Titre de l'article

An ecological study to identify census blocks supporting a higher burden of disease: infant mortality in the lille metropolitan area, france.

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Résumé

In France, reducing social health inequalities has become an explicit goal of health policies over the past few years, one of its objectives is specifically the reduction of the perinatal mortality rate. This study investigates the association between infant mortality and social deprivation categories at a small area level in the Lille metropolitan area, in the north of France, to identify census blocks where public authorities should prioritize appropriate preventive actions. We used census data to establish a neighbourhood deprivation index whose multiple dimensions encompass socioeconomic characteristics. Infant mortality data were obtained from the Lille metropolitan area municipalities to estimate a death rate at the census tract level. We used Bayesian hierarchical models in order to reduce the extra variability when computing relative risks (RR) and to assess the associations between infant mortality and deprivation. Between 2000 and 2009, 668 cases of infant death occurred in the Lille metropolitan area (4.2 per 1,000 live births). The socioeconomic status is associated with infant mortality, with a clear gradient of risk from the most privileged census blocks to the most deprived ones (RR = 2.62, 95 % confidence interval [1.87; 3.70]). The latter have 24.6 % of families who were single parents and 29.9 % of unemployed people in the labor force versus 8.5 % and 7.7 % in the former. Our study reveals socio-spatial disparities in infant mortality in the Lille metropolitan area and highlights the census blocks most affected by the inequalities. Fine spatial analysis may help inform the design of preventive policies tailored to the characteristics of the local communities.

Mots-clés

Infant mortality, small-area analysis, social health inequalities, census tracts, deprivation index, bayesian models.

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