Supplementary material

Transportation noise exposure and cardiovascular mortality: a nationwide cohort study from Switzerland.

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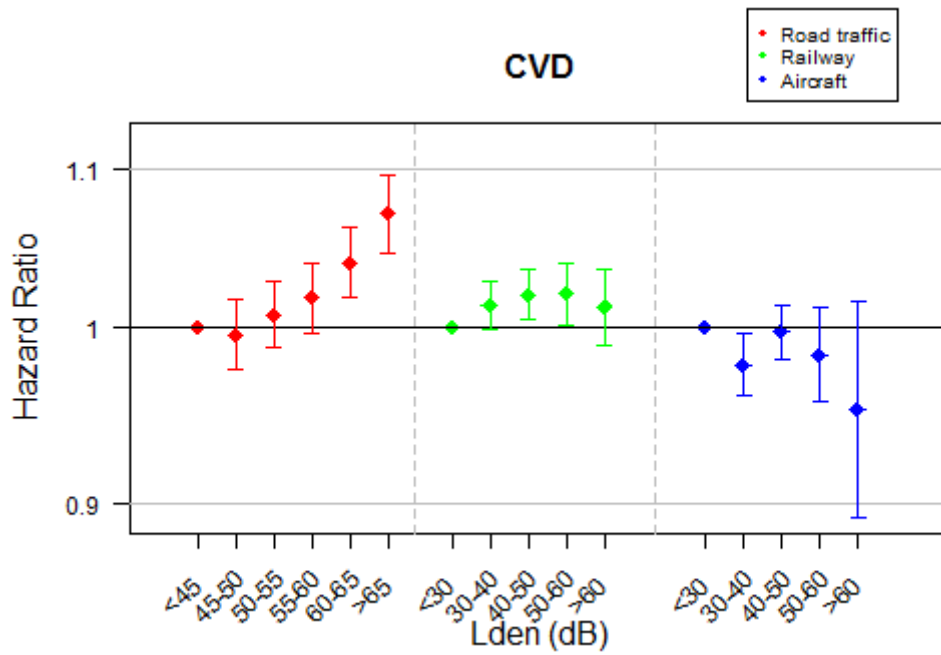
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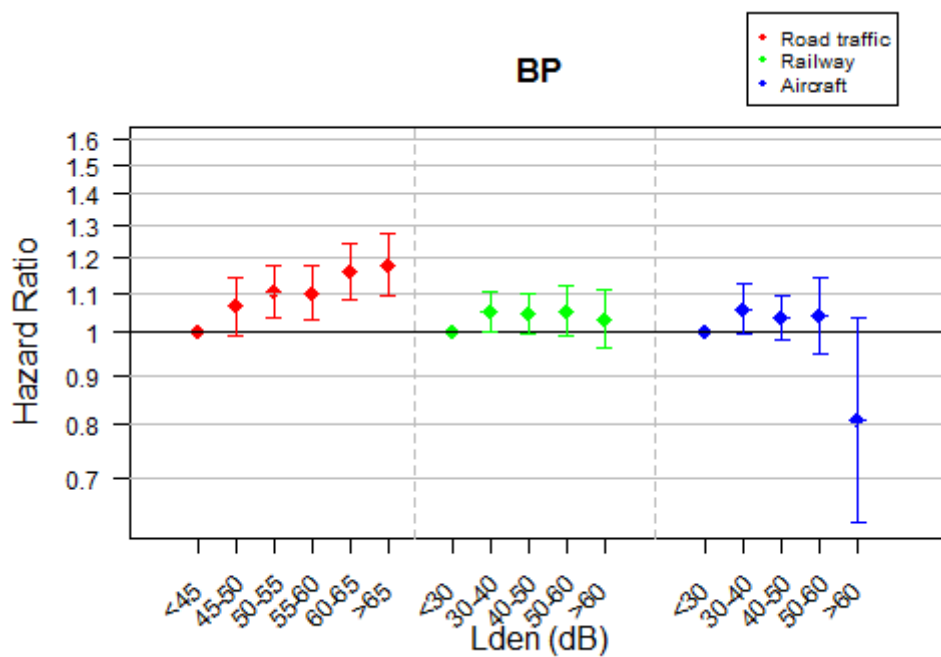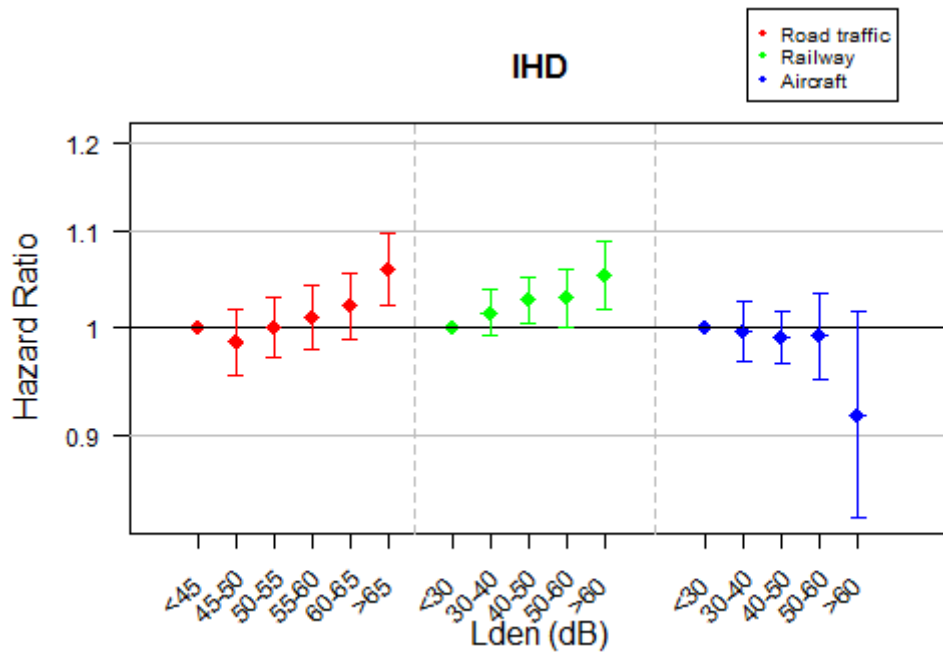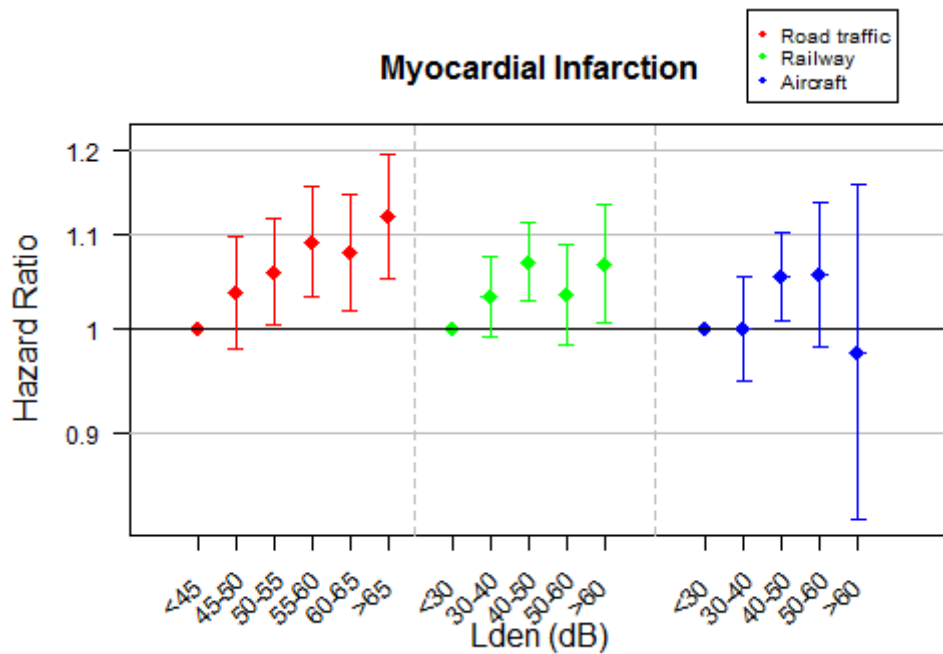

