Interactive Self-Blood Pressure Monitoring Workshops for Patients with Uncontrolled Hypertension in General Outpatient Clinics

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Introduction
International guidelines including the European Society of Hypertension (EHS) and National Institute for Health and Clinical Excellence (NICE) recommended appropriate use of self-blood pressure monitoring (SBPM) in evaluate hypertension (HT) in patients with uncontrolled blood pressure (BP). There were > 100,000 General Outpatient Clinic patients with suboptimal HT control in 2016. Patients often perform inappropriate SBPM using non-validated HBPM devices.

Objectives
To increase accuracy of HBPM by interactive education workshops, regular assessment of HBPM technique and loaning standard validated SBPM device for home use.

Methodology
Patients with clinic BP > 140/90mmHg in past 12 months, who were able and willing to perform SBPM were invited to attend one 2 hours workshops with 9 to 12 participants. Their drug compliance was assessed by the Validated 8-item Morisky’s Medication Adherence Scale (MMAS-8). Their health literacy was assessed by the Chinese Health Literacy Scale for Chronic Care. The rundown of workshop was (1) 20 minutes lecture of basic HT knowledge and drug information; (2) 15 minutes video demonstration of SBPM procedure; (3) 10 minutes nurse demonstration BP measurement; (4)trial of SBPM device, (5)return demonstration by patients until all 10 steps of SBPM correctly performed. Patients were instructed to record home BP twice daily in the coming 7 days, followed by twice weekly. A standard SBPM record book was issued. Patients were followed up by nurses individually 4-6 weeks later to reassess their SBPM technique and quality of BP records.
**Result**

151 eligible patients (mean age = 66, age = 29-86, M: F = 0.57) attended 15 workshops in 3 clinics. 30% of them had Diabetes while 65.6% of them had hyperlipidemia. 84.1% of them had uncomplicated hypertension. Their MMAS-8 score showed only 41.1% of them had good drug compliance, while 22.5% of them had low drug compliance. 37.1% of them had inadequate health literacy. All of them were able to demonstrate the 10 steps of SBPM immediate after education. 130 (86.1%) patients attended the individual counseling sessions 4-6 weeks later. Their Home BP records and frequency of measurement were adequate. 72% of them continue SBPM, 56% have bought their own HBPM device according to our recommendation. For the 46 participants not yet bought their own device, 91% wanted to continue loaning SBPM device from clinic. 86% of participants demonstrated all correct steps of SBPM.

Conclusion: Most patients were willing to continue SBPM. Loaning validate device and structured workshop can promote accurate SBPM.