

Modelling Hospital Depending Spatial Variation in Austria

Barbieri V¹, Ostermann A², Pfeiffer KP¹

¹*Innsbruck Medical University, Austria*

²*University Innsbruck, Austria*

verena.barbieri@i-med.ac.at

Population based epidemiologic maps, adapted from routine hospital data, indicate significant regional differences between Austrian districts (N=121) concerning the occurrence of diseases and medical health care supply. The aim of our investigations was to develop a Bayesian spatial smoothing model to explain variation. For this a special term for hospital effects, including position, catchment area and capacity of available health care units was developed. An adequate distance function regarding the Austrian geographical situation was designed and interaction between hospitals was modelled. The advantage of this new modelling approach is that it does not average across hospitals, but considers their catchment areas and controls for variation. The theoretical approach and practical results from simulations and investigations on real data are going to be presented.