

The patterning of hospital discharges and bed-days by deprivation in Scotland (2011/12)

March 2015

Gerry McCartney,
Ioannis Tamvakas,
Drew Millard,
Lorna Smith
Lorna Renwick

We are happy to consider requests for other languages or formats. Please contact 0131 314 5300 or email nhs.healthscotland-alternativeformats@nhs.net

We would like to thank Claire Hyatt for assistance with data entry and Steven Halcrow at NHS National Services Scotland for extracting and supplying the data.

Published by NHS Health Scotland

1 South Gyle Crescent
Edinburgh EH12 9EB

© NHS Health Scotland 2015

All rights reserved. Material contained in this publication may not be reproduced in whole or part without prior permission of NHS Health Scotland (or other copyright owners). While every effort is made to ensure that the information given here is accurate, no legal responsibility is accepted for any errors, omissions or misleading statements.

NHS Health Scotland is a WHO Collaborating Centre for Health Promotion and Public Health Development.

Contents

Summary	1
Background	1
Methods	1
Results	1
Conclusion	1
Introduction	2
Background	2
Health inequalities	2
Aim of this report	3
Methods	4
Data source	4
Analysis	4
Results	4
Absolute numbers of events	4
Age-standardised rates	6
NHS Board analyses	10
Discussion	11
Main results	11
Strengths of limitations	11
How this fits with the existing literature	11
Implications	12
Conclusion	12
Appendix: Local Health Board data	13

Summary

Background

The Health Promoting Health Service (HPHS) initiative aims to use the context of secondary care as a health improvement opportunity. This report aims to describe the patterning of secondary care use by deprivation in local areas to inform the planning of local HPHS work.

Methods

Routine hospital admissions data were obtained from NHS National Services Scotland by age, sex, deprivation, local Health Board and type of contact. Data were analysed to provide the crude number of events and age-standardised rates for each Scottish deprivation quintile for Scotland overall and each Board.

Results

There are a much greater number of general hospital emergency admissions, A&E attendances and psychiatric hospital admissions for men and women, and for maternity hospital admissions for women, with greater deprivation. There are also a greater number of general hospital elective admissions, general hospital day cases and general hospital outpatient appointments with increasing deprivation for men and women, but the gradient for these hospital event types is much less. The number of bed-days for emergency admissions to general hospitals shows marked deprivation gradients, but is less for elective admissions amongst both men and women. The number of bed-days is much higher for those admitted to hospital as an emergency than those admitted electively. The number of events is much higher in A&E and general hospital outpatients than for the other categories.

Conclusion

The greatest opportunity for health improvement interventions in the most deprived groups lies in outpatient appointments and emergency general hospital admissions. However, other secondary care contacts might represent groups at particularly high risk (e.g. psychiatry) or at particularly important points in the life course (e.g. maternity).

Introduction

Background

The concept of the Health Promoting Health Service (HPHS) is that ‘every healthcare contact is a health improvement opportunity’.¹ It, therefore, supports a World Health Organization (WHO) programme of work to embed health improvement actions into all healthcare settings. It is a whole-setting approach which seeks to create healthcare environments that are public health exemplars within their communities for staff, patients and visitors. The Scottish Government has further argued that HPHS builds upon:

- evidence of effectiveness for health-promoting activity in hospital settings
- access to large numbers of patients, carers, visitors and staff
- efficiency by making the most of opportunistic face-to-face contacts and assessment processes at all stages of the pathway through hospital
- utilising ‘teachable moments’ where patients are potentially more amenable to health improvement interventions when they are in contact with health services
- good employment practice, which involves supporting staff health and wellbeing.

The Scottish Government published its HPHS policy in 2008 and it was given further impetus by a Chief Executives Letter (CEL (1) 2012) in January 2012. This required local Health Boards to take a range of actions on ‘patient interfaces’, staff health and physical environments across topics such as tobacco, alcohol, breastfeeding, food and health, healthy working lives, sexual health, physical activity and active travel.

Health inequalities

Recent research has identified that, whilst Scotland’s health has been improving, inequalities between the most and least deprived groups have continued to grow over time.²

Given that people at increased risk of health inequalities make proportionately greater use of acute and community hospital services, hospitals offer an important opportunity for health improvement actions to reduce health inequalities. However, it has long been recognised that the patterning of use of health services do not necessarily follow the patterning of need for those services.³ Julian Tudor Hart postulated that this mismatch (termed the ‘inverse care law’) and inequality were more profound where there was greater use of market forces in the distribution of the service.⁴ Even within the context of a universally provided national health service, the ability to ‘get in, get through and get on’ differs, owing to differences in agency and resources, meaning that inequalities in the use of services can exacerbate inequalities in health.⁵

Aim of this report

Through consultation on the CEL (1) 2012 governance framework, a need for stronger and more effective health inequalities driven practice was identified. Increasing our understanding of the use of different hospital settings and the demographic profile of the user population is a key component of action to reduce health inequalities through health service provision. More specifically, this work aims to map the demographic characteristics of service users (i.e. by age group, gender or SIMD quintiles) for different hospital settings (i.e. emergency, elective or day cases) and in patient length of stay for Scotland and its local Health Boards.

This hospital activity mapping process provides the required intelligence to better articulate the potential opportunity of health improvement action in hospital settings. This can support the delivery of the current policy directive CEL (1) 2012 as well as the future policy context in 2015 onwards. More specifically, this can provide an evidence-based mechanism for CEL (1) 2012 interventions to be targeted within specific settings that offer the greatest opportunity for impact. In the final year of the current HPHS policy, this report allows national and local HPHS leads to influence key strategic and clinical leaders to deliver and progress a sustainable programme of work reflective of hospital users in Scotland.

Methods

Data source

We obtained data from the Information Services Division (ISD) of NHS National Services Scotland (NSS) for events occurring between April 2011 and March 2012. The data were provided for: emergency hospital admissions; elective admissions; day cases; accident and emergency (A&E) attendances; first outpatient attendances (all to general hospitals); psychiatric hospital admissions; maternity hospital admissions; the mean inpatient length of stay for emergency admissions; and the mean inpatient length of stay for elective admissions. Elective admissions were based on the financial year of discharge (2011/12) and all admission counts were based on continuous inpatient stays (i.e. movements within hospitals once admitted were not counted). Admissions that lasted more than 365 days were excluded from the calculation of bed-days. Individual records that could not be assigned a valid postcode were excluded.

The data were stratified by NHS Board of residence, age group, sex and Scottish Index of Multiple Deprivation (SIMD) quintile (using the 2009 classification). Denominator populations were also provided for each stratum from the 2011 Community Health Index (CHI) database.

Analysis

The absolute number of events in each stratum were back-calculated from the rates and denominator populations provided by ISD. We used the age-stratified data to calculate age-standardised rates. We could not directly use the 2013 European Standard Population (ESP) because data were only supplied for the following age bands: 0–18, 19–29, 30–44, 45–59, 60–74, 75–89 and 90+ years. We, therefore, adapted the 2013 ESP to create weighted strata of: 20,400; 13,100; 20,500; 20,500; 16,500; 8,000; and 1,000 persons for each of these age bands respectively to facilitate indirect standardisation. Poisson regression was used to calculate 95% confidence intervals.

