

ease of teaching CPR rather than actual evidence-based treatment priorities. Although there are definite differences in the techniques and interventions for paediatric CPR, the adoption of some of these techniques is based mainly on adult studies.

In the teaching of basic CPR, studies have shown that it is difficult for laypeople to recognise an absent pulse or detect presence of pulse. Hence, as in adult CPR, the circulation check now involves teaching laypeople to recognise signs of circulation rather than for the presence of pulse. Again, because of the ease of teaching, chest compressions are taught as a techniques to remove foreign body in an obstructed airway.

In advanced paediatric CPR, most changes follow those of the adults. One of the notable changes is the use of amiodarone in the treatment of arrhythmias. Studies in children are limited mainly to its use in postoperative cardiac arrhythmias. But, amiodarone can affect sterility in growing boys, and a lethal complication described as the "gasp syndrome" have been described in neonates.

In the resuscitation of the newly born, recommendations to the start of chest compressions and administration of intravenous adrenaline have been simplified for easier teaching.

Teaching CPR in children continues to emphasize the need to pay attention to airway and breathing.

**Keywords:** amiodarone; cardiopulmonary resuscitation; circulation; CPR; gasping syndrome; pediatric; resuscitation

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## 2.11. Information Technology: The Way of the Future

### Information Technology and Emergency Medicine: Present and Future

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The two elements that make information technology (IT) attractive, with regard to data, are speed and storage. Traditionally, the emergency department is the logical place for the treatment of acute illness and injuries. However, with the increasing awareness of the health care status of the individual, the demand and expectations from the public have increased tremendously in the past few years. Emergency departments face a constant increase in workload and episodic increase in attendance. Various methods have been used to cope with the additional workload. Information technology is an enabling tool to improve the efficiency of the emergency operating system.

Currently, the application of IT in emergency medicine usually starts with administrative and managerial systems.

Clinical applications were developed on top of these administrative systems and infrastructures. Currently, many emergency departments in the world already have begun to capture patients' data into an electronic medical record in digital format. These clinical data include the diagnosis coding, medications, and discharge summary. Supportive clinical information also are available, such as the laboratory, diagnostic imaging, and electrocardiogram reports. Images could be retrieved in computer workstations through the use of Picture Archive Communication System (PACS) technology.

In the near future, expert systems commonly will be employed on top of the clinical information systems so as to enhance the decision support for emergency physicians. Global sharing of clinical data will be the future trend. Development of e-business for electronic transactions and interactions between health care providers will become the primary driving force for e-medicine. The improvement in international broadband networks such as Gigabit Switch Router (GSR), Asynchronous Transfer Mode (ATM), and the Internet 2 technology will enhance the data transmission speed. Wireless workstations using the wireless Local Area Network (LAN) in IEEE 802.11b standard and Bluetooth technology will be the coming trend. Mobile phones using 3G technology will be very helpful in pre-hospital care and disaster field management.

**Keywords:** data; data storage; emergency department; information technology

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### Medical History in an Emergency: Tapping Information Technology

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LifeMedic is an on-line personal medical history record system developed to help reduce the number of preventable medical errors made every year due to inadequate patient information. Using this system, doctors can retrieve important patient history in LifeMedic using the internet, telecommunication (facsimile and WAP-enable hand-phone), and wireless communications (personal digital assistant devices) technologies. LifeMedic allows timely access to information on critical illnesses, past surgery, current medications, and allergies to facilitate quick and accurate diagnosis, and help doctors optimise treatment of patients in an emergency.

LifeMedic is developed for simple and quick access in an emergency. For the non-medical community users, LifeMedic's webpages are designed to be user-friendly, easy to understand, and simple to navigate. LifeMedic is multi-lingual for worldwide use.

LifeMedic provides a 24-hour emergency medical and travel advisory services to its members when they are overseas. LifeMedic also promotes healthy lifestyles and fitness for disease prevention and personal well-being amongst its members through online and offline health education programmes.