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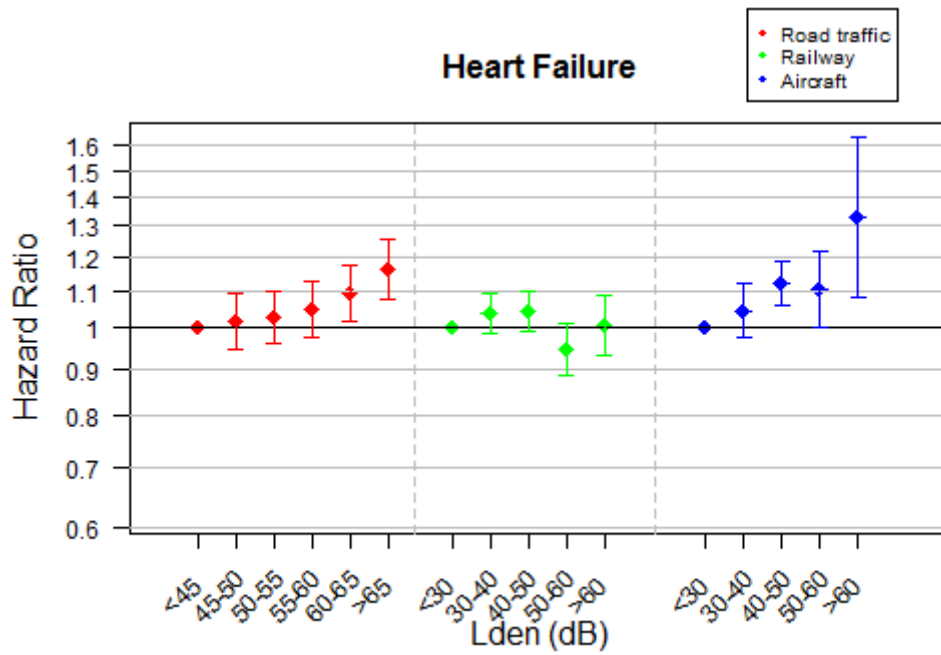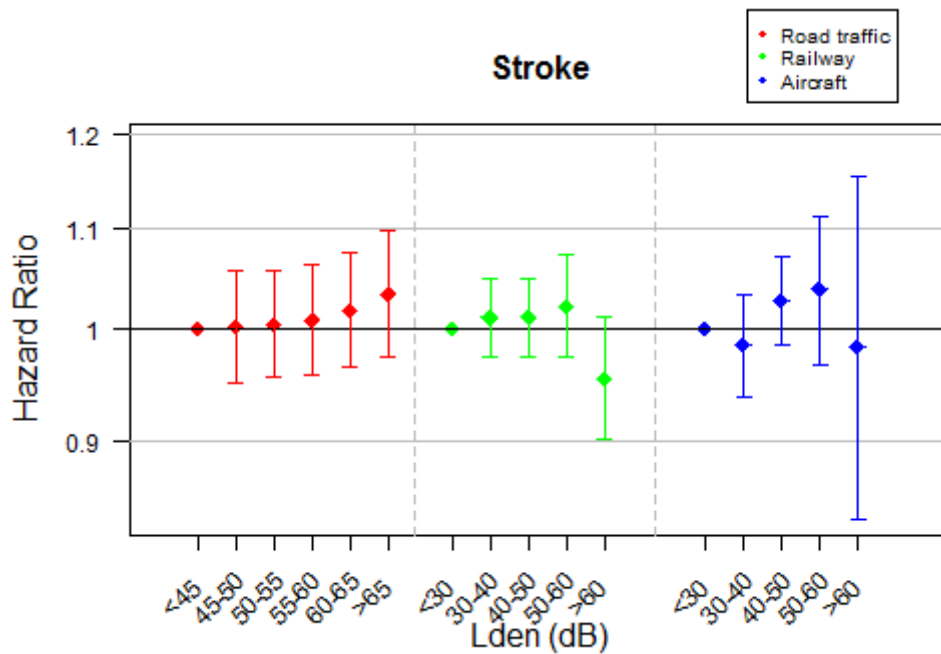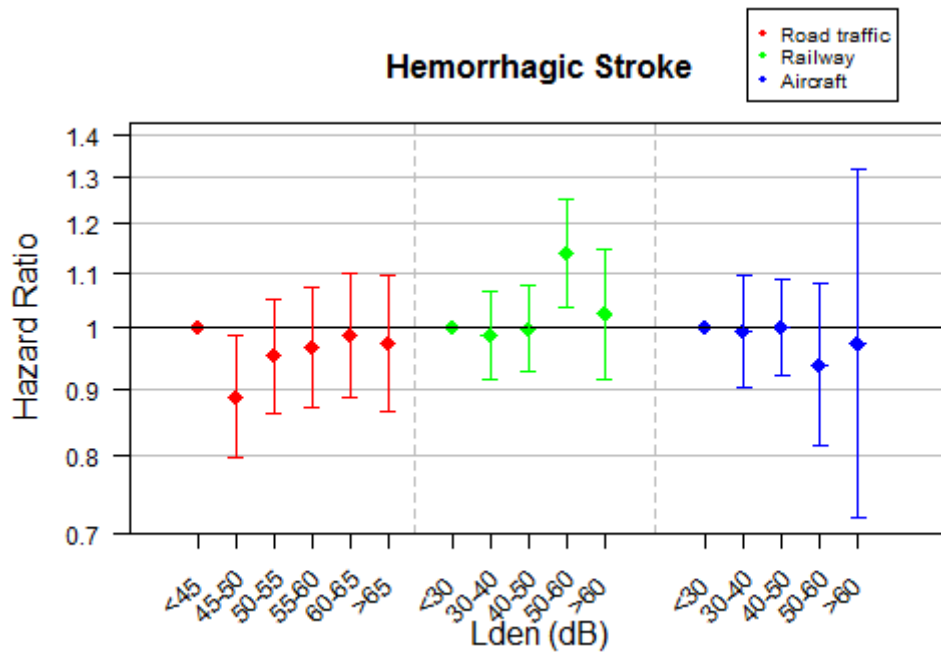