Results

Absolute numbers of events

The absolute number of events by deprivation decile and category for Scotland is given in Table 1 and Figure 1. They show that, for people resident in the most deprived areas, there are a much greater number of general hospital emergency admissions, A&E attendances and psychiatric hospital admissions for men and women and for maternity hospital admissions for women. There is also a greater

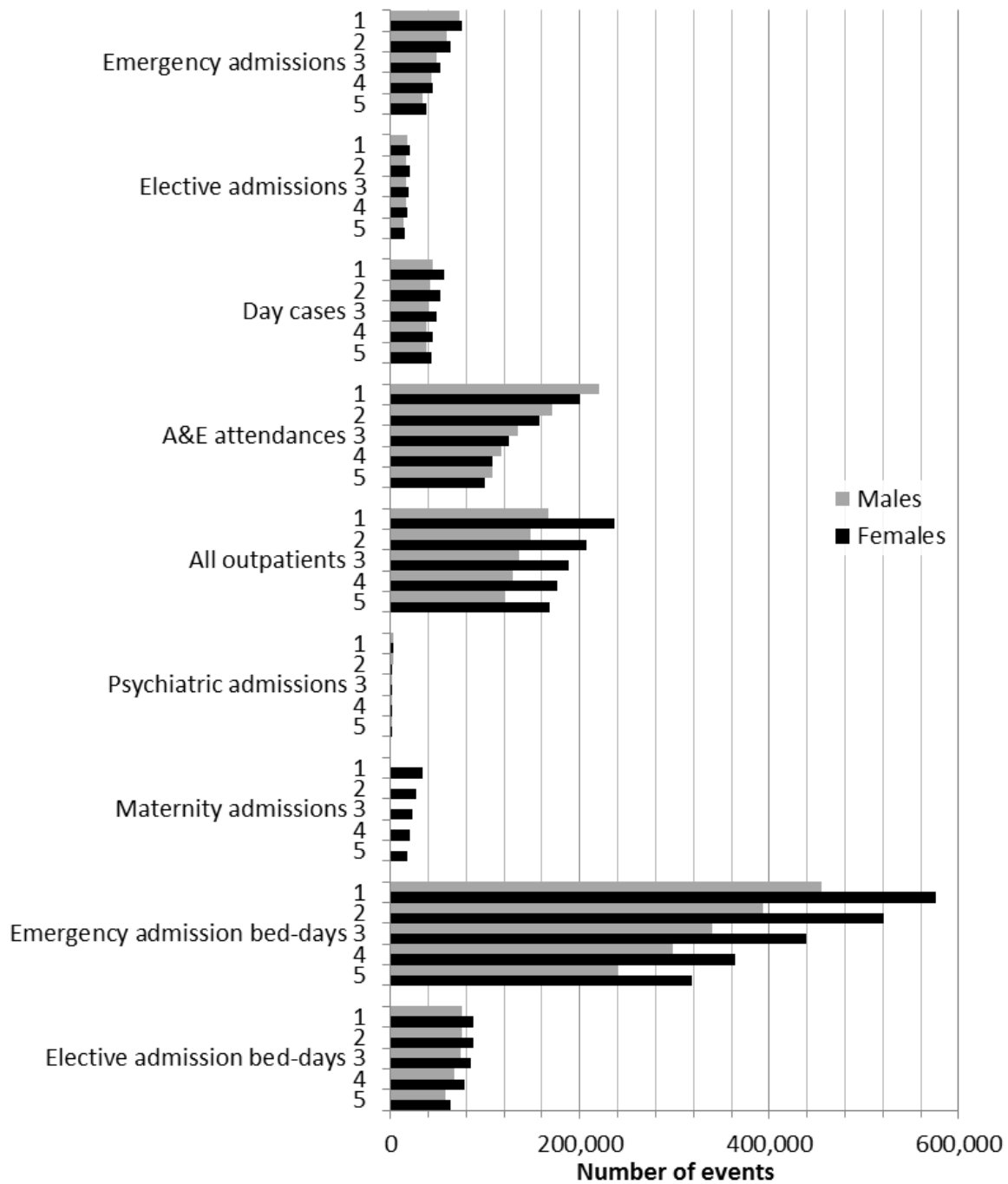
number of general hospital elective admissions, general hospital day cases and general hospital outpatient appointments with increasing deprivation for men and women, but the gradient for these hospital event types is much less.

The number of bed-days for emergency admissions to general hospitals shows marked deprivation gradients, but is less for elective admissions amongst both men and women. The number of events is much higher in A&E and general hospital outpatients than for the other categories. The number of bed-days is much higher for those admitted to hospital as an emergency than those admitted electively.

Table 1: Annual number of hospital discharges, outpatients and bed-days by deprivation quintile and type (Scotland, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	72,220	17,262	45,183	220,764	166,624	3,441	0	455,757	74,968
2	58,848	17,172	42,068	170,698	147,417	2,542	0	393,167	76,164
3	49,263	17,158	41,244	134,877	136,544	1,937	0	340,218	74,138
4	42,802	16,310	38,013	117,431	128,887	1,558	0	297,846	67,713
5 (least deprived)	34,630	13,972	38,041	107,401	121,172	909	0	240,591	57,763
Females									
1 (most deprived)	76,001	21,008	57,216	199,881	236,331	2,975	34,289	575,308	87,511
2	63,579	20,277	52,897	157,150	207,546	2,317	27,435	520,734	88,066
3	52,732	19,447	48,450	125,291	188,065	1,993	22,967	439,399	84,739
4	45,133	18,354	44,904	107,873	176,806	1,663	20,000	363,686	78,036
5 (least deprived)	37,702	15,687	43,018	99,957	167,606	1,051	17,414	318,746	64,005

Figure 1: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHSScotland, all ages, 2011/12)

