

## **Prescription and Modification of Seating System to Chairbound Private Nursing Home Elders**

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### **Introduction:**

Local survey in private nursing homes of Hong Kong East region showed that 31% of residents were either chairbound or bedbound. Among them, significant proportion were being restrained, having pressure sores, had poor sitting balance and short sitting tolerance time.

### **Purpose of the Project:**

To provide seat modification and prescription to chairbound residents aiming at improving sitting tolerance time, balance and comfortability while reducing pressure sores and use of restrainer.

### **Material & Methods:**

228 residents were screened from 5 private nursing homes, 42 chairbound residents with either poor sitting tolerance, poor sitting balance or existing pressure sores were recruited. Assessment of current seating system in areas of dimension, support, safety, material, pressure relieving effect, ventilation and correctness to body alignment were performed by occupational therapist. Seating system was then modified or replaced according to individual's need. Computerised pressure mapping was performed before and after intervention.

### **Results:**

Before intervention, 43% of the 42 residents had pressure sores, 90% had sitting tolerance time of < 30 mins and most reported that their existing seats were uncomfortable. 74% were having either wrist band, waist belt, jacket, or tabletop as restrainer. Types of chair varied from rattan chair, plastic chair, commode chair with or without seat on top, sofa chair and bed.

After intervention, computerised pressure mapping showed that peak buttock pressure fell significantly from 84 -200 mmHg to 53 -119 mmHg ( $P < 0.001$ ). Mapping also showed that pressure was more evenly distributed. Residents reported the seat were more comfortable. Nursing home staff used less restrainer due to improved sitting posture.

### **Conclusion:**

Seat modification could reduce buttock pressure exertion, reduce use of restrainer, prolong sitting tolerance and improve comfortability in private nursing home chairbound elders.