Fig 9: Categorical HRs for Ischemic stroke for road traffic, railway, and aircraft noise. Multipollutants models adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure

CVD

Fig 10: HRs by quintiles of IR night for CVD. Multipollutant models including L_{den}(Road), L_{den}(Rail) and L_{den}(Air) adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure

BP

Fig 11: HRs by quintiles of IR night for BP. Multipollutant models including L_{den}(Road), L_{den}(Rail) and L_{den}(Air) adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure

IHD

Fig 12: HRs by quintiles of IR night for IHD. Multipollutant models including L_{den}(Road), L_{den}(Rail) and L_{den}(Air) adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure

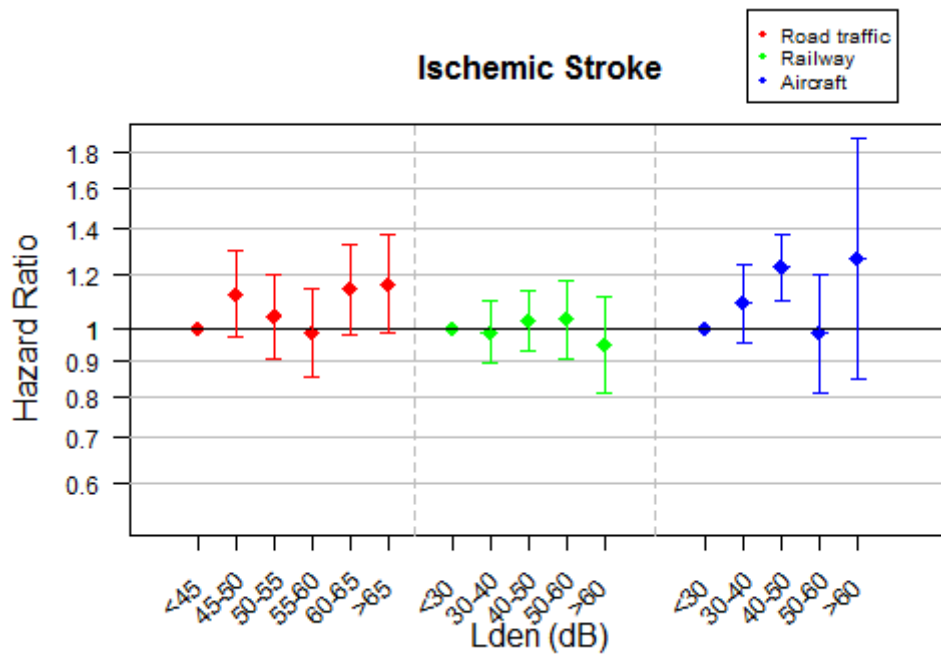## Myocardial Infarction
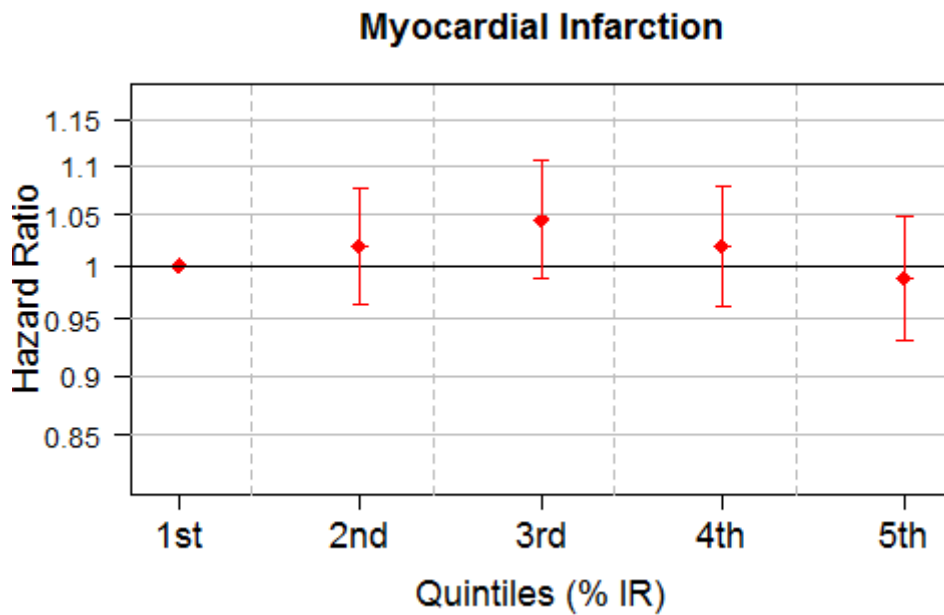
Fig 13: HRs by quintiles of IR night for Myocardial Infarction. Multipollutant models including L_{den}(Road), L_{den}(Rail) and L_{den}(Air) adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure
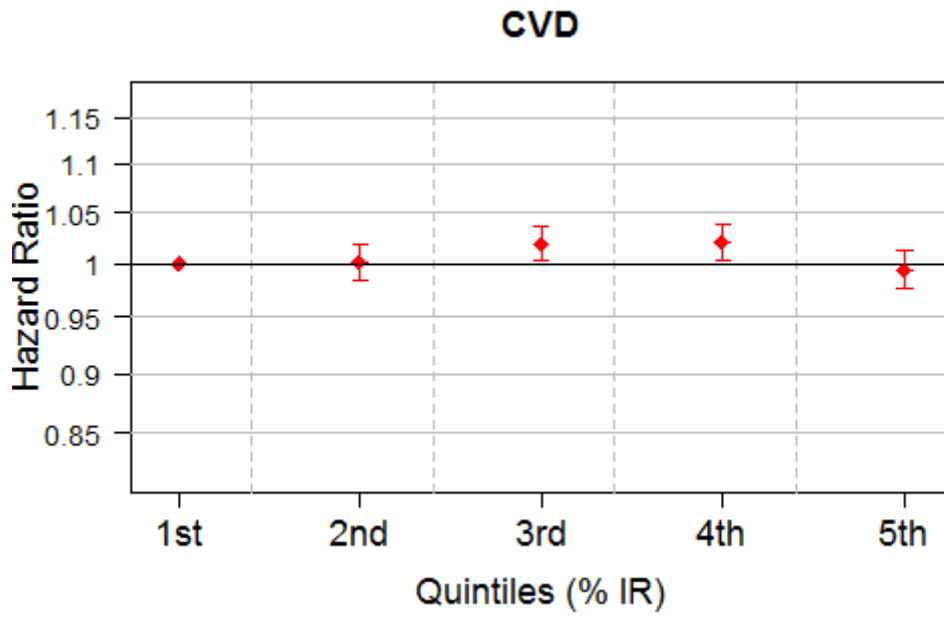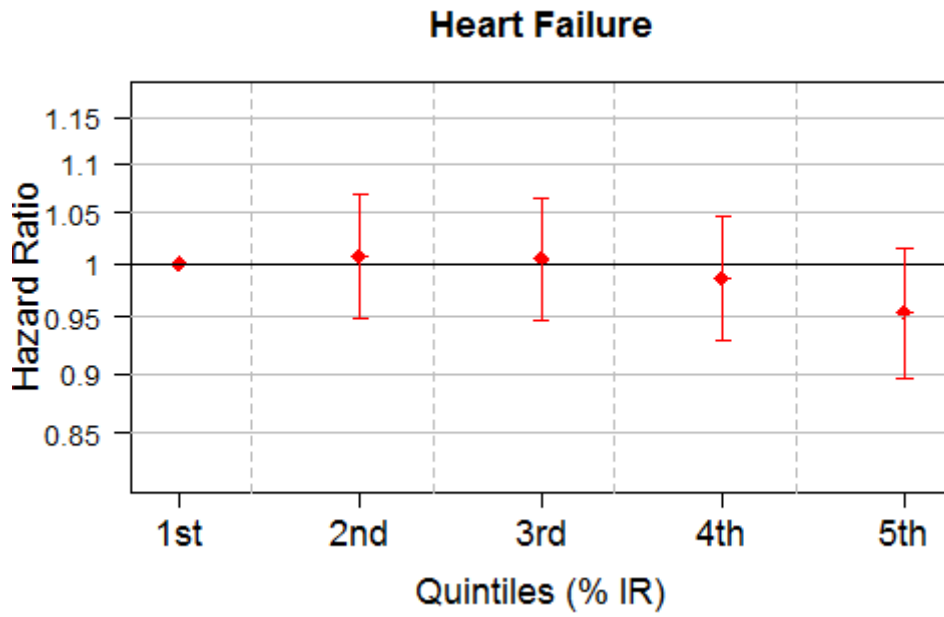
Heart Failure

