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Home Blood Pressure Monitoring among Hypertensive Patients in a Primary Care Clinic of Hong Kong: A Cross Sectional Survey

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Introduction

Numerous international agencies had recommended home blood pressure monitoring (HBPM) in their published guidelines. However, HBPM is often used without proper medical advice, these measurements can be inaccurate and adversely influence clinical management. No local studies have been performed to document the prevalence and use of HBPM in primary care setting.

Objectives

1. To evaluate the prevalence and epidemiological pattern of HBPM in primary care setting. 2. To assess the competence of self-blood pressure measurement among hypertensive patients.

Methodology

A cross sectional survey, involving adult Chinese patients with hypertension was conducted in Family Medicine and General Outpatient Department of Kwong Wah Hospital. Randomly generated list of hypertensive patients were invited to complete the questionnaire and those patients performing HBPM were tested on knowledge and competence on self-BP measurement with automatic BP machine. A model predicting use of HBPM was constructed by univariate and multivariate logistic regression.

Result

57 (44.5%) male and 71 (55.5%) female patients completed the questionnaire. 66.4% of them aged 61 to 80 years old, 54.0% of them had at least completed primary education, and while 60.9% of them were retired. 24.2%, 38.2% and 41.4% of them also had comorbidities of diabetes mellitus, hyperlipidaemia or obesity respectively. 65.6% of patients owned BP machine of any type at home, while 58.5% of them conducting home BP monitoring. 37.3%, 25.3%, 17.3% and 20.1% of patients monitored their BP daily, 3 times or more per week, less than 3 times per week, and irregularly respectively. 28.1% of patients had ever learned how to perform BP measurement. For patients did not own home BP machine, 38.6% claimed that BP machine was too expensive, while 38.6% did not know how to measure the BP. 56.6%

of respondents expressed 'Strongly agree' and 20.1% expressed 'Agree' that HBPM can help hypertensive patients to achieve better BP control. Multiple regression model revealed that patients who were female, with higher education or higher family income were more likely to perform HBPM. 65 patients completed competence test in self-BP measurement, 97% of them passed the written test while 55.3% of them passed the practical test. 75% of patients did not know that measured BP would be increased if patient was feeling unwell or in pain. For practical test, 30.7% of patient failed to put the cuff on proper position, while 10.7% did not put the arm at the same level of heart. Conclusion: 58.5% of hypertensive patients in a primary care clinic of Hong Kong conducted home blood pressure monitoring, while 55.3% of them were concluded as competent in performing self-blood pressure measurement.