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INJURY EPIDEMIOLOGY AND NEW ZEALAND MILITARY FORCES IN WORLD WAR ONE

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Background Despite the large mortality burden of World War One (WW1) on New Zealand (NZ) military forces, no analysis using modern epidemiological methods has ever been conducted.

Aims To study injury-related mortality amongst NZ military forces for WW1 and consider issues around preventability.

Methods An electronic version of the Roll-of-Honour for NZ Expeditionary Force (NZEf) personnel was supplemented with further coding and analysed statistically. We also performed literature searches to provide context.

Results Out of a total of 16 703 deaths occurring during the war (28 July 1914 to 11 November 1918), injury deaths predominated: 65.1% were 'killed in action' (KIA), 23.4% 'died of wounds' (DOW), 1.0% were other injuries ('accidents', drownings, and executions), and 10.5% were other causes (mainly disease). During the course of the war the annual mortality rate from injury (for KIA+DOW) per 10 000 NZEF personnel in the North Hemisphere peaked at 1335 in 1915 (Gallipoli campaign) and then peaked again in 1917 at 937 (largely the Battle of Passchendaele). Cumulative injury mortality proportions for WW1 differed by ethnicity which reflected differing roles in the military: European/Other (1245/10 000); Māori (906); and Pacific soldiers (83).

While historical interpretations differ, there are many plausible preventive measures that could have reduced mortality eg: better diplomacy (to prevent the war); better military planning to avoid failed campaigns (eg, Gallipoli); and improved design and resourcing of medical services.

Significance WW1 was by far the worst mass injury event in New Zealand's history. Many of these injury deaths could have been prevented.