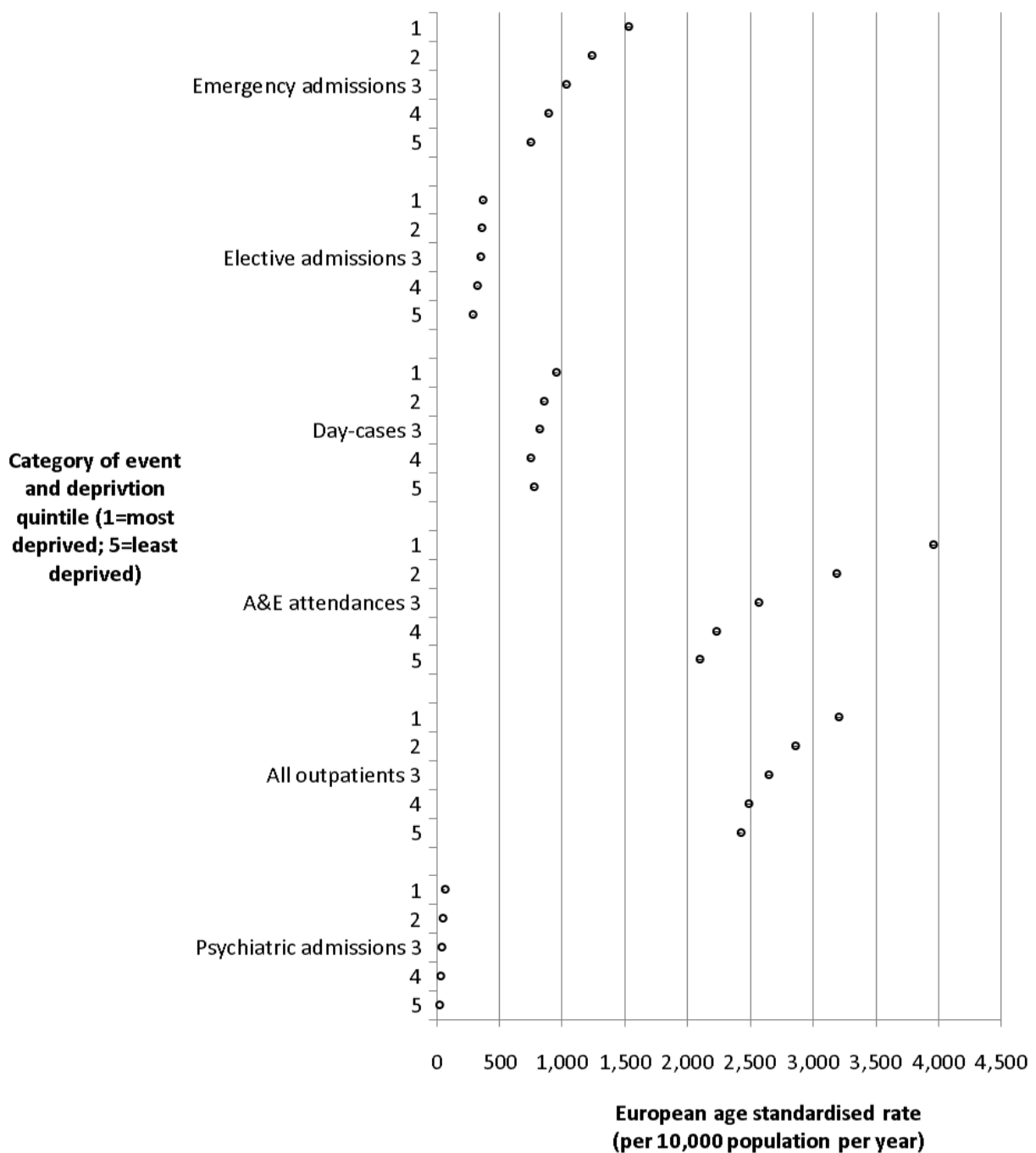


Age-standardised rates

The age-standardised rates for hospital admissions, outpatient attendances and bed-days in general hospitals showed very similar patterns to the crude numbers (see Figures 2–4). The gradient across deprivation is steep for general hospital emergency admissions, A&E attendances and general hospital outpatients (and also for psychiatric admissions, but the rates are so small that this is not obvious from the

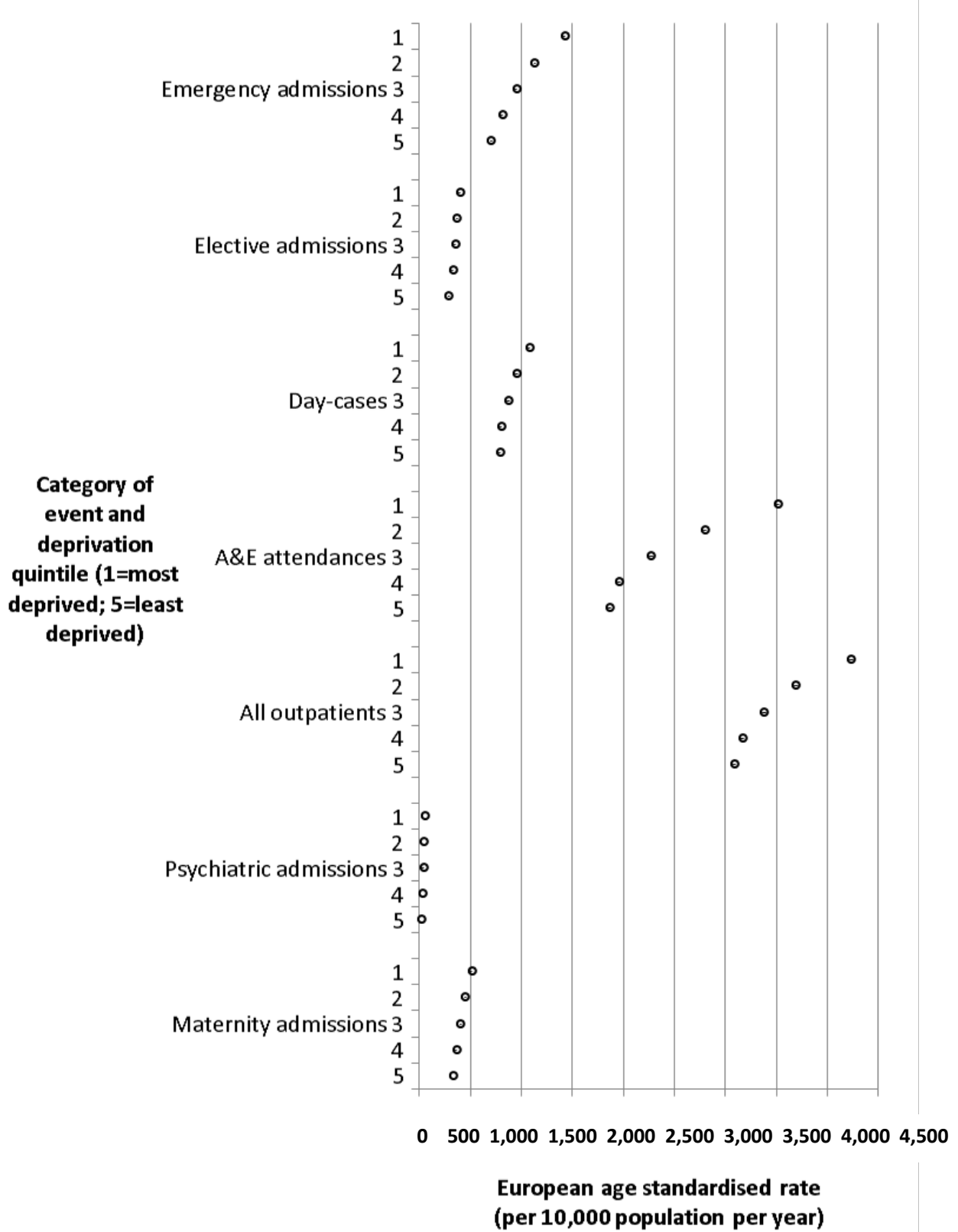
graphs). The gradients are much less for general hospital day-cases, elective admissions and elective bed-days. The number of events in each stratum is sufficiently large over a year that the 95% confidence intervals are very narrow in each group.

