

relatively short time horizons, there is a clear need for longer term studies to investigate resource use of ICU survivors. Our findings should help to inform the design and reporting of such studies.

**P52 PREDICTORS OF EMERGENCY DEPARTMENT ATTENDANCE RATES IN SMALL AREA POPULATIONS**

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**Objectives** Emergency Department (ED) use is known to be related to both socio-economic deprivation and distance to hospital. However, hospitals are often located in urban areas close to deprived populations. The objective of this study is to investigate the relationship between distance and attendance at EDs, net of deprivation.

**Method** Multiple linear regression models were used to explore the relationship between deprivation and distance to hospital with age-sex standardised ED attendance rates at neighbourhood level. Distance to a Minor Injury Unit (MIU) was also included. Interaction between distance and deprivation was investigated. Separate models for children and adults were used because some populations had access to a dedicated children's ED.

**Setting** The Government Office Region of the West Midlands, in central England (population 5.4 million).

**Population** Attendances of West Midlands residents to EDs in acute hospitals in financial year 2007/08 (n=1 465 355) within 3482 Lower Level Super Output Areas (LSOA), each containing approximately 1600 residents.

**Outcome Measures** The response variable was the directly age-sex standardised ED attendance rate for each LSOA (square-root transformed). Predictor variables were distance from LSOA centroid to nearest ED and nearest MIU in kilometres and income deprivation score (high score=high deprivation).

**Results** There was a significant positive relationship between attendance and deprivation,  $\beta$  coefficient=0.96 ( $p<0.001$ ) in adults and 0.68 ( $p<0.001$ ) in children. There was a significant negative relationship between attendance and distance, the  $\beta$  coefficient=-0.24 ( $p<0.001$ ) in adults and -0.37 ( $p<0.001$ ) in children. Child attendance appeared more sensitive to distance than adult attendance but less sensitive to deprivation. Attendance in deprived neighbourhoods was more sensitive to distance than in less deprived ones. For adults, at the third quartile of deprivation,  $\sqrt{\text{attendance rate}}=-0.32$  per km +19.50 compared to -0.18 per km +15.86 at the first quartile. For children, at the third quartile of deprivation,  $\sqrt{\text{attendance rate}}=-0.49$  per km +21.30 compared to -0.30 per km +17.95 at the first quartile. The paper goes on to describe the models in greater detail, (including the effect of MIUs).

**Conclusion** Attendance at EDs is sensitive to income deprivation at neighbourhood level but distance from hospital appears to modify this relationship differently in deprived areas than in affluent ones. Also, children's attendance appears to be more sensitive to distance than that of adults. This is useful to understand when comparing ED attendance between and within populations.

**P53 MORTALITY AFTER HOSPITAL ADMISSION CLEARLY VARIES BETWEEN ATHEROSCLEROTIC DISEASES LOCATED AT DIFFERENT VASCULAR BEDS**

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**Objective** Most studies providing data on survival in patients with atherosclerosis only address a single disease site: heart, brain or legs.

Therefore, our objective was to determine risk of death after first hospital admission for atherosclerotic disease located at different sites.

**Design** Hospital-based follow-up study.

**Setting and Participants** A nationwide cohort of patients hospitalised for the first time for acute myocardial infarction (AMI), peripheral arterial disease of the lower extremities (PAD) or ischaemic stroke was identified through linkage of national registers in 1995, 1997 and 2000. The total population of the Netherlands in 1995, 1997 and 2000 was 15 424 122 (men 7 627 428, women 7 796 640), 15 567 107 (men 7 696 803, women 7 870 304) and 15 863 950 (men: 7 846 317, women: 8 017 633), respectively.

**Main Outcome Measure** Twenty-eight-day, 1-year and 5-year mortality rate in AMI patients was compared to mortality rate in ischaemic stroke patients and PAD patients by estimating RR (with 95% CI). Cox's proportional hazard models were used to adjust for age.

**Results** Case fatality was highest for ischaemic stroke patients though lowest for PAD patients. In patients 55 to 74 years, large differences in risk of death were observed between AMI patients and PAD patients (men: RR 9.62; 95% CI 5.78 to 16.02, women: RR 14.28; 95% CI 6.68 to 30.52) In contrast, the 5-year risk of death was similar for male AMI and PAD patients and differences in risks of death between AMI and ischaemic stroke patients largely attenuated.

**Conclusions** The dynamics of mortality over time clearly differ between atherosclerotic diseases. Short-term mortality is higher for cardiac and ischaemic stroke patients compared to PAD patients. However, the risk of death increases considerably over follow-up times for PAD patients, and 5 years after first hospital admission the differences in risks of death between AMI and PAD patients and between AMI and ischaemic stroke patients have largely attenuated.

**P54 MIGHT FINANCIAL CUTS DRIVE NHS DECISION-MAKING "DOWNSTREAM"? A QUALITATIVE STUDY OF FACTORS AFFECTING PUBLIC HEALTH DECISION-MAKING**

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**Objectives** To explore the process of public health decision-making, and the role of research evidence, taking cardiovascular disease (CVD) as a case study.

**Design** In-depth interview study.

**Setting and Participants** Over 30 public health policy-makers and planners in CVD, including: commissioners, public health consultants, data analysts, librarians and knowledge managers at Primary Care Trusts; public health academics; lead consultant cardiologists; local and national guideline developers; and third sector staff.

**Methods** In-depth semi-structured interviews were recorded and transcribed verbatim. Transcripts and field notes were analysed using the constant comparative method.

**Findings** Participants reported that previously there was relatively little change in health care investment year on year. Consequently, it was seldom necessary to seek research evidence. However, changes had occurred in recent times. National Health Service (NHS) cuts had led to a more systematic prioritisation process necessitating the explicit use of research evidence. There was a sense that decision-makers must now take stock of what they were doing and ascertain if it was evidence-based. Unfortunately, these cuts had also removed much of the opportunity for creative thinking and for trying out new and unproven innovations. Despite most participants wishing