Fig 14: HRs by quintiles of IR night for Heart failure. Multipollutant models including L_{den}(Road), L_{den}(Rail) and L_{den}(Air) adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure
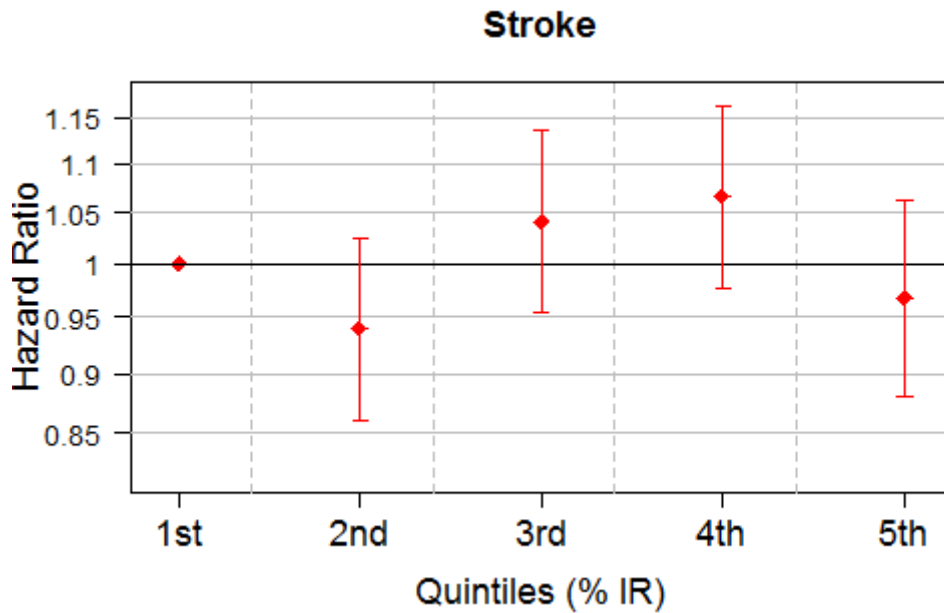
Stroke

