

A Health Intervention to Improve Medication Adherence in Patients with Epilepsy

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Problem Area

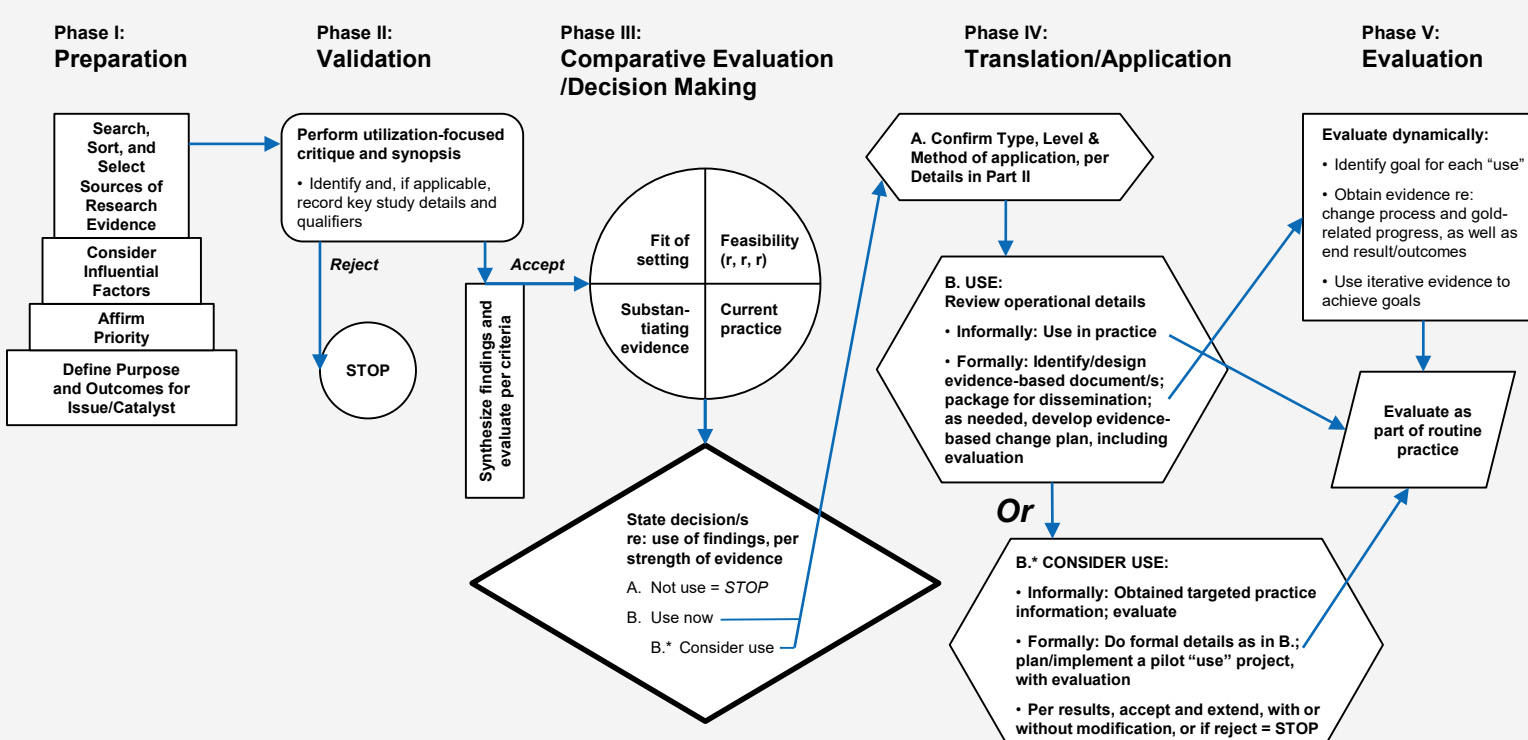
- Epilepsy is a chronic disease and it is estimated that between 30% and 60% patients are non-adherent with their AEDs therapy.
- Nonadherence to AEDs leads to higher risk of physical injuries and psychological distress, and it is associated with an increased healthcare resource utilization that can be costly.
- Therefore, optimal evidence-based approaches in managing nonadherence in patients with epilepsy are crucial.

Project Purpose

- The purpose of this project was to investigate if health education intervention in adult patients with epilepsy will improve this problem.
- It was also important to assess the reasons for the non-adherence in order to understand the underlying causes.
- A planned health educational intervention included a face to face interaction, information about AEDs, and highlighting the importance of medication adherence in the management of epilepsy.

