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| **Table 1: Person and sex-specific analysis of predictors of heart attack admissions for all ages for Local Authorities (2010-2013).** | | | |
|  | IRR | Lower CI | Upper CI |
| *All Persons* | |  |  |
| % Cycle | 0.963 | 0.960 | 0.967 |
| % Walk | 0.995 | 0.993 | 0.997 |
| *Males* |  |  |  |
| % Cycle | 0.974 | 0.965 | 0.984 |
| % Walk | 0.986 | 0.981 | 0.990 |
| *Females* |  |  |  |
| % Cycle | 0.974 | 0.965 | 0.985 |
| % Walk | 0.987 | 0.978 | 0.996 |
| *Note: Each model was adjusted for level of deprivation, prevalence of overweight and obesity, levels of physical activity and smoking. Model included an age- and sex-specific offset which was the expected count of admissions to control for age and sex differences between Local Authorities.* | | | |

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| **Table 2: Age specific Poisson regression examining predictors of heart attack admissions for Local Authorities (2010-2013)** | | | | | | | |
|  | | Males | | | Females | | |
| IRR | Lower CI | Upper CI | IRR | Lower CI | Upper CI |
| 16-24 | % Cycle | 0.853 | 0.754 | 0.955 | 1.122 | 0.856 | 1.358 |
| % Walk | 0.991 | 0.949 | 1.033 | 0.935 | 0.853 | 1.017 |
| 25-34 | % Cycle | 0.923 | 0.894 | 0.951 | 0.938 | 0.831 | 1.040 |
| % Walk | 0.962 | 0.944 | 0.980 | 0.981 | 0.945 | 1.016 |
| 35-44 | % Cycle | 0.941 | 0.931 | 0.951 | 0.949 | 0.919 | 0.979 |
| % Walk | 0.957 | 0.947 | 0.967 | 0.950 | 0.934 | 0.966 |
| 45-54 | % Cycle | 0.945 | 0.939 | 0.951 | 0.909 | 0.893 | 0.925 |
| % Walk | 0.937 | 0.930 | 0.943 | 0.951 | 0.941 | 0.960 |
| 55-64 | % Cycle | 0.926 | 0.920 | 0.933 | 0.935 | 0.923 | 0.946 |
| % Walk | 0.928 | 0.922 | 0.934 | 0.949 | 0.942 | 0.956 |
| *Note: Each age-specific model was adjusted for level of deprivation, prevalence of overweight and obesity, levels of physical activity and smoking* | | | | | | | |

Note: IRR = incidence rate ratio, CI = credible interval

Table 2 presents the overall association between the percentage of individuals using active transport and the incidence of myocardial infarction. There is a clear negative association with the prevalence of cycling, with a one percentage increase in the individuals cycling within a Local Authority associated with a decrease in the likelihood of an additional heart attack of 3.7%. A smaller negative association was observed for the percentage of people who walk to work (IRR = 0.995, 95% CIs = 0.993-0.997). Similar results were found when disaggregating the analyses by sex (for both outcomes and exposures).

Table 3 extends the analysis through disaggregating the measures by age band (for both outcomes and exposures). The results largely follow the same direction with mainly consistent negative associations for both walking and cycling across each sex and age band. Only the percentage of walking for 16-24 demonstrates no clear association to incidence of myocardial infarction. For males, the effect size for cycling varies by age band with a u-shape curve with the largest incidence rate ratio among individuals aged 16-24 (although the credible intervals overlap). For walking there are larger incidence rate ratios at older age bands. The incidence rate ratios are larger for cycling than compared to walking for each age band other than 45-54.

Females present similar consistent negative associations across each age band, although the patterns by age bands differ to males. The credible intervals for both cycling and walking variables for females in age bands 16-24 and 25-34 crossed a value of 1 suggesting that there were no association among these demographic groups. There is little consistent pattern between age bands as well. The incidence rate ratio is also consistently lower (i.e. a stronger effect size) for cycling compared to walking.