Figure 2: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHSScotland, 2011/12)*



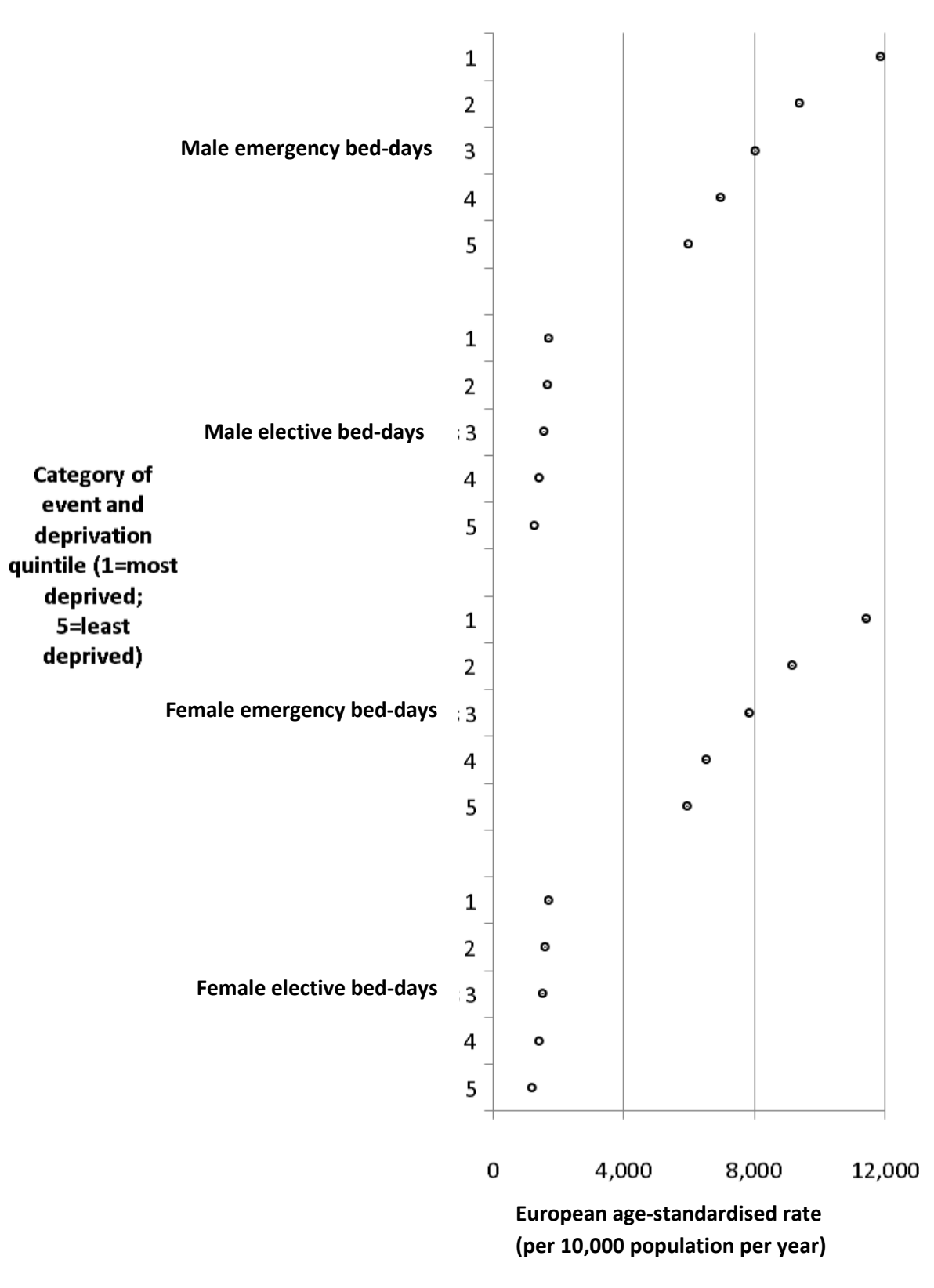
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 3: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHSScotland, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 4: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHSScotland, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Board analyses

In the Appendix, data are provided for each of the local NHSScotland Boards. This includes a table providing the absolute number of events in each Board by Scottish deprivation quintile, a histogram illustrating the absolute number of events for each quintile and histograms providing the age-standardised rates for men and women.

In general, the same pattern is found within each Board as for Scotland overall. However, many of the smaller and more rural Boards are not well suited for analysis by Scottish deprivation quintiles because the area-based measure works less well in discriminating between dispersed communities and in some Boards there are very few (or zero) datazones in all the Scottish deprivation quintiles. In these areas this breakdown will be much less useful.⁶ Furthermore, in some of the smaller Boards there are some deprivation quintiles where the number of individuals within a particular age-stratum, and the number of events, is very small. The 95% confidence intervals provide a guide to the precision of the estimates, but the estimates may be dependent on a relatively small number of events occurring amongst a small number of individuals in those areas.

Discussion

Main results

There are a much greater number of general hospital emergency admissions, A&E attendances and psychiatric hospital admissions for men and women, and for maternity hospital admissions for women, with greater deprivation. There are also a greater number of general hospital elective admissions, general hospital day cases and general hospital outpatient appointments with increasing deprivation for men and women, but the gradient for these hospital event types is much less. The number of bed-days for emergency admissions to general hospitals shows marked deprivation gradients, but is less for elective admissions amongst both men and women. The number of events is much higher in A&E and general hospital outpatients than for the other categories. The number of bed-days is much higher for those admitted to hospital as an emergency than those admitted electively.

Strengths and limitations

The Scottish Morbidity Record (SMR) system has very high ascertainment (i.e. it includes almost all the cases that occur) and is almost complete for patients' postcodes. The data are, therefore, highly likely to represent the real picture of secondary care contacts in Scotland.

Our measure of deprivation was SIMD. This includes a measure of health in the composite index creating a risk of circularity in its use for exploring differences in health outcomes. However, the overall SIMD index is very highly correlated with the income domain of the index and so the risk of this biasing the results is very small. SIMD does not discriminate well between populations in rural areas because of the highly dispersed populations which include greater socioeconomic diversity within each datazone. The differences between socioeconomic groups in these areas are, therefore, not well described. Unfortunately, individual or household socioeconomic status, linked to SMR records, is not currently available and so better analysis is not possible.

How this fits with the existing literature

Differences in secondary care contacts between socioeconomic groups are not routinely reported in Scotland. Analyses of cohort data have found a similar pattern of greater hospital use amongst those living in deprived communities, with a steeper gradient for emergency than routine contacts. However, the degree of higher use is likely to be less than the greater need in those communities.

Implications

The greatest opportunity for health improvement interventions in the most deprived groups lies in outpatient appointments and emergency general hospital admissions. However, other secondary care contacts might represent groups at particularly high risk (e.g. psychiatry) or at particularly important points in the life course (e.g. maternity).

Conclusion

Most secondary contacts in Scotland occur in outpatients and emergency general medical admissions. Across all aspects of secondary care there are more events amongst those living in the most deprived areas, but the gradient is greatest for emergency and unplanned contacts. The greatest opportunity for health improvement interventions in the most deprived groups, therefore, lies in outpatient appointments and emergency general hospital admissions. However, other secondary care contacts might represent groups at particularly high risk (e.g. psychiatry) or at particularly important points in the life course (e.g. maternity).

