Redesign the Care Process of Epilepsy Paediatric Patients To Increase Caregiver’s Epilepsy Management Knowledge

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Introduction

Epilepsy is common in Singapore children (incidence of 25 per 100,000 person-years) [1]. It has significant impact on caregivers and patients, especially at seizure onset and diagnosis [2, 3]. Accurate information and counseling at the point of diagnosis promotes coping and long-term adjustment skills and reduces misconceptions [3, 4]. Currently, caregivers of newly diagnosed children with epilepsy do not receive standardized epilepsy counselling tool, resulting in poor caregiver knowledge retention and repeated epilepsy management-related enquires. Prior studies identified education as crucial to improve compliance [5]. The aim is to implement a standardized epilepsy counseling tool to increase caregiver knowledge on epilepsy and seizure management.

Methods

The current care process comprises verbal instructions by multiple healthcare providers.

Solution: Design and implement an Epilepsy Action Plan (EAP) to improve caregiver knowledge retention of Epilepsy & Seizure Management and aid empowerment (See figure 1).

Unique design for:
1. Standardized counseling
2. Easy to read, with step-wise instructions
3. Literacy-friendly colour printed pictorial guide on:
   i. Epilepsy medication usage
   ii. First aid seizure management
   iii. Emergency medication administration

Measure:
1. Caregiver knowledge score - before and 2 weeks after implementing the EAP.
2. Satisfaction of caregivers and 35 non-neurology trained healthcare providers (doctors, nurses and pharmacists) on the new implementation
3. Percentage enquiries from caregivers before and after the implementation of the EAP.

Results

35 caregivers of patients with seizures or newly diagnosed epilepsy who required rectal diazepam at discharge received the EAP.

Impact on Caregivers:
- An average knowledge improvement score of 12% (P<0.001) (Graph 1).
- Satisfaction Survey - 100% strongly agreed EAP is:
  - Useful
  - Informative
  - Clearly written
  - Aids knowledge retention
  - Empowered self-management

Impact on Non-Neurology Trained Healthcare Providers (doctors, nurses and pharmacists):
- Satisfaction Survey – 100% agreed or strongly agreed EAP is: (Graph 2a,b,c)
  - Educational tool for healthcare professionals
  - Standardizes epilepsy counseling/ seizure first aid
- Impact on epilepsy management-related enquiries:
  - 0% first aid-related calls from EAP patients (unnecessary enquiries).
  - Man-hours saved on repeat counselling translates to approximately $9600 per year (Graph 3).

Conclusions

The Epilepsy Action Plan:
- Was well received by caregivers and healthcare professionals.
- Had significant impact on caregivers’ knowledge retention, empowerment and self-management.
- Enables epilepsy paediatric patients to receive prompt first aid treatment from their caregivers and hence improve patient safety.

The EAP is a simple yet useful and cost-effective solution, with low cost in terms of printing and man-hours required to provide the structured educational counselling.

References