Fig 15: HRs by quintiles of IR night for Stroke. Multipollutant models including L_{den}(Road), L_{den}(Rail) and L_{den}(Air) adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure
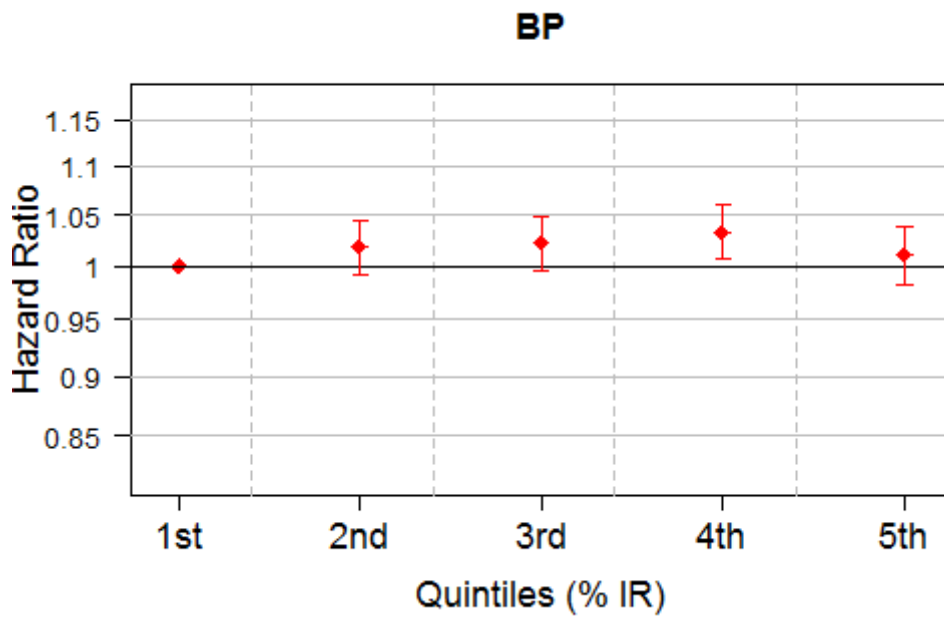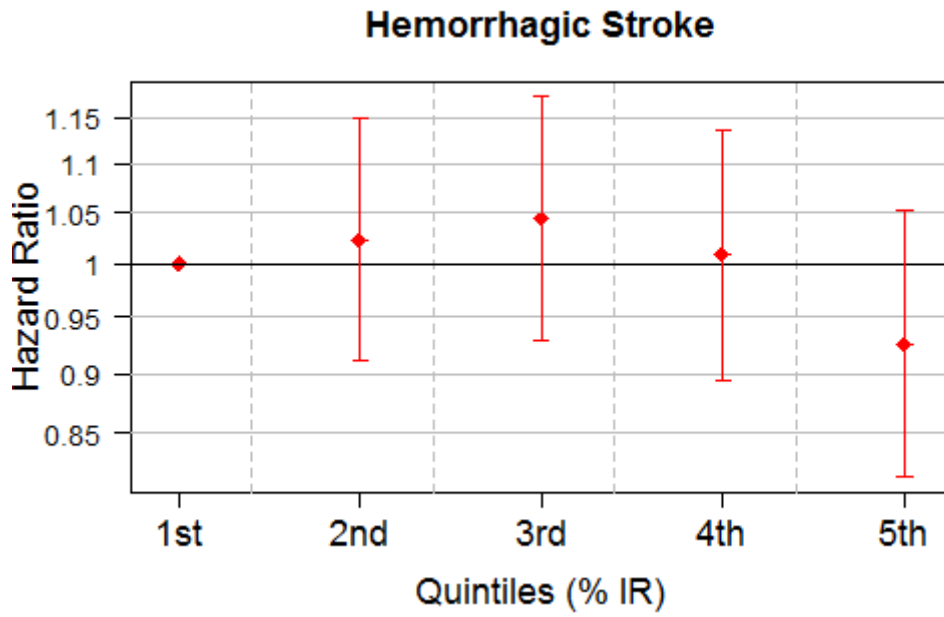
Fig 16: HRs by quintiles of IR night for Hemorrhagic stroke. Multipollutant models including L_den(Road), L_den(Rail) and L_den(Air) adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure
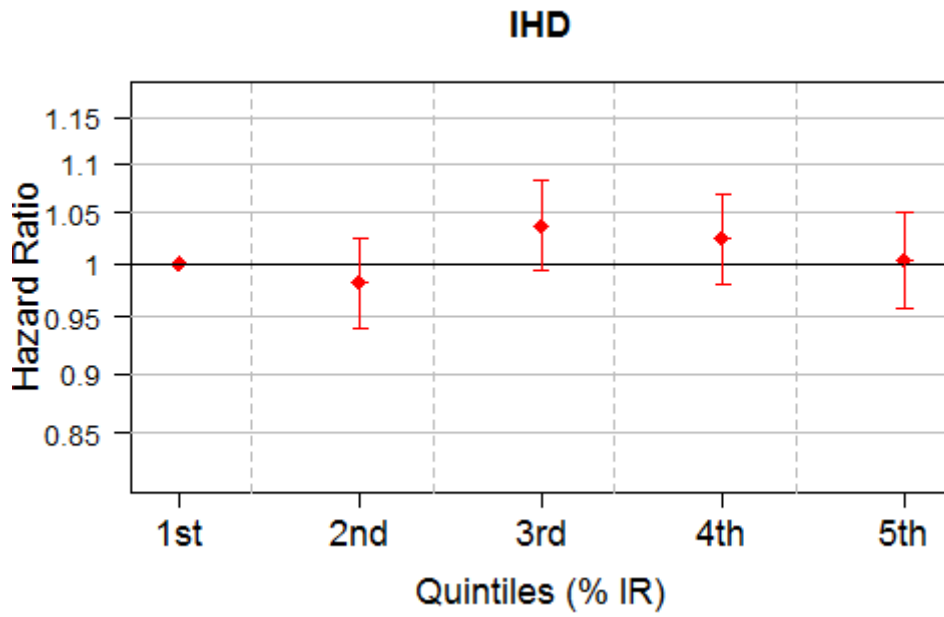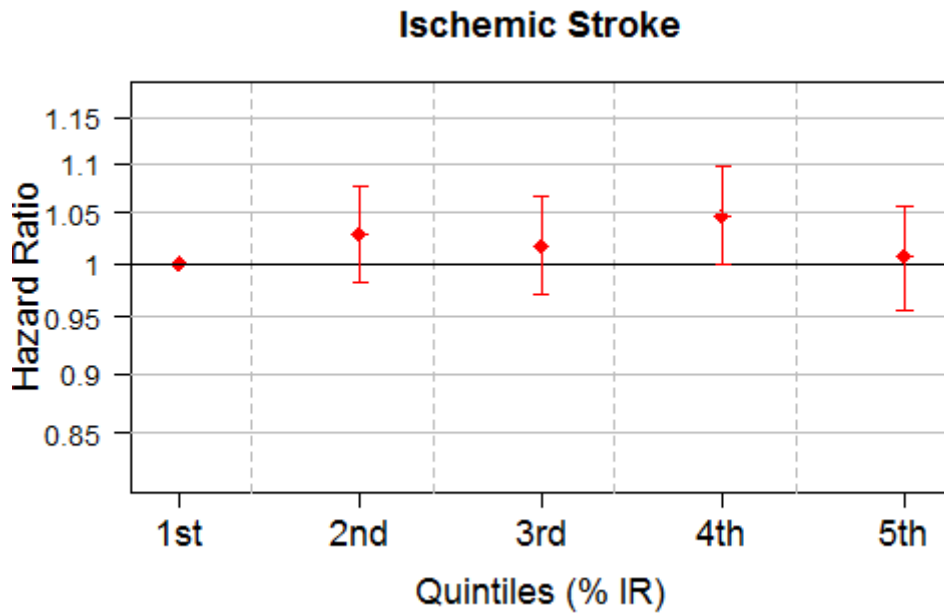

Fig 17: HRs by quintiles of IR night for Ischemic stroke. Multipollutant models including L_den(Road), L_den(Rail) and L_den(Air) adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure

Table 4: Stratified HRs for CVD for Road traffic, Railway and Aircraft noise.