Appendix: Local Health Board data

NHS Ayrshire and Arran

Table 2: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Ayrshire & Arran, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	8,216	1,679	4,802	20,705	14,376	44	0	43,866	8,223
2	6,796	1,730	4,936	16,734	13,343	42	0	38,767	8,021
3	3,552	1,048	3,039	8,603	7,427	14	0	22,151	4,718
4	2,665	917	2,560	6,879	6,818	13	0	16,811	3,609
5 (least deprived)	2,165	781	2,545	5,632	5,814	6	0	13,519	3,070
Females									
1 (most deprived)	8,390	1,986	5,952	18,459	20,845	50	1,924	51,968	8,147
2	7,094	1,975	6,560	15,249	19,244	27	1,374	49,309	8,112
3	3,618	1,099	3,515	7,925	10,104	11	720	28,515	5,176
4	2,807	1,100	3,406	6,379	9,601	6	708	22,269	4,192
5 (least deprived)	2,375	842	3,035	5,481	7,780	10	497	18,271	3,569

Figure 5: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Ayrshire & Arran, all ages, 2011/12)

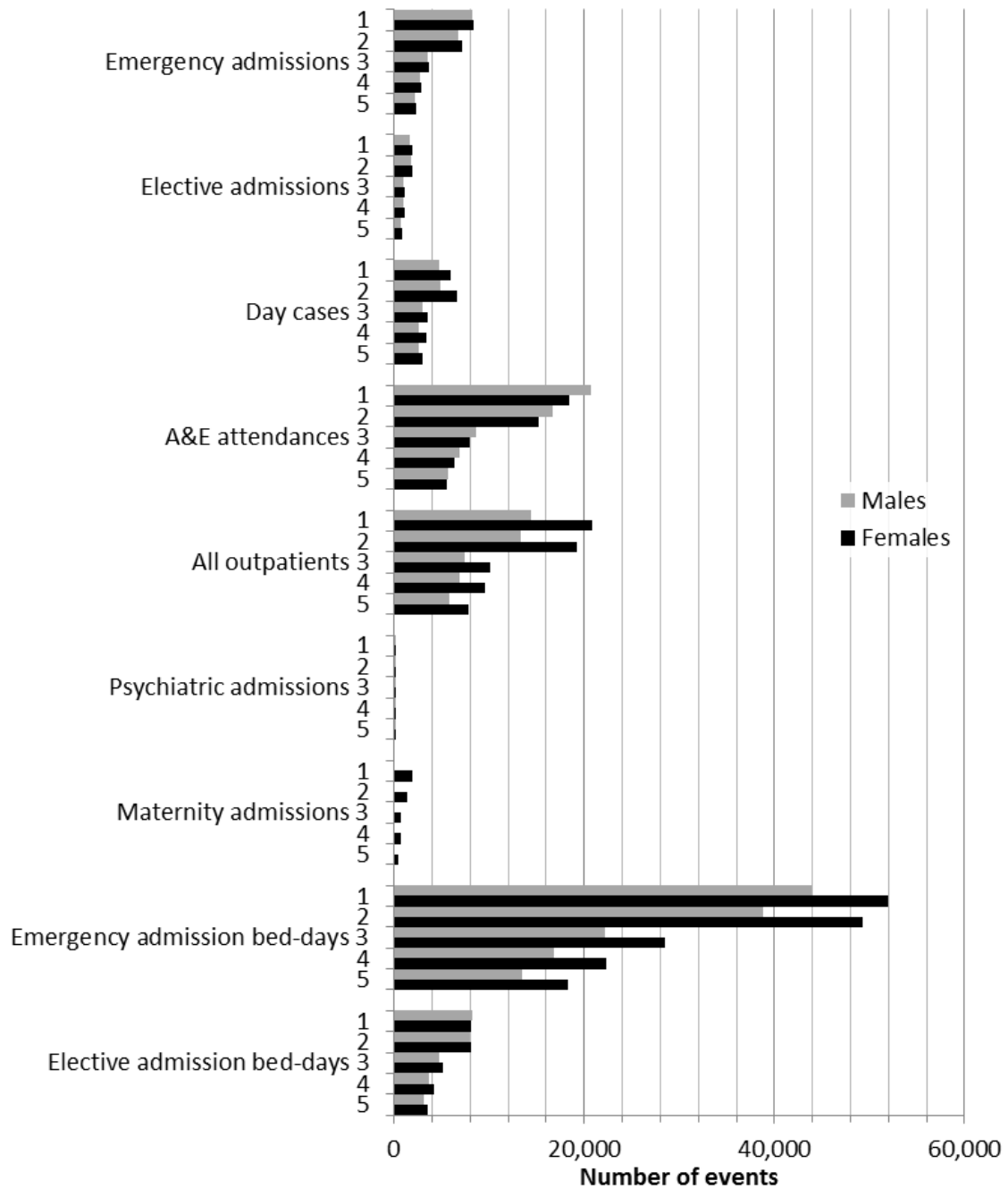
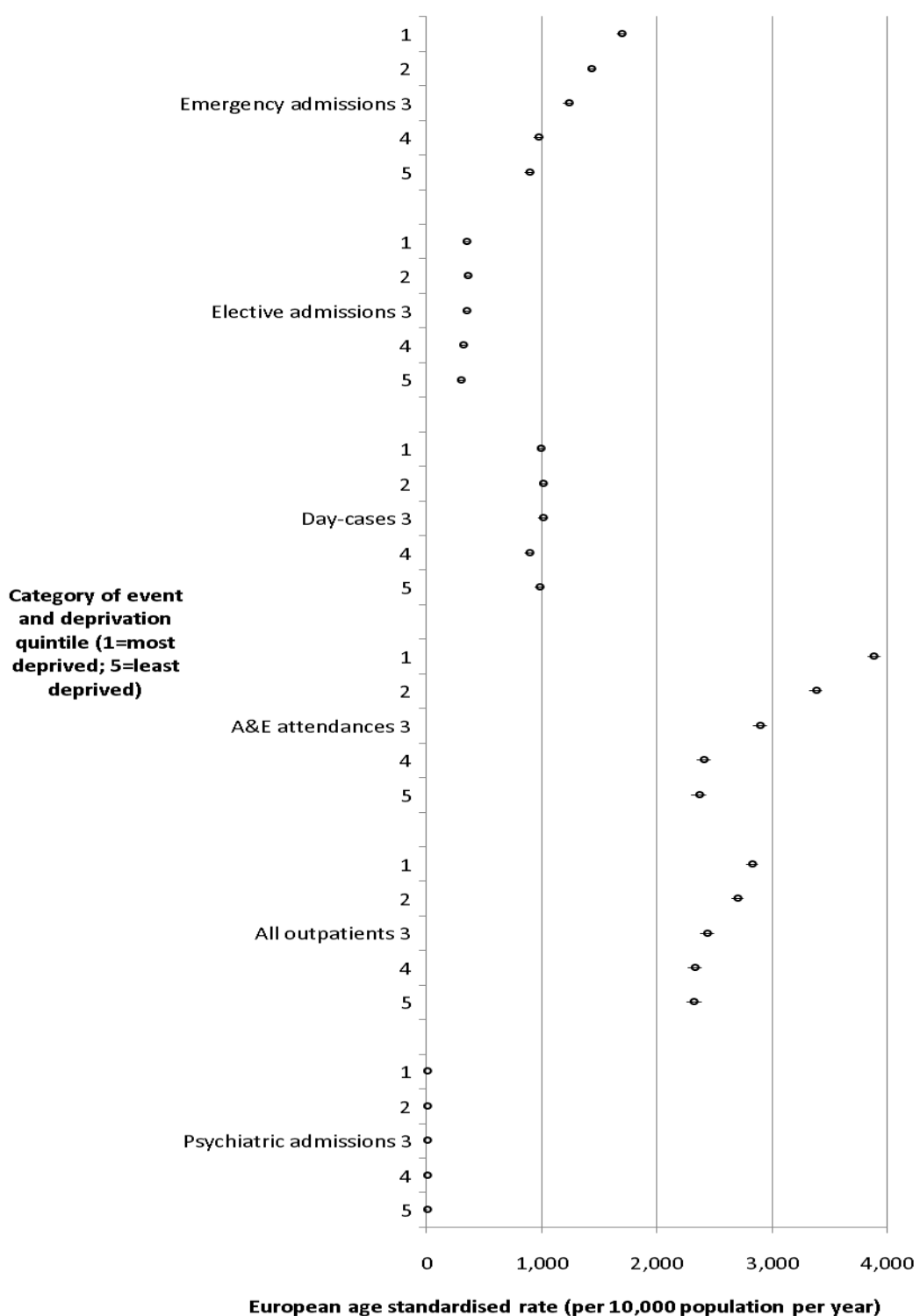
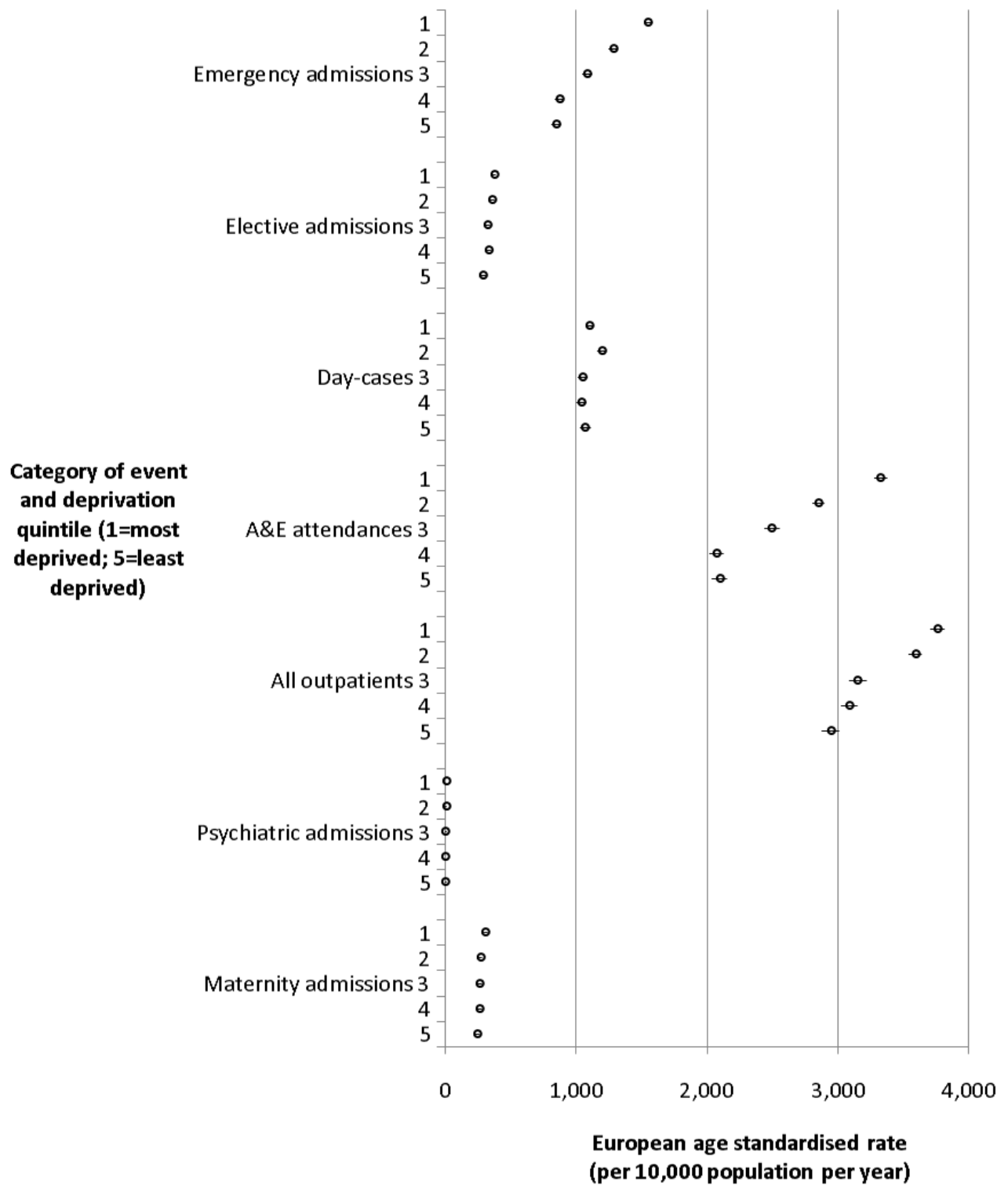