Framework

The Stetler Model of Research Utilization



Methods

Design & Participants: This quality improvement (QI) project used a pre-test and post-test study design, 25 participants were recruited with epilepsy from the Epilepsy Foundation in Houston, Texas using the convenience sampling method.

Measures: Data were gathered using the Morisky Medication Adherence Scale (MMAS-8).

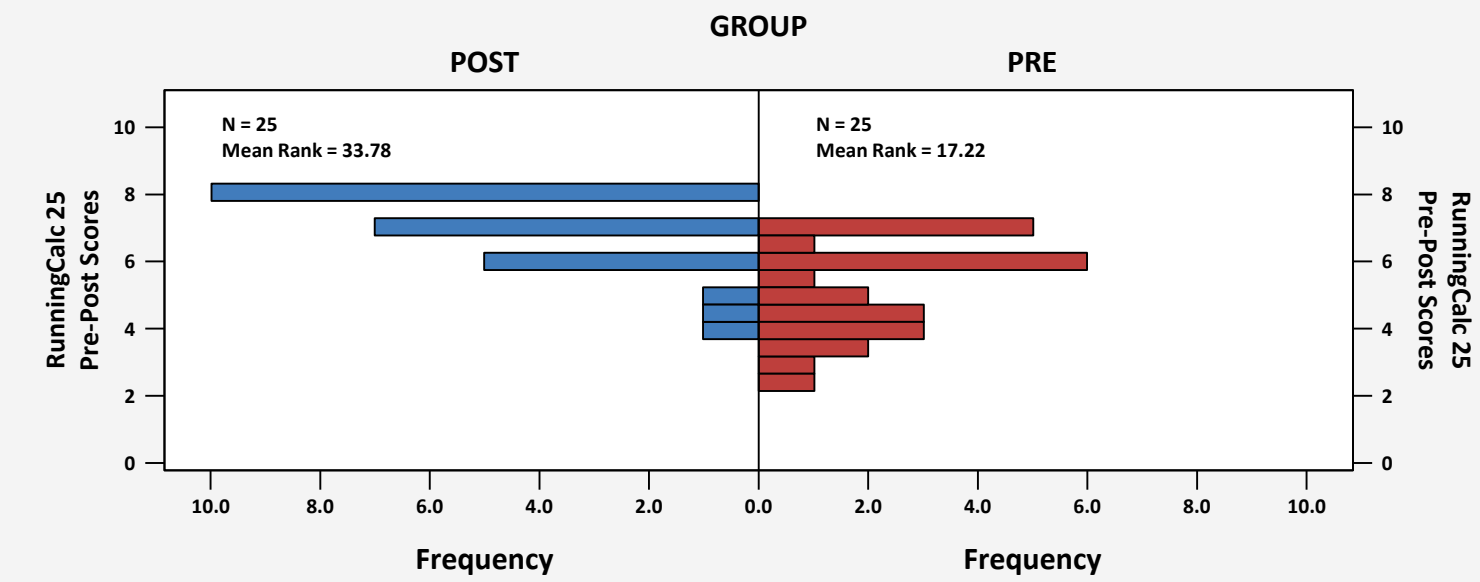
Procedure: Initial encounter: 1) Pre-test: MMAS-8 questionnaire; 2) A questionnaire regarding the causes of their adherence; 3) A 5-minute video from Epilepsy.com regarding the epilepsy medication; and 4) A brochure titled "Epilepsy Medication Adherence: Why It's Important". Post-test was conducted in a follow-up phone call in one month.

Statistical Analysis: The IBM Statistical Package for the Social Sciences (SPSS) version 20 was utilized to compute all statistical tests in this QI project. A descriptive statistics and graph was performed to describe the causes of non-adherence to AEDs. The Mann-Whitney U test, a non-parametric was performed to compare the mean ranking of the pre-test and post-test.

