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The Effect of Training of School Physicians on Their Knowledge Regarding Surveillance in Alexandria

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Objective

We assessed the effect of a training program on the knowledge of school physicians regarding surveillance. The purpose of evaluation is to improve the information provided and thereby help improve service provision and delivery.

Introduction

Schools inherently foster the transmission of infections from person to person because they are a group setting in which people are in close contact and share supplies and equipment. Surveillance is important in schools and actions that can help control the spread of infections are the key to effective disease control in the community [1].

School health physicians should play an important role in surveillance. Their training on data collection, analysis, reporting and importance of feedback is recommended in order to improve the disease surveillance system and therefore the prevention and control of diseases.

Methods

An intervention study (one group pretest post test design) was carried out in January and February 2013 in Alexandria, Egypt. Based on the assumption that the proportion of school health physicians with good level of knowledge before the intervention will be 40% and after the intervention will be 75%, the minimum required sample size was 60 physicians at 5% alpha error and 80% power. The sample was increased to 70 physicians to compensate for the loss to follow up.

Assessment of their baseline surveillance knowledge was done using a predesigned self administered structured questionnaire (pretest) which consisted of two sections. Section I included basic personal data and section II was used to collect data about the physicians' surveillance knowledge. A special scoring system was prepared and applied. The total knowledge score ranged from 0 – 23. The level of knowledge was classified into three categories; poor (below 11), fair (between 11 and 15) and good (16 or more).

Based on the results of the pretest, an intervention program in the form of a workshop was prepared to raise their knowledge regarding surveillance. Within one week after the end of the intervention, assessment of the effect of the training program was done using the same data collection tool (post test).

Results

Before the intervention, 37.4% of physicians had poor level of knowledge, 50.7% had fair level of knowledge, while only 11.9% had good level of knowledge regarding surveillance. After the intervention, only 10.4% had poor level of knowledge, 40.3% had fair level of knowledge, while 49.3% had good level knowledge about surveillance. The mean knowledge score before the intervention was 11.5 ± 3.39 and it had increased to 14.6 ± 2.58 after the intervention. This difference was statistically significant (paired t-test = 7.78, p=0.000),

In a multiple linear regression model, only two factors were found to be significantly affecting the school physicians' knowledge score after the intervention; the total knowledge score before the intervention which explained 11.42% of the variation of the score and age which explained 5.19% of the variations. About 31% of the variability which occurred in the school physicians' knowledge score after the intervention were attributed to those two factors (adjusted $r^2 = 0.316$).

The probability of acquiring knowledge after the intervention program was 67.2%. It was nearly the same for those with poor and fair knowledge scores (68.0% and 66.7% respectively). Cox proportional hazard model revealed no significant predicting variable for that change in knowledge score.

Conclusions

Training of school physicians on disease surveillance has an effect on their level of knowledge regarding surveillance which is essential for planning and evaluation of communicable diseases prevention and control.

Keywords

Intervention; School health physicians; Surveillance; Training

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