Pediatric Emergency Medicine Course (PEMC)
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Pediatric Emergency Medicine Course (PEMC)

Excellence in specialized pediatric emergency care to get kids back on track

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Dedicated
to
All nurses and
physicians who care for the critically ill child
in resource limited settings
Lead me from the untruth to the truth!
Lead me from darkness to light!
Lead me from death to immortality!

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Stridor
Asthma
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Septic Shock
Anaphylaxis
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Status Epilepticus
Cardiogenic Shock
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Rajesh Balakrishnan  DCH (2005)  
N Kumar  MD (2006)  
Rajendran  MD (2003)  
Arun Kumar  DCH (2007)
Foreword

Pediatric emergency medicine is a mature discipline that has been around for over 3 decades. It is becoming a popular subspecialty for many pediatricians due to the recognition of its importance in the care of the most vulnerable children. The growth and maturity of the discipline is fuelled by enlightened emergency medicine practitioners who have shifted the emphasis to the team concept within the department while also participating in transport programs for the critically ill, outreach education, and as a resource for community practitioners. Hospitals are also recognizing the importance of pediatric emergency departments as the showcase of the hospital, the area where the greatest number of patients are treated and where there is the potential to do the greatest good.

Like politics, emergency care of children is “local” and depends on adaptation to the available resources and practice environment. It is therefore appropriate that those who take care of an enormous volume of patients in a unique environment share their experience and expertise. This is an attempt to do just that. This book consists of 31 chapters relating to common life-threatening emergencies and procedures that form the core of emergency medicine. The first chapter is an appropriate launching pad for this valuable text and addresses the recognition of critical illness in the emergency department. It is then followed by some discussion of common conditions such as respiratory distress and failure, stridor, asthma, shock, multi-system trauma, and status epilepticus. These diseases are encountered in children worldwide but the unique contribution of these authors is that they bring their local perspective to diagnoses and treatment. Other chapters such as poisoning, stings and bites, and fever syndromes discuss conditions that are unique to patients seen in India. The book also contains practical tips for common procedures that should be within the armamentaria of the emergency physician and concludes with a chapter on how to set up an emergency service.

You might ask why another manual in emergency medicine? This book differs from others in that it bears relevance to countries and situations in which there are limited resources. Chapters are succinctly written and usually start with a short realistic case scenario. They include flow charts that are easy on the eyes and the key points in each chapter provide valuable nuggets for those working in similar environments. It has been said that “a picture is worth a 1000 words”, and the illustrations in this book certainly attest to this aphorism. The illustrations clarify issues and make relevant points to supplement the text material. One gets the impression that those who are writing the chapters are experts and spend considerable time practicing in pediatric emergency departments. Therefore, this is not just another textbook but a unique contribution that provides a perspective that others do not.

This valuable text should be on the shelves of all health care workers who are involved in the emergency care of the ill and injured child. For those in the developing world it contains useful information to provide care for children in situations where resources are limited. Those in the developed world can learn useful techniques that are cost effective and can be easily adapted to their environment.

The ultimate beneficiaries of this book should be the most vulnerable children in resource limited environments. It provides time sensitive and practical suggestions to treat common problems. The authors have every reason to be justly proud of their efforts.

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“Excellence in specialized pediatric emergency care to get kids back on track”

Few situations in a pediatrician’s practice evoke the anxiety and panic which accompanies the management of an acutely ill child. The Pediatric Emergency Medicine Course offers a structured approach to handle the crisis using a time sensitive, goal directed approach during the initial “golden hour” of critical illness.

Conceived by Dr S Krishnan, a pilot course was conducted in 1999 with the collaboration of the emergency and intensive care physicians of the Kanchi Kamakoti Childs Trust Hospital and the Institute of Child Health, Madras Medical College, under the auspices of the Indian Society of Critical Care Medicine (ISCCM) - Chennai Chapter. Since then the content of the course has undergone tremendous changes as international resuscitation guidelines evolved providing better standards of care. In 2006, this course was formally copyright to the ISCCM Chennai chapter.