Results

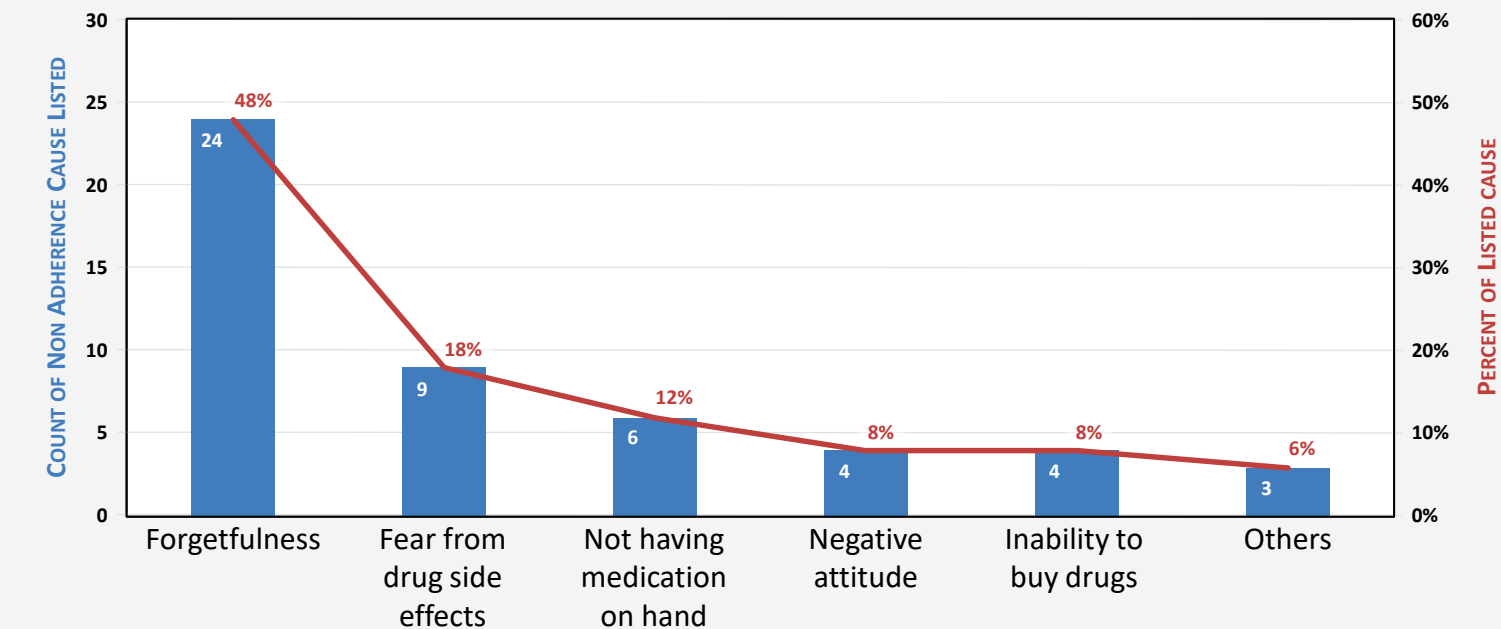
- On the basis of MMAS-8 results in the pretest, 70% participants had low adherence (< 6) and 30% had a medium adherence (6<8) rates.
- In post-test, out of 25 participants, 32% scored low adherence (< 6), 36% scored medium adherence (6<8), and 32% scored high adherence (=8). It is worth noting that eight participants improved to high adherence.
- The pre-test distribution of scores, the mean rank of scores was 17.22 and in the post-test distribution was 33.78, measurably higher.

Independent-Samples Mann-Whitney U Test



- The higher post intervention score is interpreted as a clinically significant improvement.
- The most commonly reported causes for non-adherent were forgetfulness and side effects, which account for almost seventy percent of the reasons.

Causes of Non Adherence to Medications



Conclusions

- The high prevalence of epilepsy and its well-documented problem with poor adherence, not only in the US, but also worldwide, warrants the evidence to address this common and significant problem.
- The findings in this QI project demonstrated both statistical and clinical significance in the role of health education intervention in improving medication adherence, despite its limitations.
- The ultimate goal of future studies is to focus on the positive impact of continuing educational interventions needed to improve patient outcomes.

Practice Implications

- This project demonstrated that providing simple and short health education is a valuable tool to reach out to patients who are non-adherent to their medication.
- Outpatient clinics are the best place to screen patients regarding their medication adherence and providing individualized education and counseling.
- Clinicians play a pivotal role in screening non-adherent patients and providing appropriate educational intervention to address their underlying causes.

Limitations

- Despite the statistical significance of the health education intervention, the interpretation of the findings should be used with caution since it was conducted in a small convenience sample (N =25).
- The majority of participants were low-income and only selected to English speaking; therefore, the sample participants cannot be representative of the general population.
- The intervention was done in a single session education with limited follow-up.
- The post-test was conducted over the telephone without the benefits of face-to-face interaction.

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