

**Results** Maps show the temporal evolution and spatial distribution of dengue fever risk on the territory. Highest risk areas coincide with those of greater movement of people and lack of infrastructure in the municipality.

**Conclusion** The method was suitable for identifying risk areas, in which government's actions should be efficient and constant.

**P1-342** **EMPIRICAL ANALYSIS OF THE RISK ESTIMATORS IN SPATIAL CASE-CONTROL STUDIES USING DIFFERENT SAMPLE DESIGNS**

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**Introduction** There are many sample designs for case-control studies. Three of them were simulated to investigate the properties of their risk estimators when the aim of the study is to analyse the space along with other covariates. They are: the case-base sampling, where all controls are selected at the beginning while the cases are sampled during the study as they occurs; the survivor sampling, in which both cases and controls are sampled at the end of the study; and the risk-set sampling, where both cases and controls are sampled during the study.

**Methods** A realistic at risk population was created by sampling individuals from the empirical spatial distributions derived from governmental census information of a Brazilian city. Two epidemic scenarios were built, a transmissible and a nontransmissible disease. We used the generalised additive models to estimate the risks in each different study, fitting semiparametric models with the geographical coordinates and other covariates as age, income, gender and study.

**Results** The results suggest that the estimated spatial risks are similar in the three sample designs, but the standard deviations vary in the space and, the widest variation occurs in the survivor sampling (for the nontransmissible disease) and in the case-base sampling (for the transmissible disease). The parametric estimates that are closest to the initially defined were attained by the risk-set sampling, at the nontransmissible disease scheme.

**Conclusion** We conclude that the best risk estimates are attained by sampling the controls at the same time of the cases, as the epidemic occurs.

**P1-343** **GENDER DIFFERENCES IN HOME SMOKING RESTRICTIONS IN HUNGARY**

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**Introduction** The relationship between the environmental tobacco smoke exposure and the increased risk of illness and death from a wide range of diseases is well-known. The aim of this study was to assess the connection between gender and home smoking restrictions.

**Methods** The first wave of a quantitative longitudinal study was delivered in 2009. A sample of individuals (n=2250) aged

16–70 years completed a self-administered questionnaire (response rate =57.4%). Logistic regression models were applied to reveal the predictors of having a smoke-free home in smokers and non-smokers.

**Results** Nearly two-third of people (34.9% of smokers and 71.4% of non-smokers) lived in homes where smoking was totally restricted. The predictors of having a smoke-free home were gender (female: OR=1.60; p<0.0001) and education (medium: OR=1.73; high: OR=1.96; p<0.001) among non-smokers; while education (medium: OR=1.81; high: OR=1.3.20; p<0.001) and living in the rural area (OR=1.91; p<0.0001) in smokers.

**Conclusion** Home smoking restrictions were associated with gender and education among non-smokers, with education and living place among smokers. The results showed that greater attention must be placed on non-smoker males, on smokers living in urban areas, and in general on low educated people to improve tobacco control in Hungary.

**P1-344** **CORONARY ARTERY LESIONS OF INCOMPLETE KAWASAKI DISEASE: THE NATIONWIDE SURVEY OF 2007–2008 IN JAPAN**

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**Objectives** To observe the recent epidemiologic features of incomplete Kawasaki disease (KD) patients reported to the Japanese nationwide survey, and to compare risk factors for developing coronary artery lesions (CALs) between incomplete KD and complete KD.

**Methods** In the 2007–2008 nationwide survey, 23 337 KD patients were reported and then classified by their number of principal symptoms for analyses. In this study, complete KD was defined as having five or more of the six principal symptoms; incomplete KD as having four or fewer regardless of the presence or absence of CALs.

**Results** Compared with complete KD patients, younger ages at first hospital visit, a higher incidence rate of CALs, less frequency of both initial and additional intravenous immunoglobulin (IVIG) administration, later IVIG administration, less total dose of IVIG administration, and less frequency of steroid therapy were observed among those with incomplete KD. Also particularly in patients having CALs, the same delayed and insufficient IVIG therapy was observed in incomplete KD. Multivariate analysis showed that the risk factors for CALs observed in incomplete KD were almost the same as those observed in complete KD, except for receiving initial IVIG therapy. The initial IVIG administration was risk of developing CALs in incomplete KD, but not risk rather protective in complete KD.

**Conclusions** The results imply the existence of a common pathological basis in generating CALs regardless of presentation types of KD. Therefore, more timely diagnosis and treatment to incomplete KD patients could lead to the further prevention of cardiac lesions caused by KD.

**P1-345** **REGULATORY RISK ASSESSMENT IN EPIDEMIOLOGY: PRINCIPLES AND METHODOLOGY**

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Regulatory risk assessment is a useful tool in the development of public policy, regulation and decision making in occupational safety and health. It focuses on a detailed quantification of occupational