

Phone based development of kids with epilepsy: Comparison of exactness between a claim to fame nurture and a pediatric nervous system science individual

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Background

Childhood epilepsy forms a significant burden on the health-care delivery system. Only a few pediatric neurologists available in most of the developing countries and caregivers face a lot of financial and logistic hardships, apart from a long waiting period for initial and follow up visits. Telemedicine is a proposed effective alternative in overcoming this burden.

Methods

Telephonic consultation by a pediatric neurology fellow was compared with that of a specialty nurse; both against face-to-face consultation (gold standard). Care-givers of children 4 months-18 years with epilepsy were telephonically consulted 24–48 hours before their scheduled hospital appointment by one specialty nurse and one pediatric neurology fellow at least 24 h apart in a random sequence. During the hospital visit, another pediatric neurology fellow blinded to the telephonic consultation, documented the same after Face-to-Face interview.

Results

In 141 children with epilepsy, 504 critical clinical events were identified. Telephonic consultation by pediatric neurology fellow had a sensitivity of 99 %, 97 %, and 100 % and specificity of 100 % each in detecting whether the child had any breakthrough seizure, any adverse event and whether the drug compliance was adequate or poor respectively, as compared to face-to-face consultation. Telephonic consultation by specialty nurse had a sensitivity of 91 %, 84 %, and 98 % and specificity of 97 %, 99 %, and 81 % in detecting whether the child had any breakthrough seizure, adverse event and whether the drug compliance was adequate or poor respectively. But the specialty nurses fared poorly in identifying atypical seizure semiologies like atonic and myoclonic seizures and documenting an exact number of breakthrough seizures, as well as few subjective adverse effects like behavioral abnormality and scholastic worsening, which was performed excellently by the pediatric neurology fellow.

Conclusions

Telephonic consultation in childhood epilepsy by pediatric neurology fellow has excellent sensitivity and specificity. A specialty nurse has also acceptable sensitivity and specificity in comparison with a face-to-face consultation.