

## Hospital Care for Children in Developing Countries: Clinical Guidelines and the Need for Evidence

Throughout most of the world, nurses, paramedical workers and non-specialist doctors provide the care of critically ill children who present to hospitals. While most seriously ill children in developing countries present to district and peripheral hospitals, a large proportion of hospital funding and resources is allocated to tertiary institutions. As a consequence, most critically ill children are cared for where resources are inadequate, support from central agencies is lacking, there is poor access to information, there is little ongoing professional development or staff training, and staff morale is invariably low. The quality of care provided in these hospitals has an impact on the health and lives of millions of children each year. Until relatively recently, little attention was paid to this issue, perhaps because many children in developing countries die before reaching hospital, or due to concern that promoting hospitals might detract from primary care. Whatever the reasons, the quality of paediatric care in peripheral hospitals has been somewhat neglected by many organisations. With recent evidence that there is considerable scope for improvement [1, 2], there is a need for a serious coordinated global approach and locally appropriate interventions. Improvements in triage, diagnosis, treatment guidelines, supportive care, monitoring and follow-up would reduce hospital mortality and iatrogenic complications. These are public health as well as clinical problems; and demand approaches that can be brought to national scale [3].

In recent years the World Health Organization (WHO) has produced clinical guidelines for paediatric hospital care in developing countries. These have been developed in an attempt to provide up-to-date recommendations for management in settings that have limited resources. These guidelines include the publication: *Management of the Child with a Serious Infection or Severe Malnutrition: Guidelines for Management at a District Hospital* [4], and the new *Pocket Book of Hospital Care for Children* [5], for use by doctors and nurses in settings where resources are limited. In addition to serious infections and malnutrition, the *Pocket Book* also includes topics such as neonatal care, surgical problems, injuries, poisoning and others. These guidelines are an extension of IMCI, bringing these principles to

the setting of a hospital of first-referral level, and focusing on the in-patient care of children seriously ill enough to be referred by IMCI primary care guidelines.

These hospital guidelines are increasingly being adopted by Ministries of Health, often after adaptation to local needs. The first WHO manual mentioned has been translated into French, Spanish, Russian, Arabic, Chinese, Indonesian, Pashtu and Persian. It is used in several African countries, Fiji, the Solomon Islands, Vietnam, Indonesia, Cambodia, Kazakhstan, Uzbekistan, Moldova, Russia, and elsewhere. Treatment recommendations are consistent with the WHO Essential Medicines programs, the best available evidence from research in developing countries, and require only basic laboratory investigations that are available in most small hospitals (such as full blood examination, blood slide for malarial parasites and CSF microscopy).

There have been substantial falls in case fatality rates where such hospital guidelines have been introduced when accompanied by training, audit or other quality improvement measures. Implementation of WHO guidelines for the management of severe malnutrition [6, 7], oxygen delivery [8], and neonatal care [9] have substantially reduced case fatality rates in hospitals in several developing countries. Emergency triage and treatment approaches, included in the WHO guidelines, are effectively used by nurses to identify and manage seriously ill children in busy outpatient departments in developing countries [10, 11].

In considering whether to adopt such guidelines, paediatricians and ministries of health often ask about the reasons for one treatment being recommended over another. Uncertainty about the most appropriate and cost-effective form of management for common conditions can be an obstacle to adoption and implementation. In some countries local protocols have existed that contain recommendations that are outdated, ineffective or potentially harmful. Changing national or hospital treatment policies is a process that requires weighing evidence for and against, in the context of local resources and specific needs.

To assist in the global implementation of these guidelines, the WHO has developed a collaborative project to document the evidence behind recommendations for paediatric care in hospitals with limited resources. Short reviews on important or controversial topics will be published on the WHO web-site (<http://www.who.int/child-adolescent-health/publications/pubCNH.htm>), serialized in the *Journal of Tropical Paediatrics*, and published in a hard copy booklet in the future. The aim is to make this evidence as widely available and as cheaply as possible. The first of these reviews, on the choice of first line antibiotics in sepsis in children, is published in this edition of *Journal of Tropical Paediatrics*.

You may be interested in contributing a review to this collaboration or suggesting questions that require addressing. The starting point is the WHO clinical guidelines, as outlined in the *Pocket Book of Hospital Care for Children*. We will provide contributors with a copy of the WHO Pocketbook, a standardized framework for searching and presenting the evidence, and a clinical question for which evidence would assist national programs implementation and uptake. After contributors submit a draft of the review, we then ask content experts to review them before publication.

This project shares several things with Cochrane systematic reviews, but it has clearly defined scope in terms of topics and the target setting, it uses a widely available search strategy ('Clinical Queries' in Pubmed), and the reviews are short summaries of the evidence. These reviews will be updated regularly, and will form the resource needed by WHO to modify treatment recommendations as new evidence is published.

We hope that wide involvement in this project will raise awareness of the importance of the WHO Pocket book and other evidence-based clinical guidelines. It will also assist in measuring the appropriateness of local treatment recommendations, and highlight the value of evidence in improving the quality of clinical care.

We hope you enjoy reading the brief reviews in each edition of *Journal of Tropical Paediatrics*. Should you be interested in contributing please contact Dr Julian Kelly: [julian.kelly@rch.org.au](mailto:julian.kelly@rch.org.au).

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