Figure 6: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Ayrshire & Arran, 2011/12)*



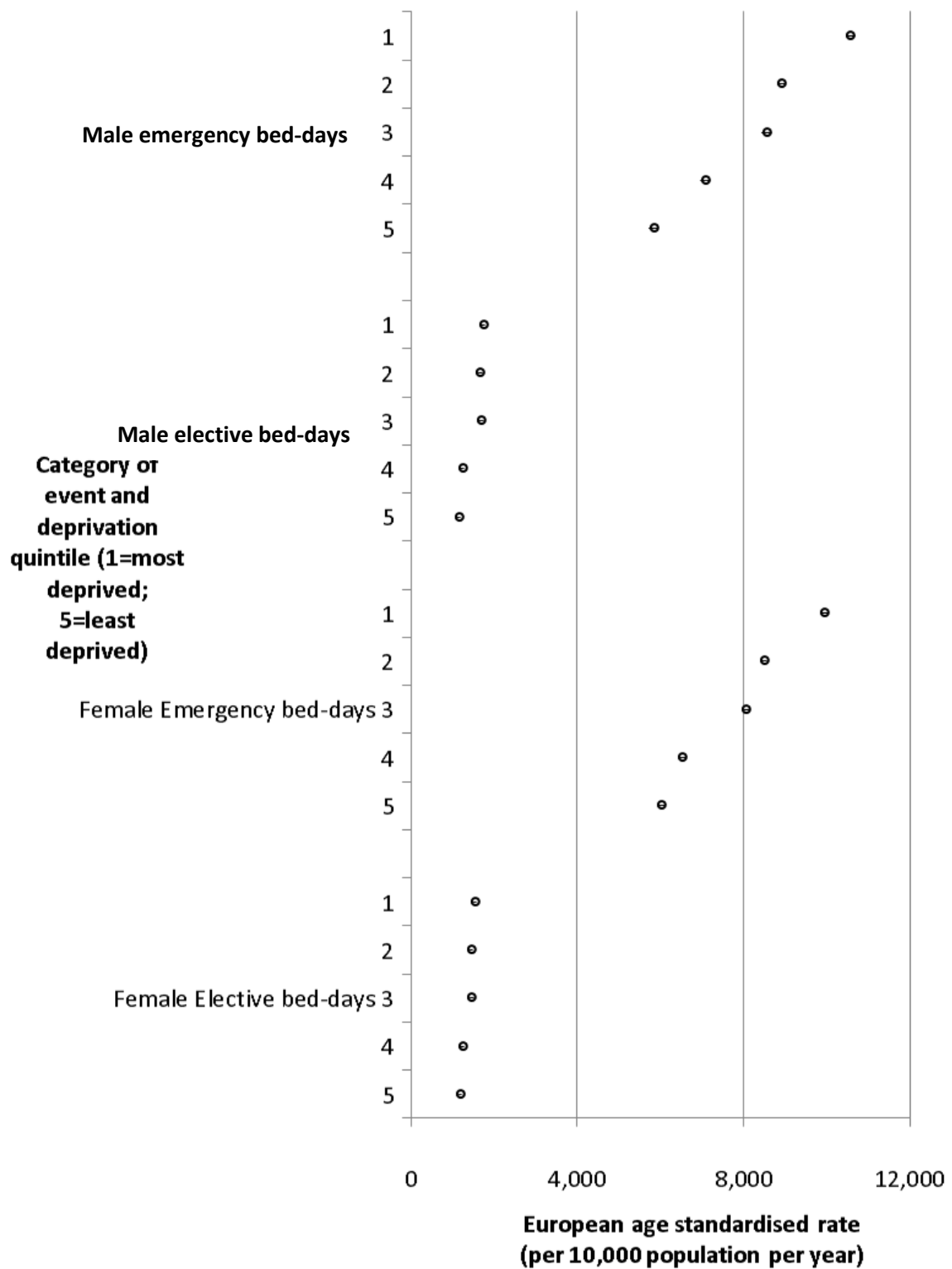
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 7: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Ayrshire & Arran, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 8: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Ayrshire & Arran, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Borders

