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The human rights of children with reference to child protection

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It is imperative to place the needs and rights of children as the central concern. This paper will set the context of safeguarding practice in terms of the universal and targeted services available to improve the well-being of children and recognise and respond to indicators of abuse. This will be set within the legislative and policy framework to achieve a sense, not only of child protection services and processes but also the supportive services and measures that can be put in place for families to prevent abuse. Rights can be defined and adhered to differently depending upon context, location, interpretation and availability. Banks (2006: 104) emphasises the broad nature of the term, referring to a range of claims, liberties, powers and relationships. Meagher and Parton (2004: 24) suggest that justice and rights are compatible and even indispensable to each other. Justice and respect are noted as key components of social care practice. However justice in terms of an individual's rights to care for example, is often necessarily balanced against the availability of resources and number of people in need in a form of distributive justice, meaning that needs are determined by service availability that may be incompatible with principles of social care. Balancing the needs of various individuals within a scenario is also a dilemma for practitioners, particularly within a safeguarding context where addressing parents or carers' needs could impact positively on the care of children; however this must not be to the point of being detrimental to the child's well-being.

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Automated screening of pediatric congenital heart diseases

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A pediatric cardiologist can often make a distinction between healthy and sick hearts in children relying on his personal information and experience gained through work. Expert systems, also known as a knowledge based system, are computer programs containing the knowledge and analytical skills of one or more human experts, related to a specific subject. To that effect, these systems simulate human brain and design the diagnostic methods based on the function of the brain. A doctor's experience is compared with databank in an expert system and his analysis based on his information about the heart physiology and related diseases are likened to processing methods. A computer system expected to distinguish unhealthy hearts in children, needs a databank containing all congenital heart diseases and signals emitted from healthy hearts. Statistical analysis shows that around 1% of children are born with congenital heart disease that counts for about 10% of all congenital anomalies. While as many as 70% have asymptomatic extra sounds which are sometimes confused with pathological heart sounds during auscultation. Moreover, the incidence of diseases differs and some of them rarely occur. For instance, Tricuspid Atresia are seen in one percent of children with congenital heart diseases, roughly 10,000 children have to undergo testing for having a databank containing only one type of this disease. A study in Johns Hopkins University, showed that the screening accuracy in pediatrics cases is as low as 40% in family doctors. Based on our unique and internationally patented processing method on murmur characterization, the Arash-Band method, an original intelligent digital phonocardiograph is developed. The results show that, the screening accuracy of the intelligent phonocardiograph is by far higher than the accuracy of a typical cardiologist who invokes conventional or computer-assisted auscultation. The intelligent phonocardiograph can be employed as a clinical device in hands of nurses or practitioners to increase the screening efficiency.

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