



**Service Priorities and Programmes**  
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**Osteoporosis Nurse-led Clinic (ONC) in the Management of Osteoporosis to Reinforce Lifestyle Modification, Increase Drug-adherence Rate and Osteoporosis Clinic Attendance Rate at Queen Mary Hospital**

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**Introduction**

Osteoporosis has become a major health problem worldwide. It is a silent disease until the occurrence of bone fractures. Effective treatment on osteoporosis requires lifestyle modification and long term adherence to medications, and health education is an essential element in osteoporosis management. To improve the quality of the osteoporosis service, we have initiated an Osteoporosis Nurse-led Clinic (ONC) in Queen Mary Hospital since January 2010. Health education and nursing intervention on osteoporosis is provided by an experienced nurse in the ONC, under the supervision of an endocrinologist.

**Objectives**

1. To evaluate the effectiveness of the ONC on patient's life-style modification in osteoporosis management. 2. To evaluate the adherence rate of patients to osteoporosis treatment and default rate of Osteoporosis Clinic of patients.

**Methodology**

Patients referred to Osteoporosis Clinic between August 2011 and August 2012 were followed up regularly in the ONC (Intervention group). Patients seen in Osteoporosis Clinic between January 2009 and January 2010 were selected as historic control. Patients' daily oral calcium intake, and exercise adherence, was measured at baseline and one year after follow up for comparison. Their adherence rate to osteoporosis treatment and default rate to osteoporosis clinic after the initiation of ONC were also measured.

**Result**

51 patients were included for analysis in each group during the observation period.

The baseline characteristics were similar in both groups. The mean oral daily calcium intake increased from  $632 \pm 222$  mg to  $916 \pm 198$  mg ( $p < 0.05$ ) in the intervention group but there were no significant changes in the control group. The proportion of patients who engaged in regular weight-bearing exercise at one year follow up was much higher in the intervention group than the control group (75% vs. 31%,  $p < 0.05$ ). Furthermore, patients followed in ONC had a lower Osteoporosis Clinic default rate than those in the control group (0% vs. 12%) ( $p < 0.05$ ). The mean adherence rate of osteoporosis medication was also higher among patients attending ONC ( $98 \pm 5.8\%$  vs  $84 \pm 1.8\%$ ,  $p < 0.05$ ). We concluded that Osteoporosis Nurse-led Clinic (ONC) is effective in reinforcing life-style modifications, improving adherence rate to osteoporosis treatment, and reducing their default rate to Osteoporosis Clinic. The altered patient behavior would likely result in better treatment outcome.