Educating cardiac rehabilitation patients on their medicines

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Introduction

Cardiovascular disease (CVD) remains the leading cause of death worldwide, responsible for approximately 31% of deaths (1). Patients who have undergone a cardiac event (myocardial infarction, angioplasty/stent insertion, heart-valve surgery or bypass surgery) are enrolled in a cardiac rehabilitation programme in Cork University Hospital (CUH).

As part of the cardiac rehabilitation programme in CUH, a medication management talk is given by a pharmacist to provide detailed information to patients on their current medication. Patients who have access to the internet are also provided with an informative video educating them on their individual drug therapies.
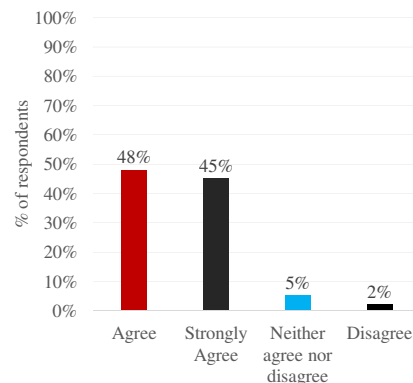
The aim of this study is to investigate the effectiveness of the medication management talk and educational videos, on patient knowledge of, belief in, and adherence to their medication

Materials and methods

•**Study Population:** 89 patients were enrolled from the CUH cardiac rehabilitation programme over a six month period. Patients were assigned a study ID to maintain confidentiality.

•**Data Collection:** Patients were given a pre-programme questionnaire at week 1 to assess knowledge of their cardiac medication. At week 2 of the programme, patients were given a talk by the pharmacist and received a post-talk questionnaire to evaluate the benefit of talk. At week 4, patients were sent videos relating to their medication by e-mail. At week 6, a post-programme questionnaire was given to patients to evaluate the overall increased knowledge gained as well as to detect changes in beliefs about, and adherence to, medicines. The pre- and post-programme questionnaire comprised of two validated questionnaires, the Morisky 8-item adherence scale[2] and the Beliefs about Medicines Questionnaire[3] (BMQ) along with five questions on medication knowledge.

•**Statistical Analysis:** Data analysis was performed using Excel and IBM SPSS Statistics ® version 22. Paired analyses were performed on data pre- and post-programme. Statistical significance was determined at $p<0.05$.

•Descriptive statistics were used to represent patient responses to the medication management talk and the educational video tools.

Results

Table 1: Participant Demographics

Characteristics	No. of Patients	Percentage of Total (%)
Gender		
Male	63	82.9
Female	10	13.2
Missing	3	3.9
Age		
Under 30	1	1.3
31-50	10	13.2
51-64	34	44.7
65-75	22	28.9
Over 75	3	3.9
Missing	6	7.9
Level of education		
Primary/No education	7	9.2
Secondary – NFQ Level 6	51	67.1
NFQ Level 7 and above	11	14.5
Missing	7	9.2

Figure 1: "I know more about why I take my medicines" - Post-programme evaluation

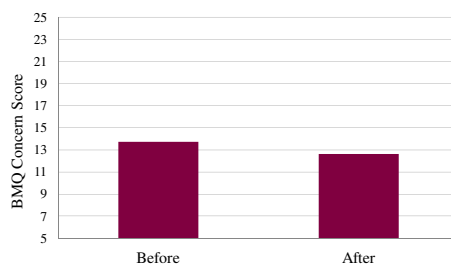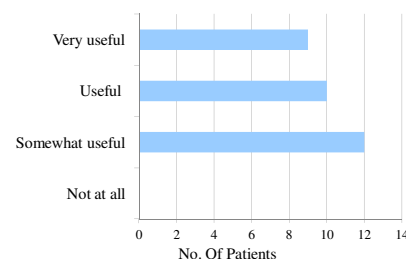Figure 2: Concerns about medications pre- and post-programme

Figure 3: Evaluation of the Online Video

- Of the 89 patients enrolled on the programme, 76 participated in this study. Not all participants completed all questionnaires.
- Participant demographics are provided in Table 1. In addition, 88.2% were of Irish nationality. 75% had access to the internet; 67% were regular internet users.
- There was a self-reported increase in medication knowledge after the medication management service; 93% of patients reported they knew more about why they took their medicines immediately after receiving the medication management talk (n=60). (Fig.1)
- A significant decrease in patients' concerns about their cardiac medications was observed after the talk. The mean score on the BMQ Concern pre-talk was 13.72 (n=68) and post-talk was 12.62 (n=53) (p=0.031). (Fig.2).
- Less than half of the participants (n=31) accessed the online educational videos; 62% found the videos to be useful/ very useful. (Fig.3).
- Although not statistically significant, there was a small increase in self-reported adherence from 6.73 (n=66) before the programme to 6.87 (n=55) post-programme.

Conclusions

The pharmacological management of cardiac patients is essential to improve patient outcomes.

This study has demonstrated, on a small scale, the importance of the role of the pharmacist in the multidisciplinary team and the benefits that are derived from the cardiac rehabilitation talk.

The participants who accessed the online educational videos found them to be a useful tool and this is a novel way of helping patients educate themselves in CUH.

Future work will look at ways to expand the use of the educational videos and to enhance the educational material provided to patients of the cardiac rehab programme.

References

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Acknowledgements