paediatric hospital ED in Egypt, the main presentation was respiratory distress and wheezy chest, followed by convulsions and then pallor. Long-term illnesses were predominantly congenital heart diseases, cerebral palsy, chronic haemolytic anaemia, and asthma. The overall mortality rate was 0.8%. Appropriate and ongoing data collection and analysis could guide more efficient utilization of paediatric emergency services to achieve better outcomes.

Profile of patients visiting the paediatric emergency service in an Egyptian University Hospital. *Pediatr Emerg Care* 2012;28(2):148–52.

Starch vs. Ringer’s acetate in severe sepsis

Intravenous fluids are the mainstay of treatment for patients with hypovolemia due to severe sepsis. Colloid solutions are used to obtain rapid and lasting circulatory stabilization, but there are limited data to support this practice. The Surviving Sepsis Campaign guidelines recommend the use of either colloids or crystalloids, but high-molecular-weight hydroxyethyl starch (HES) may cause acute kidney failure in patients with severe sepsis. In a Scandinavian study done between 2009 and 2011, patients 18 years of age or older who needed fluid resuscitation in the ICU and who fulfilled the criteria for severe sepsis were screened and randomized to receive HES 130/0.42 or Ringer’s acetate. Patients who received HES 130/0.42, as compared with those who received Ringer’s acetate, had an increased absolute risk of death at 90 days by eight percentage points. They were more likely to receive renal-replacement therapy, and had fewer days alive without renal-replacement therapy and fewer days alive out of the hospital.


CPR training in Botswana

One third of the global deaths each year are from cardiovascular diseases, yet no strong evidence supports any specific method of CPR instruction in a resource-limited setting. Hospital-based healthcare providers (HCP) in Botswana were prospectively randomized to three training groups: instructor led, limited instructor with manikin feedback, or self-directed learning. Acquisition of knowledge and CPR skills following initial training using standard or modified programs was good, and 100% reached acquisition of CPR skill competence on the day of training, however 65% required remediation prior to achieving minimal skill competence. Interestingly, novel training with feedback was not inferior to traditional training. Self-directed learning (SDL) was not intended for the novice learner, yet in this environment both SDL and a student to instructor ratio of 18:1 demonstrated significant CPR knowledge and skill acquisition and retention. Cost effective training strategies and devices should be developed to fill the resuscitation-training gap for HCP that exists in resource limited settings.


Trauma in Tanzania

Traumatic injuries represent a significant and growing disease burden in the developing world, and now represent one of the leading causes of death in economically active adults in many low- and middle-income countries (LMICs). Despite the disproportionate numbers of death and disabilities caused by injuries in LMICs, the burden of disease resulting from these events has been largely under-reported in the emergency medicine literature. Recent research from Moshi, Tanzania indicates that road traffic injuries were the major mechanism of injury in patients presenting to the Kilimanjaro Christian Medical Centre casualty department. Falls and assaults were the second and third most common cause of injuries. Although burns accounted for a small percentage of patient injuries, they are of particular concern in children less than 5 years of age, who suffered 45.5% of all burns. Injury prevention and improved quality of emergency care for injured patients necessitate an understanding of the local prevalence, contributing mechanisms of injury and their resulting impact on patients, families and the broader health care system on which they depend.


Mass casualty incident training in Sierra Leone

A mass casualty incident (MCI) occurs when a sudden calamitous event bringing great damage, loss, or destruction involves a large number of injured people, overwhelming the capacity of local emergency medical services. Disaster preparedness, including the capacity and ability to care for multiply injured patients, is a valuable and essential responsibility of healthcare providers. A collaborative effort between a New York-based non-governmental organization and the Sierra Leone Office of National Security led to the development of a 2-day MCI workshop designed to meet needs specific to their resource-limited environment. During the drill, the following problems were identified in the prehospital setting: overcrowding, unanticipated bystanders, limited entrance and exit sites to the stadium, quantity of smoke from the fire, and the need to temper enthusiasm for staging a realistic yet potentially dangerous fire as a training event. Problems identified in the hospital setting of the mock event included triage sites that were inadequate. Logistical training, rather than medical skills or knowledge, was identified as the educational priority. Pre-existing MCI programmes based on first-world logistics did not account for challenges encountered when caring for casualties in resource-constrained settings. Some principles of disaster training in the developed world can be adapted for use in low- and middle-income countries; these include fundamentals such as leadership, planning, communications, peak operations sustainability, interagency cooperation and funding. Often, with proper resource allocation, effective triage and proper patient management, better outcomes can be obtained.

Family witnessed resuscitation in Africa

The concept of family witnessed resuscitation in Africa is one that is rarely practiced. In the majority of cases family members are ushered away from the resuscitation area. Consequently, the healthcare provider in the African health sector is relatively inexperienced in family witnessed resuscitation. A study done in South Africa explored and described the perceptions and opinions of a select group of critical care nurses regarding family presence during resuscitation. Some of the objections raised by the nurses included; the potential traumatic effects that it could have on the family; concerns that family members might interfere with resuscitation efforts; fear that their own shortcomings might be exposed to family members should they observe resuscitation attempts; family members may misinterpret issues pertaining to resuscitative efforts; the physical space at the bedside would be inadequate; it is norm to ask family members to leave the resuscitation area, in part due to habit, and thus could be preventing family members being invited to the bedside; lack of policy guidelines may be acting as a barrier to allowing and facilitating nurses to invite family members to witness resuscitation. With changing times, an awareness of the international trends with regard to family witnessed resuscitation should be created. In addition to this, the skills needed for the implementation of family witnessed resuscitation should be introduced and policy direction should be based on the benefit and guidance for family witnessed resuscitation.

Perceptions and opinions of critical care nurses regarding family presence during resuscitation. <http://wiredspace.wits.ac.za/handle/10539/10938>; [accessed 01.08.12].