This model illustrates the behaviour of outcome overestimates the effect of vaccination. This is less marked when during the period when the PR approximates the ARR, the POR length of this period is determined by the duration of carriage. Results The PR approximates the ARR well, after an initial ratio and prevalence ORs for carriage were plotted over time.

Methods For all unvaccinated and was assumed not to change for 2 years. Prevalence ratios and prevalence ORs for carriage were provided with the same age group. Our study also confirmed that more than 50% of the sex difference in life expectancy was accounted for by smoking. With respect to the novel design, the results revealed consistency in the results using different control groups.

Conclusion This new case-spouse control design as an alternative for control selection in case-control studies is valid and feasible.

P1-49 Spatial Epidemiological Mapping for Disease Prevalence Management in an Urban Community: Swine Flu Prevalence Management in South of Tehran, Iran

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Epidemiology investigation uses multidisciplinary approaches to help decision makers in healthcare to control and foretell the phenomena of disease prevalence. In this study, we have applied spatiotemporal analysis and mapping to improve swine flu prevalence management in south of Tehran, Iran. We present a new pattern to monitor the swine flu pandemic in Iran in a more effective way. In this research we gathered 900 suspicious records of H1N1 from south of Tehran. We used spatial data mining and spatiotemporal analysis method to create a specific final pattern for a potential swine flu pandemic management and recovery. GIS and data mining tools have been used to calculate and visualise the results. The results of this research can be used by health policy makers and administrators to guide mitigation policies to minimise possible spread of the disease into the general healthcare setting.

P1-50 Should Heart Failure Be Considered As Categorical or Dimensional?

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Introduction The categorical view dominates the traditional diagnostic approach to heart failure (HF) but ignores possible within-class heterogeneity such as individual differences in severity.

Objective To assess if HF should be considered as categorical or dimensional, and to validate a novel scale of severity for clinical HF.

Methods Cross-sectional evaluation of 1115 community participants aged ≥45 years in 2006–2008. We considered items related to troubled breathing and fatigue (4 items), volume overload (6 items) and objective evidence of cardiac structural/functional abnormalities (3 items). Bayesian Information criteria from latent class analysis (LCA) and latent trait analysis (LTA) were used to assess if HF could be considered as categorical or dimensional. BNP values and American College of Cardiology (ACC)/American Heart Association (AHA) stages of HF, classified by experienced clinicians with access to all data, were used to validate the scale.

Results Bayesian Information criteria suggested a 3-class solution for the LCA and a 2-factor solution for the LTA, with the best result being the last one. The first factor was associated with the items on troubled breathing/fatigue and cardiac abnormalities; the second factor was associated with the items about volume overload. The prevalence of BNP>30 pg/ml, BNP>100 pg/ml and stage C/D of clinical HF was significantly higher in the group of individuals with high scores for all factors than in that of individuals with low scores.

Conclusions The use of latent models applied to HF provided evidence for considering HF as dimensional rather than categorical as traditionally considered.