

THE INTRODUCTION OF LONDON'S CONGESTION CHARGE ZONE AND CHANGES IN ROAD CASUALTIES

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Background and Aims: In 2003, a Congestion Charging Zone (CCZ) was introduced in central London, UK, with the aim of tackling worsening traffic congestion. Although the CCZ was not introduced as a measure to benefit public health, there has been much interest in its impact on health, particularly in terms of air pollution and road traffic casualties. This paper quantifies the changes in road traffic casualties following the introduction of the CCZ in London.

Methods: Observational study based on analysis of geographically-coded road casualty data, 1993-2006. Analyses were made of longitudinal changes in counts of road casualties within each of 119,029 road segments with non-zero casualty counts, using conditional fixed-effects Poisson models. Estimates of the effect of introducing the CCZ on casualties were adjusted for changes in counts of casualties outside the zone, and for the effect of the introduction of 20 mph speed zones.

Results: The introduction of the CCZ was associated with an appreciable fall in the number of casualties in the zone relative to other areas within charging hours: a fall of around 16% (95% confidence interval: 11-21%) in all casualties within charging hours, not observed outside charging hours (4% increase, 95% CI: -1-9%). There were relatively large reductions in the number of car occupant and powered two-wheeler rider casualties. We found an appreciable increase in the number of cyclists injured inside the CCZ (30% increase, 95% CI: 9-52%) that appears broadly to parallel an increase in the numbers of people cycling in London.

Conclusions: The introduction of the CCZ in London has been accompanied by a small but important decline in road casualties overall, partly offset by an increase in cyclist casualties that broadly reflects increasing cyclist numbers. These changes would appear to represent part of an appreciable net benefit to population health of the CCZ.