Outcome	Strata	N cases	HR L$_{den}$(Road) (95% CI)	HR L$_{den}$(Rail) (95% CI)	HR L$_{den}$(Air) (95% CI)
CVD	<65y[a]	17431	1.067 (1.046-1.089)	1.02 (1.006-1.034)	0.997 (0.975-1.019)
	>=65y[a]	125524	1.019 (1.012-1.027)	1.003 (0.997-1.008)	0.993 (0.984-1.002)
	new building[b]	75025	1.028 (1.018-1.038)	1.004 (0.997-1.011)	0.999 (0.988-1.011)
	old building[b]	67930	1.021 (1.01-1.031)	1.004 (0.997-1.011)	0.989 (0.978-1.001)
	Movers[c]	65521	1.021 (1.011-1.032)	1.001 (0.993-1.008)	0.994 (0.982-1.007)
	non-movers[c]	73411	1.031 (1.021-1.041)	1.009 (1.002-1.016)	0.991 (0.979-1.002)
	low n events[d]	70330	1.009 (0.997-1.022)	1.003 (0.997-1.01)	0.989 (0.977-1.001)
	high n events[d]	72625	1.04 (1.029-1.051)	1.007 (0.999-1.015)	0.998 (0.986-1.009)
	Male	69915	1.043 (1.032-1.053)	1.013 (1.006-1.02)	0.987 (0.975-0.998)
	Female	73040	1.008 (0.998-1.018)	0.997 (0.991-1.004)	1 (0.989-1.012)
	low sep[e]	77763	1.015 (1.005-1.024)	1.003 (0.996-1.009)	0.984 (0.972-0.997)
	high sep[e]	65192	1.039 (1.028-1.05)	1.007 (0.999-1.014)	1.002 (0.991-1.013)
	Urban[f]	101283	1.03 (1.022-1.039)	1.008 (1.002-1.014)	0.992 (0.984-1.001)
	Rural[f]	40428	1.012 (1-1.025)	0.995 (0.985-1.005)	1.016 (0.991-1.042)

Multipollutants models adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure. [a] Age split at 65 years, [b] building newer than 30y or renovated vs. older than 30y without renovation, [c] more than 5 years of residence vs. less than 5 years of residence, [d] number of events that exceed background level (median split), [e] socio-economic position (median split), [f] urbanity degree (urban vs. rural)

Table 5: Stratified HRs for BP for Road traffic, Railway and Aircraft noise.

Outcome	Strata	N cases	HR L$_{den}$(Road) (95% CI)	HR L$_{den}$(Rail) (95% CI)	HR L$_{den}$(Air) (95% CI)
	<65y[a]	1089	1.017 (0.939-1.101)	1.048 (0.992-1.106)	1.091 (1.003-1.187)
	>=65y[a]	12460	1.057 (1.033-1.083)	1.008 (0.991-1.025)	1.004 (0.976-1.033)
	new building[b]	6894	1.042 (1.01-1.076)	1.016 (0.993-1.039)	1.042 (1.003-1.084)
	old building[b]	6655	1.068 (1.034-1.104)	1.008 (0.985-1.031)	0.986 (0.949-1.025)
	Movers[c]	6171	1.036 (1.002-1.072)	1.008 (0.984-1.032)	1.015 (0.975-1.057)
	non-movers[c]	7002	1.07 (1.037-1.104)	1.014 (0.992-1.037)	1.002 (0.964-1.041)
	low n events[d]	6724	1.036 (0.996-1.078)	1.002 (0.982-1.023)	0.98 (0.941-1.02)
BP	high n events[d]	6825	1.094 (1.056-1.133)	1.018 (0.992-1.045)	1.038 (1-1.078)
	Male	5023	1.069 (1.03-1.109)	1.027 (1-1.054)	1.045 (1-1.091)
	Female	8526	1.045 (1.016-1.075)	1.002 (0.982-1.022)	0.993 (0.959-1.028)
	low sep[e]	7455	1.043 (1.013-1.075)	1 (0.979-1.021)	1.008 (0.967-1.051)
	high sep[e]	6094	1.069 (1.032-1.107)	1.026 (1.001-1.051)	1.016 (0.98-1.054)
	Urban[f]	9288	1.062 (1.032-1.093)	1.015 (0.996-1.034)	1.011 (0.982-1.041)
	Rural[f]	4125	1.028 (0.99-1.068)	0.987 (0.956-1.019)	1.032 (0.955-1.114)

Multipollutants models adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure. [a] Age split at 65 years, [b] building newer than 30y or renovated vs. older than 30y without renovation, [c] more than 5 years of residence vs. less than 5 years of residence, [d] number of events that exceed background level (median split), [e] socio-economic position (median split), [f] urbanity degree (urban vs. rural)

Table 6: Stratified HRs for MI for Road traffic, Railway and Aircraft noise.

Outcome	Strata	N cases	HR L_{den}(Road) (95% CI)	HR L_{den}(Rail) (95% CI)	HR L_{den}(Air) (95% CI)
	<65y[a]	4217	1.081 (1.038-1.125)	1.027 (0.999-1.056)	1.039 (0.995-1.085)
	>=65y[a]	15096	1.029 (1.008-1.052)	1.018 (1.003-1.033)	1.025 (1-1.05)
	new building[b]	10398	1.046 (1.02-1.073)	1.018 (1-1.037)	1.037 (1.006-1.069)
	old building[b]	8915	1.034 (1.005-1.063)	1.018 (0.999-1.038)	1.016 (0.985-1.048)
	Movers[c]	8744	1.038 (1.009-1.067)	1.012 (0.992-1.032)	1.041 (1.008-1.075)
	non-movers[c]	9968	1.049 (1.022-1.077)	1.023 (1.004-1.042)	1.012 (0.982-1.044)
	low n events[d]	9510	1.04 (1.005-1.075)	1.023 (1.005-1.04)	1.005 (0.973-1.037)
MI	high n events[d]	9803	1.044 (1.014-1.075)	1.008 (0.987-1.031)	1.045 (1.015-1.077)
	Male	11451	1.049 (1.024-1.075)	1.017 (1-1.035)	1.026 (0.998-1.054)
	Female	7862	1.028 (0.998-1.059)	1.024 (1.003-1.045)	1.031 (0.996-1.066)
	low sep[e]	10737	1.041 (1.016-1.068)	1.019 (1.002-1.037)	1.016 (0.983-1.049)
	high sep[e]	8576	1.038 (1.008-1.069)	1.021 (1-1.042)	1.039 (1.009-1.069)
	Urban[f]	13684	1.043 (1.019-1.068)	1.017 (1.001-1.032)	1.03 (1.007-1.054)
	Rural[f]	5485	1.036 (1.002-1.07)	1.026 (0.999-1.054)	0.99 (0.926-1.058)

Multipollutants models adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure. [a] Age split at 65 years, [b] building newer than 30y or renovated vs. older than 30y without renovation, [c] more than 5 years of residence vs. less than 5 years of residence, [d] number of events that exceed background level (median split), [e] socio-economic position (median split), [f] urbanity degree (urban vs. rural)

Table 7: Stratified HRs for heart failure for Road traffic, Railway and Aircraft noise.

