

NATURE AND TYPE OF INJURIES FROM THE 4 SEPTEMBER 2010 AND 22 FEBRUARY 2011 CANTERBURY EARTHQUAKES, NEW ZEALAND

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Background Despite significant advances in the understanding of earthquake hazard, risk and mitigation, earthquake deaths and injuries continue to increase globally. The use of earthquake risk and impact modelling is therefore gaining increasing importance for informing the value of mitigation through: development of appropriate building regulations and controls for urban development; public education around actions to take during earthquakes and planning post-disaster emergency operations. However, such models rely on reliable estimates of the number of deaths and the number and type of injuries which may result from a given pattern of ground shaking.

Aim This paper explores the nature and type of earthquake injuries, and outlines potential causes of injury and possible preventative measures that can be taken to reduce the risk of injury and contributes directly to a multi-year Wellington 'It's Our Fault' research programme.

Method Data obtained from the Accident Compensation Corporation (ACC) in New Zealand is part of a collaborative study to understand the nature and type of injuries from the 4 September 2010 and 22 February 2011 Canterbury earthquakes.

Results This is a unique data set of over 9000 as it contains information on all claims lodged for injuries from both earthquakes. Primary injuries are defined as occurring at the moment of the earthquake as a direct result of the immediate shaking. It was divided into two sub categories, immediate and action. An 'immediate' type injury was an injury of unavoidable cause. Alternatively, a primary injury could be classified as 'action' if a result of a movement that the person may have made.