

131 **MORTALITY RISK AMONGST NURSING HOME RESIDENTS EVACUATED AFTER THE FUKUSHIMA NUCLEAR ACCIDENT: A COMPARATIVE ANALYSIS BETWEEN EVACUEES AND NON-EVACUEES**

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**Background** Considering the health impacts of evacuation is important in disaster planning for elderly populations; however, little is known about evacuation-related mortality risks. We have conducted a retrospective cohort survival study of elderly evacuees including comparative analyses with non-evacuees, following the Fukushima nuclear accident on 11th March 2011.

**Objectives** To assess associations between evacuation and mortality after the Fukushima nuclear accident.

**Methods** 1,216 residents from seven nursing homes located 20–40 km from the nuclear plant who were admitted in the five years before the accident joined this study. Demographic and clinical characteristics were obtained from medical records. Evacuation histories were tracked until mid 2013. Main outcome measures are the pre and post disaster relative mortality incidence, and hazard ratios in Cox regression were employed.

**Result** There was a substantial variation in mortality risks post-disaster across the five evacuated facilities ranging from 0.77 to 2.88. Initial evacuation from the original facility had substantial impact on mortality with hazard ratio of 3.37 (95% CI: 1.66–6.81) against non-evacuation, though subsequent evacuations had no significant mortality risk. No meaningful influence of evacuation distance on mortality was observed.

**Conclusion** Evacuation may not be the best life-saving strategy for elderly people. Following the Fukushima accident evacuations of some facilities were inevitable because of staff deficiencies and other resource shortages, but at other sites sheltering in situ might have minimized health risk. Also, facility-specific disaster response strategies, including on-site relief and care, may have a strong influence on survival. In a mass displacement disaster, careful planning and coordination with other nursing homes, evacuation sites and government disaster agencies is fundamental to reduce the mortality.