Outcome	Strata	N cases	HR L_{den}(Road) (95% CI)	HR L_{den}(Rail) (95% CI)	HR L_{den}(Air) (95% CI)
	<65y[a]	478	1.206 (1.069-1.361)	0.911 (0.833-0.996)	1.199 (1.067-1.348)
	>=65y[a]	11867	1.046 (1.021-1.071)	1.001 (0.984-1.018)	1.05 (1.019-1.081)
	new building[b]	6146	1.058 (1.023-1.093)	0.998 (0.974-1.022)	1.04 (0.996-1.086)
	old building[b]	6199	1.043 (1.009-1.079)	0.992 (0.969-1.017)	1.061 (1.021-1.103)
	Movers[c]	5681	1.021 (0.986-1.057)	0.988 (0.963-1.013)	1.069 (1.025-1.115)
	non-movers[c]	6344	1.085 (1.05-1.121)	1.007 (0.983-1.031)	1.049 (1.007-1.092)
	low n events[d]	5977	1.021 (0.98-1.064)	1.008 (0.986-1.031)	1.052 (1.008-1.098)
HF	high n events[d]	6368	1.058 (1.02-1.097)	0.992 (0.964-1.019)	1.067 (1.026-1.109)
	Male	5088	1.103 (1.064-1.144)	0.997 (0.971-1.024)	1.062 (1.016-1.11)
	Female	7257	1.017 (0.986-1.048)	0.997 (0.975-1.019)	1.054 (1.015-1.094)
	low sep[e]	7247	1.025 (0.994-1.056)	0.981 (0.96-1.003)	1.091 (1.047-1.137)
	high sep[e]	5098	1.097 (1.056-1.139)	1.019 (0.992-1.047)	1.033 (0.993-1.075)
	Urban[f]	8302	1.079 (1.046-1.112)	1.003 (0.983-1.023)	1.048 (1.016-1.081)
	Rural[f]	3927	1.01 (0.972-1.049)	0.987 (0.954-1.02)	1.143 (1.058-1.234)

Multipollutants models adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure. [a] Age split at 65 years, [b] building newer than 30y or renovated vs. older than 30y without renovation, [c] more than 5 years of residence vs. less than 5 years of residence, [d] number of events that exceed background level (median split), [e] socio-economic position (median split), [f] urbanity degree (urban vs. rural)

Table 8: Stratified HRs for ischemic stroke for Road traffic, Railway and Aircraft noise.

Outcome	Strata	N cases	HR L$_{den}$(Road) (95% CI)	HR L$_{den}$(Rail) (95% CI)	HR L$_{den}$(Air) (95% CI)
	<65y[a]	337	1.006 (0.872-1.16)	0.888 (0.796-0.991)	1.038 (0.892-1.208)
	>=65y[a]	2654	1.058 (1.005-1.114)	1.002 (0.967-1.039)	1.081 (1.022-1.145)
	new building[b]	1612	1.062 (0.995-1.134)	0.98 (0.935-1.027)	1.039 (0.962-1.121)
	old building[b]	1379	1.044 (0.972-1.123)	0.999 (0.951-1.05)	1.121 (1.039-1.208)
	Movers[c]	1368	1.086 (1.011-1.166)	0.98 (0.931-1.031)	1.11 (1.026-1.2)
	non-movers[c]	1564	1.024 (0.958-1.096)	0.996 (0.95-1.043)	1.047 (0.972-1.129)
	low n events[d]	1440	1.008 (0.924-1.099)	0.991 (0.947-1.037)	1.065 (0.984-1.152)
IS	high n events[d]	1551	1.073 (0.997-1.155)	0.99 (0.937-1.046)	1.089 (1.012-1.172)
	Male	1435	1.05 (0.98-1.126)	0.967 (0.92-1.017)	1.081 (1.001-1.167)
	Female	1556	1.052 (0.984-1.126)	1.009 (0.964-1.057)	1.071 (0.994-1.154)
	low sep[e]	1549	1.041 (0.975-1.112)	1.014 (0.97-1.061)	1.077 (0.991-1.17)
	high sep[e]	1442	1.07 (0.996-1.149)	0.956 (0.907-1.008)	1.071 (0.998-1.148)
	Urban[f]	2181	1.051 (0.992-1.115)	0.997 (0.959-1.037)	1.084 (1.024-1.147)
	Rural[f]	780	1.055 (0.967-1.151)	0.969 (0.9-1.043)	1.038 (0.874-1.232)

Multipollutants models adjusted for sex, neighborhood index of socio-economic position, civil status, education level, mother tongue, nationality and NO2 exposure. [a] Age split at 65 years, [b] building newer than 30y or renovated vs. older than 30y without renovation, [c] more than 5 years of residence vs. less than 5 years of residence, [d] number of events that exceed background level (median split), [e] socio-economic position (median split), [f] urbanity degree (urban vs. rural)