At the 5th National Pediatric Critical Care Conference, executive body meeting of the Indian Academy of Pediatrics-Critical Care Chapter held at Surat in October 2003, it was suggested the PEMC manual be re-written with evidence based guidelines. This was not easy. Most resuscitation guidelines are based on work published in Western centers. Do these protocols work for us? Evidence is sparse in the Indian context! Using international guidelines as a prototype, protocols were modified to suit realities of a large volume Emergency Department of a public children’s hospital with little access to resources and advanced technology. Surprisingly, implementation of these modified protocols over the last ten years resulted in mortality rates to levels almost on par with developed nations in life-threatening pediatric emergencies.

This is of special relevance in our country, where the vast majority of critically ill children, do not have access to appropriate pre-hospital emergency medical services, specialist retrieval teams and advanced intensive care facilities.

Where critical care often evokes thoughts of advanced technology involving expensive resources this message is of paramount importance.

Emergency medicine also involves the ability to take quick and accurate decisions in life-threatening pediatric emergencies. To assist novice residents to take acceptable lines of action quickly in critical illnesses, this manual elucidates a structured method of fitting the findings of the cardiopulmonary assessment into the pediatric assessment triangle, understanding the physiological status and making the optimal therapeutic decision in the first hour of resuscitation in the absence of biochemical or radiological support.

While academicians may feel that the methods published in this manual may not have been validated in other centers, this approach has dramatically improved survival at the ED of the Institute of Child Health, which receives and resuscitates the largest volume of pediatric emergencies in the planet!

Indumathy Santhanam
Acknowledgements

It is well known that no one does anything that matters alone. The Pediatric Emergency Medicine Course Manual and the course are no exceptions. I am grateful for all the talented people who made this journey possible. They have been great partners and many have become good friends.

Dr Jayanthi Ramesh, provided the spring board from which the PEMC catapulted in to a highly successful course. Her unswerving ethical stand and guidance even while battling a deadly illness, on the various issues related to the course have ensured that we grew from strength to strength.

I thank Dr Shanthi Sangareddi for her constant encouragement in conducting this course. Her tireless efforts in proofing earlier editions while contributing important chapters has played a huge role in improving the content of this manual.

I am grateful for the intellectual inputs of Dr Suchitra Ranjith, who despite enormous personal commitments would immediately respond to an urgent call for assistance not only in scientific content but also in patient related critical care issues of the Institute of Child Health, Chennai.

I feel blessed and grateful to have so many remarkable young critical care physicians, Drs Anjul Dayal, Natwar Sharma, Narmada Ashok, Shrishu Kamath, Samarth, Shiv Kumar who participate as faculty in this course.

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I am indebted to Dr R K Kasthuri, Former Head of Department of the Emergency and Intensive Care and Director of the Institute of Child Health- Madras Medical College, for her unwavering support for the provision of emergency care of the critically ill child reaching a public children’s hospital.

A physician can save the few lives that he or she encounters during duty hours. But ER friendly policies by administrators can save the lives of the innumerable critically ill children who reach its threshold. This department owes its growth in the government sector to the efforts of various Directors and Heads of Department of the Institute of Child Health over the last decade.

I also wish to thank Dr Shridar, Medical Director and the senior consultants of Kanchei Kamakoti Childs Trust Hospital for their whole hearted support in conducting the course from its inception. The KKCTH provided an ideal venue for the course with its state of the art Pediatric Emergency and Intensive Care Departments. Delegates from the far nooks of the country enjoyed not only its hospitality but also its scientific environment.

Unfortunately, I never had an opportunity to thank Dr Vijayalakshmi Kamath, Head of Department Anesthesia and Intensive Care, Sri Ramachandra Medical College and Research Institute and Organizing Chairperson of Criticare–Chennai 2006, National Conference of the Indian Society of Critical Care Medicine, for her generous and outspoken words of encouragement at the eve of release of the up dated manual in February 2006.

Lessons learnt over the last decade should reach physicians far outside the walls of the ED of The Institute of Child Health, Chennai. I wish to thank my father, mother, Kichhamma, Subbappa, Subhashini, Ramesh and LG Varshini for assisting me in achieving this goal.

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