

HEALTH OF RESIDENTS LIVING NEAR INTENSIVE LIVESTOCK FARMS

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Background and Aims: Swine and poultry farmers are at increased risk of developing adverse respiratory health effects. Research into the health of residents living near intensive livestock farms is sparse and repeatedly based on self-report, while the potential health effects of intensive livestock farm emissions are of great interest for public health. The aim of this study was to explore the health of neighboring residents based on medical information registered by their general practitioner, with focus on the respiratory and gastrointestinal tract and possible intertwining comorbidity.

Methods: Data were collected from routine electronic medical records of 28 general practices (total population of 122,542 patients) in an area with a high density of intensive pig, poultry, and cattle farms. A comparison was made with 22 practices (78,060 patients) in other rural areas with low density of these facilities. Information included patient characteristics and all registered health problems (in the Netherlands everyone is obliged to register with one general practice) during 2006-2009. Prevalences of symptoms and diagnoses were calculated by multilevel analyses accounting for differences between practices and the patient's age, gender and follow-up duration.

Results: The overall prevalence of respiratory diseases was similar or even lower compared to other rural areas, with the exception of pneumonia (OR=1.4; 95%CI=1.1-1.8). No increased prevalence of asthma was observed (OR=0.9; 95%CI=0.7-1.2). The most frequently presented reasons for encounter among patients with asthma were cough, upper respiratory tract infections and rhinitis. We found an increased prevalence of atopic eczema (OR=1.3; 95%CI=1.1-1.6). More detailed analyses are currently being performed, including the geographical distribution of diseases within the study area.

Conclusions: The first results showed no differences for respiratory diseases other than pneumonia. The prevalence of atopic eczema was increased compared to controls. Having data from general practice is an important addition to self-reported complaints.