February 2008

The need for formal paediatric resuscitation training in Pakistan.

Adina R.
Aga Khan University

Sheikh Sajjad
Aga Khan University

Junaid Razzak
Aga Khan University, junaid.razzak@aku.edu

Editorial

The Need for Formal Paediatric Resuscitation Training in Pakistan

Adina R. Sheikh-Sajjad, Junaid A. Razzak
Department of Paediatrics, Aga Khan University Hospital, Karachi.

More than 10 million children die each year before their fifth birthday and almost all of these children are from the low income countries (LICs).[1] In Pakistan alone more than half a million children under five die every year. Multiple factors contribute to these alarming figures including poverty, illiteracy, poorly integrated primary care, patchy emergency services and low quality of hospital based care.[2,3] The focus of many of the current efforts is to improve care at the primary/district level through educational/training programmes and structural changes, such as Integrated Management of Childhood Illness (IMCI) introduced by WHO/UNICEF[4] and Emergency Maternal and Child Health Program (EMCH) of the Advanced Life Support Group, UK, Child Advocacy International, WHO and the Government of Pakistan.[3] While these programmes address important weaknesses in the system, the hospital care, particularly the emergency care of children in the hospital settings, remain neglected. A study carried out in 7 developing countries, revealed an inadequate triage system, substandard, delayed and inappropriate assessment and treatment along with insufficient monitoring.[5] Another study in Malawi revealed inadequate triage resulting in avoidable deaths.[6] Although we have sparse data from Pakistan addressing these issues, it is safe to assume that situations are mirrored.

The purpose of initial emergency medical care is stabilisation of patients with life or limb threatening injury or illness. Although there is no data directly linking favourable outcomes with good quality emergency care, the issue of quality of paediatric care in peripheral hospitals in developing countries has been raised by the Paediatric Quality Care Group.[6] Nolan concluded that good quality hospital care is crucial for reducing child mortality.[5] It is expected that improvements in triage, diagnosis and treatment guidelines, appropriate monitoring and follow up may reduce case fatality and iatrogenic complications, thus reducing the burden of disease in society.[2]

In Pakistan, data regarding the epidemiology of children attending emergency rooms requiring resuscitation is virtually non existent. However few studies reported from Pakistan do indicate the burden of seriously ill and injured children. A study conducted at the Children's Hospital in Islamabad over three months admitted 192 children with serious injuries.[7] Another study in Karachi observed that 1320 injured children were transported over a three year period to hospitals by the main provider of emergency medical transport.[8] Similarly a study from Lahore reported 346 cases of acute poisoning out of 37000 paediatric emergency room attendances in a five year period.[9] These figures extrapolated to the Pakistani population of under 18s (73 Million) are phenomenal.[1]

General acceptance is critical that paediatric resuscitation skills are essential for everyone involved in providing paediatric care. Only then can paediatric resuscitation skills be incorporated into the graduate and post graduate medical curricula.

Currently worldwide, successful educational strategies used in teaching and learning paediatric life support are in the form of short intensive courses over one to three days e.g. Paediatric Advanced Life Support (PALS) provider courses, concentrating on cardiac emergencies and Advanced Paediatric Life Support provider courses (APLS) taking a wider view and teaching cardiac as well as non cardiac paediatric emergencies. These were introduced to teach resuscitation in a structured, universally accepted approach.

. APLS/PALS type courses may be introduced but the content of such training should be relevant to our local needs. IMCI has developed a guide with regard to the most common presenting childhood illnesses in the developing world.[4] A study from Chandigarh, India, analysed 43800 paediatric emergency room visits over six years, and highlighted the variable epidemiology of childhood emergencies.[10] Comparison of such data reveals the course content of the APLS to be valid in its entirety but certain alterations are required to be completely relevant to our population.

The question remains as to how and who will implement this. There are two major considerations. Firstly is the establishment of a central body, such as a Resuscitation Council, to set standards and co-ordinate the processes. Secondly, training needs to be made a statutory requirement for it to be taken seriously.

Establishing a resuscitation council is a Herculean task. Such a council would not only oversee paediatric

resuscitation training but also adult resuscitation. It would comprehensively look over all the healthcare institutes with regards to providing an effective resuscitation service, ensure adequate training of the staff, and ensure appropriate equipment availability, financial planning, and continued reappraisal of standards and protocols.

Who would constitute this council? Representatives from the Ministry of Health, members dealing with emergencies from all major health care institutes (private and public sector as well as the military establishments), representatives from Pakistan Medical and Dental Council and CPSP Pakistan.

How would the council target the required population? The established institute CPSP can enforce this legislation to its postgraduates. For the remaining medical practioners, keeping in mind the limitations of medical graduates obtaining PMDC certification on the day of graduation and not all graduates receiving post graduation training, the task becomes complicated. The PMDC is slowly moving towards the introduction of Continuous Medical Education (CMEs) for its registrants. Resuscitation training can become a part of this. Additionally, the PMDC would have to intervene at the undergraduate level and establish relevant resuscitation training as a part of the medical curriculum.

The major question is the availability of funds. Costs will be incurred at every step from the establishment of the council to the training and beyond. Governmental as well as external agencies will have to play a role.

These efforts will be sustained by dedicated clinicians and governmental and external agencies. However the common denominator is valuing its importance.

Critically ill and injured children are dying because a substantial number of staff treating them have received no formal training in resuscitation. These lives may be saved by our collective efforts. The changes required need acceptance by all stakeholders including the government, governing and certifying bodies, health care institutions both private and public and most of all the doctors handling these very fragile lives.

References:

1. UNICEF- the State of the World's Children 2005, www.unicef.org/swoc05/english accessed May 2006.
2. Razzak JA, Kellermann AL. Emergency medical care in developing countries: Is it worthwhile? Bull World Health Organ 2002; 80: 900-5.
3. Hafeez A, Riaz R, Shah SU, Pervaiz J, Southall D. Integrating health care for mothers and children in refugee camps and at district level. BMJ 2004;328:834-6.
4. Gove S. Integrated management of childhood illness by outpatient health workers: technical basis and overview. Bull World Health Organ 1997; 75: S7-24.
5. Nolan T, Angos P, Cunha A, Muhe L, Qazi S, Simoes EA, et al. Quality of hospital care for seriously ill children in less developed countries. Lancet 2001; 357:106-10.
6. Duke T, Tamburlini G, Silimperi D. The paediatric Quality Care Group, Improving the quality of paediatric care in peripheral hospitals in developing countries. Arch Dis Child , 2003; 88: 563-5.
7. Singer MS, Ghaffar A. Risk factors for road traffic injury in Pakistani children. J Coll Physicians Surg Pak 2004,14: 709-12.
8. Razzak JA, Luby SP, Laflamme L, Chotani H. Injuries among children in Karachi, Pakistan--what, where and how. Public Health 2004;118:114-20.
9. Hameed MH, Butt T Baloch GR, Maqbool S. Acute poisoning in children. J Coll Physicians Surg Pak 2005, 15: 805-8.
10. Singhi S, Jain V, Gupta G. Paediatric emergencies at a tertiary care hospital in India. J Tropi Pediatr 2003; 49:207-11.