

Background Despite strong public and professional interest in suicide clusters, the scientific literature on this subject has been dominated by anecdotal reports. Precise definitions of suicide clusters are lacking.

Aim To apply geospatial mapping methods to the problem of identifying suicide clusters.

Methods All suicide decedents (N=918; 76% male; age range 12–100 years) that occurred in one region, Canterbury (population, 450 000) of New Zealand from 1991 to 2008, using official New Zealand Ministry of Health data. Suicides were defined by coronial verdict. Latitude and longitude coordinates for the residential street address for each decedent were geocoded using Google maps. Suicide cluster candidates were identified by SaTScan 8.0 using Kuldorff's space-time permutation model.

Results Geospatial mapping identified nine suicide clusters involving a total of 43 decedents (4.7% of all suicides). The median age of cluster decedents was 29 years (range 15–84 years); 37.2% of cluster decedents were aged <25 years. The median number of suicides per cluster was 4 (range 3–8); the median timeframe (from index to final case) of a cluster was 83 days [range 25 days (3 suicides) to 445 days (8 suicides)]. All members within each suicide cluster were located within circles of radii <1.6 km. The minimum radius of a cluster was 97 m (4 suicides who died within 114 days); the minimum time for a cluster was 26 days (3 suicides, circle radius 261 meters).

Conclusions Geospatial mapping is a useful new approach to identify suicide clusters and develop empirically based definitions of suicide clusters.

0918 **GEOSPATIAL MAPPING OF SUICIDE CLUSTERS IN CANTEBURY NEW ZEALAND**

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