Table 3: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Borders, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	416	92	135	863	900	34	0	1,668	339
2	908	198	374	1,590	2,313	69	0	6,998	985
3	2,133	632	1,207	3,941	4,604	94	0	13,302	2,497
4	2,545	811	1,883	4,900	6,104	99	0	16,453	3,409
5 (least deprived)	466	156	283	955	828	8	0	3,178	527
Females									
1 (most deprived)	481	83	202	747	1,339	11	284	2,154	250
2	926	202	529	1,402	3,421	50	397	9,185	790
3	2,241	612	1,420	3,399	6,292	105	913	17,630	2,375
4	2,753	797	2,166	4,642	8,351	85	1,009	19,024	2,633
5 (least deprived)	571	127	385	823	1,418	13	152	5,561	368

Figure 9: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Borders, all ages, 2011/12)

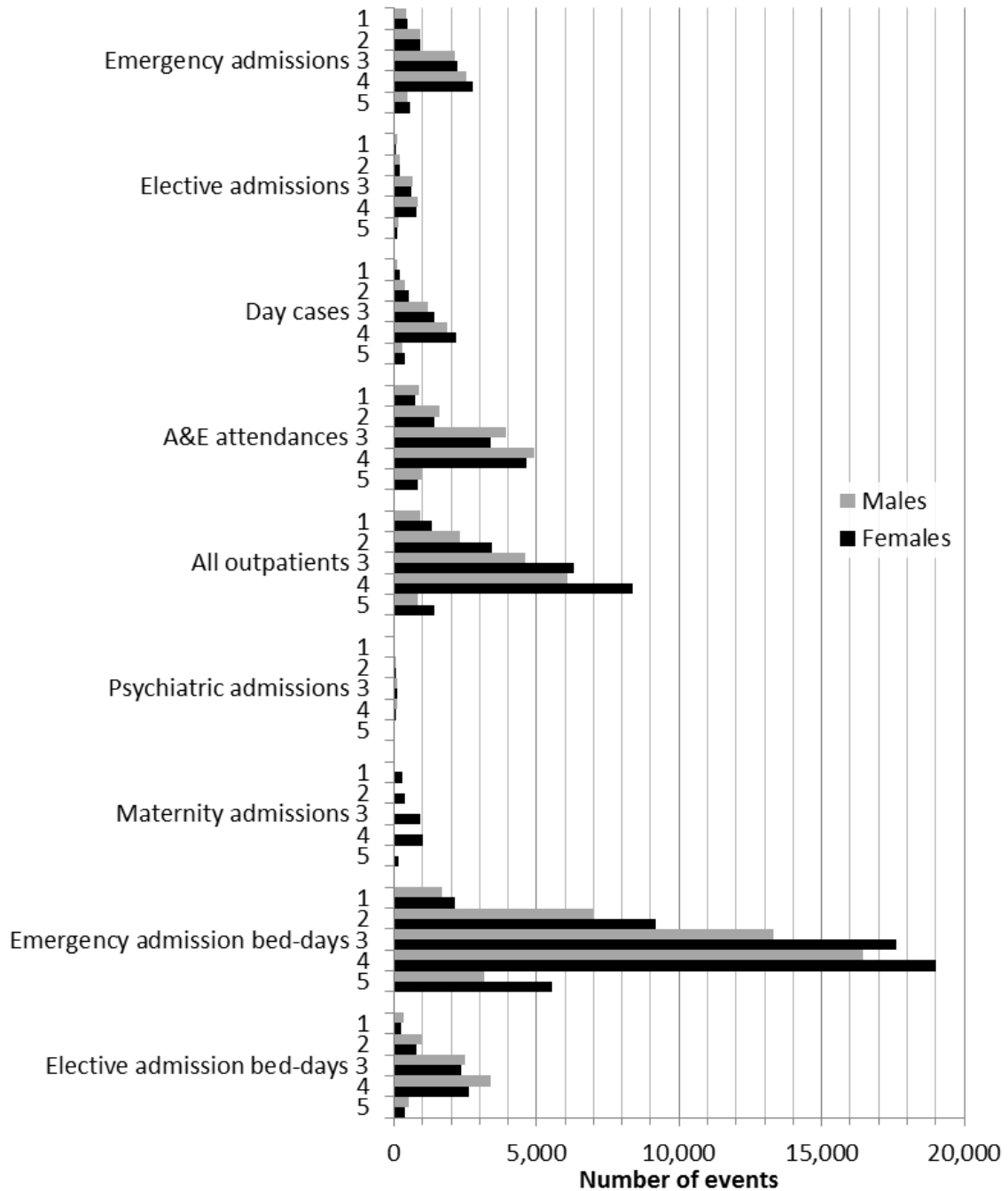
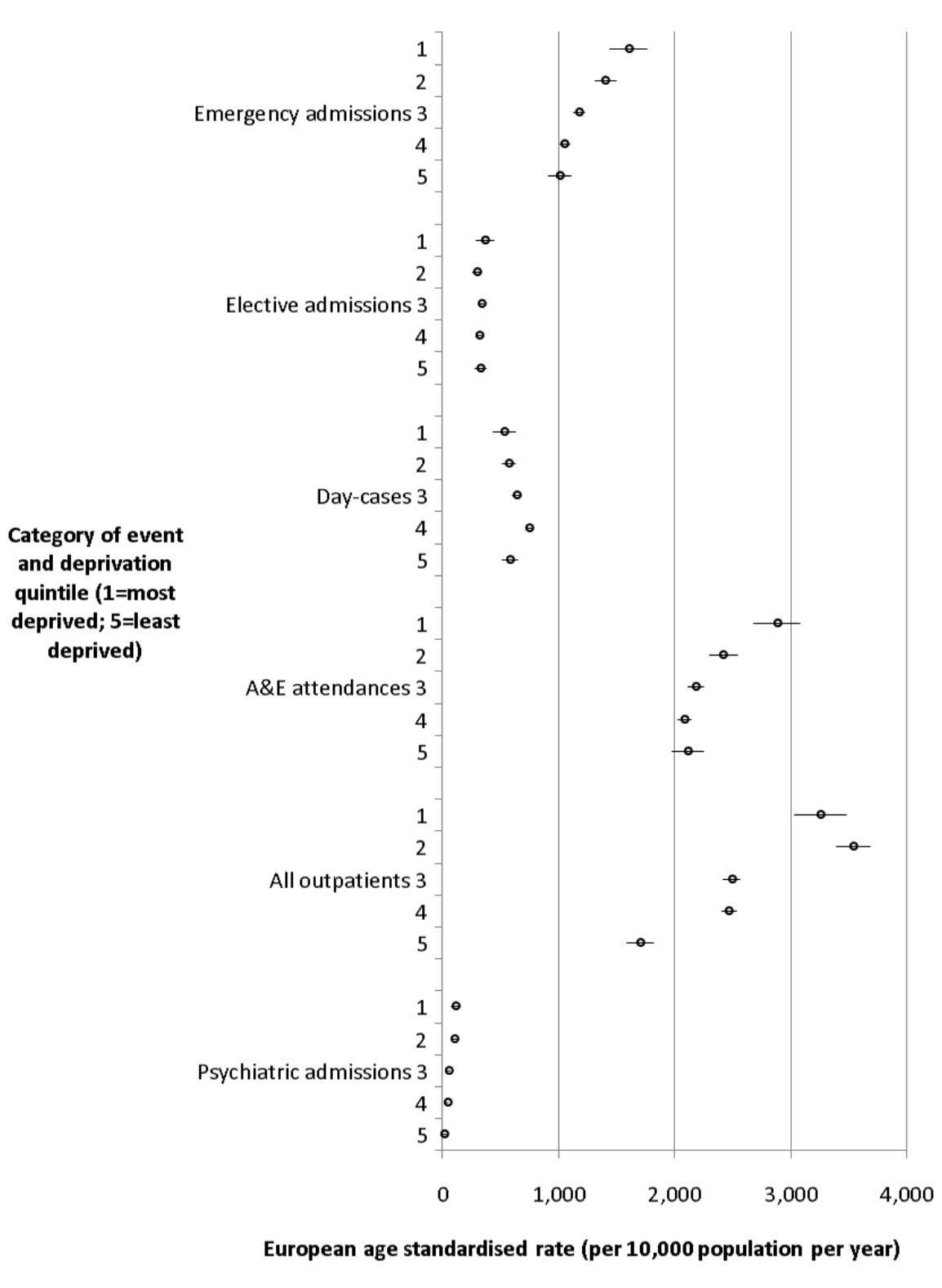
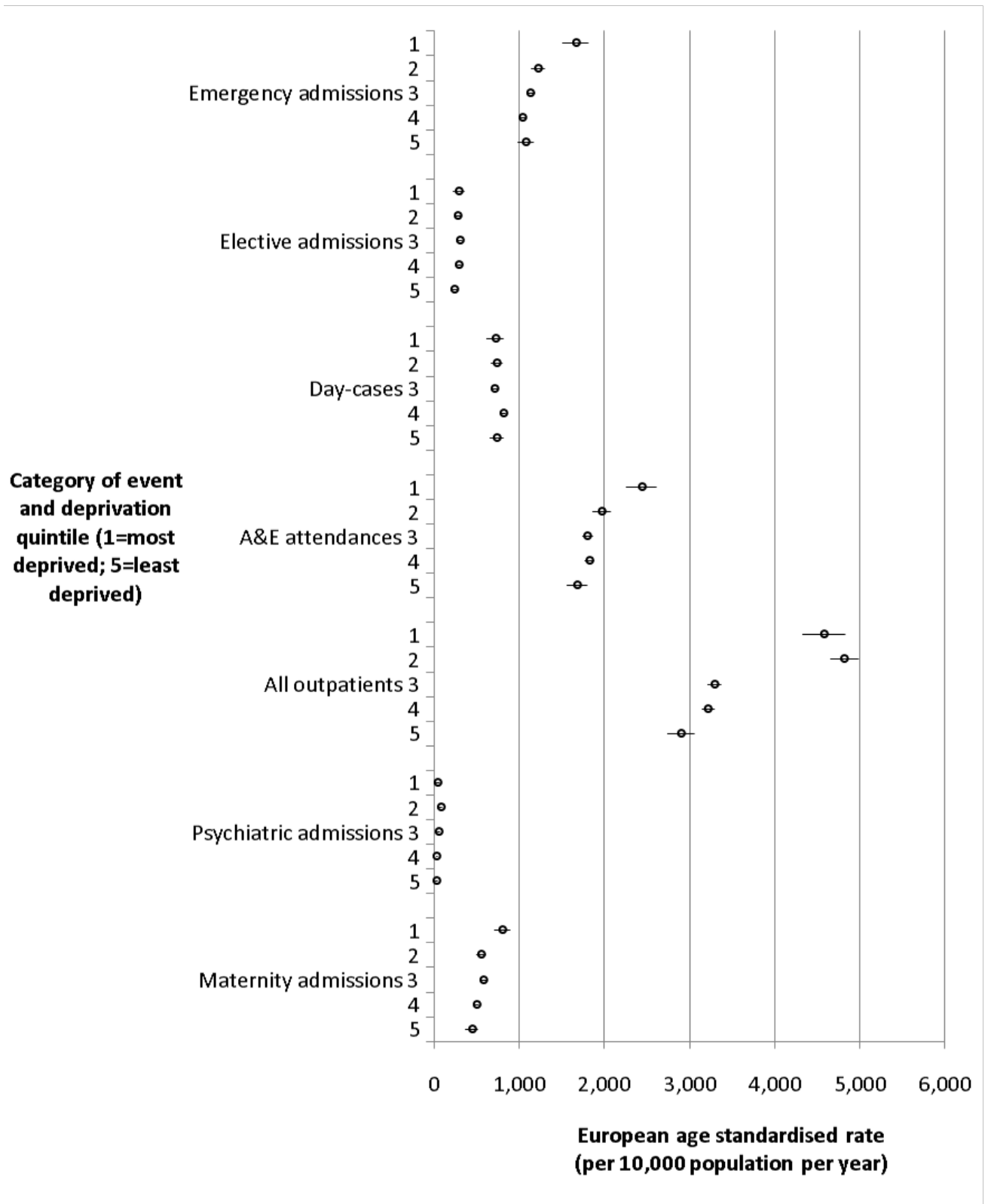


Figure 10: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Borders, 2011/12)*



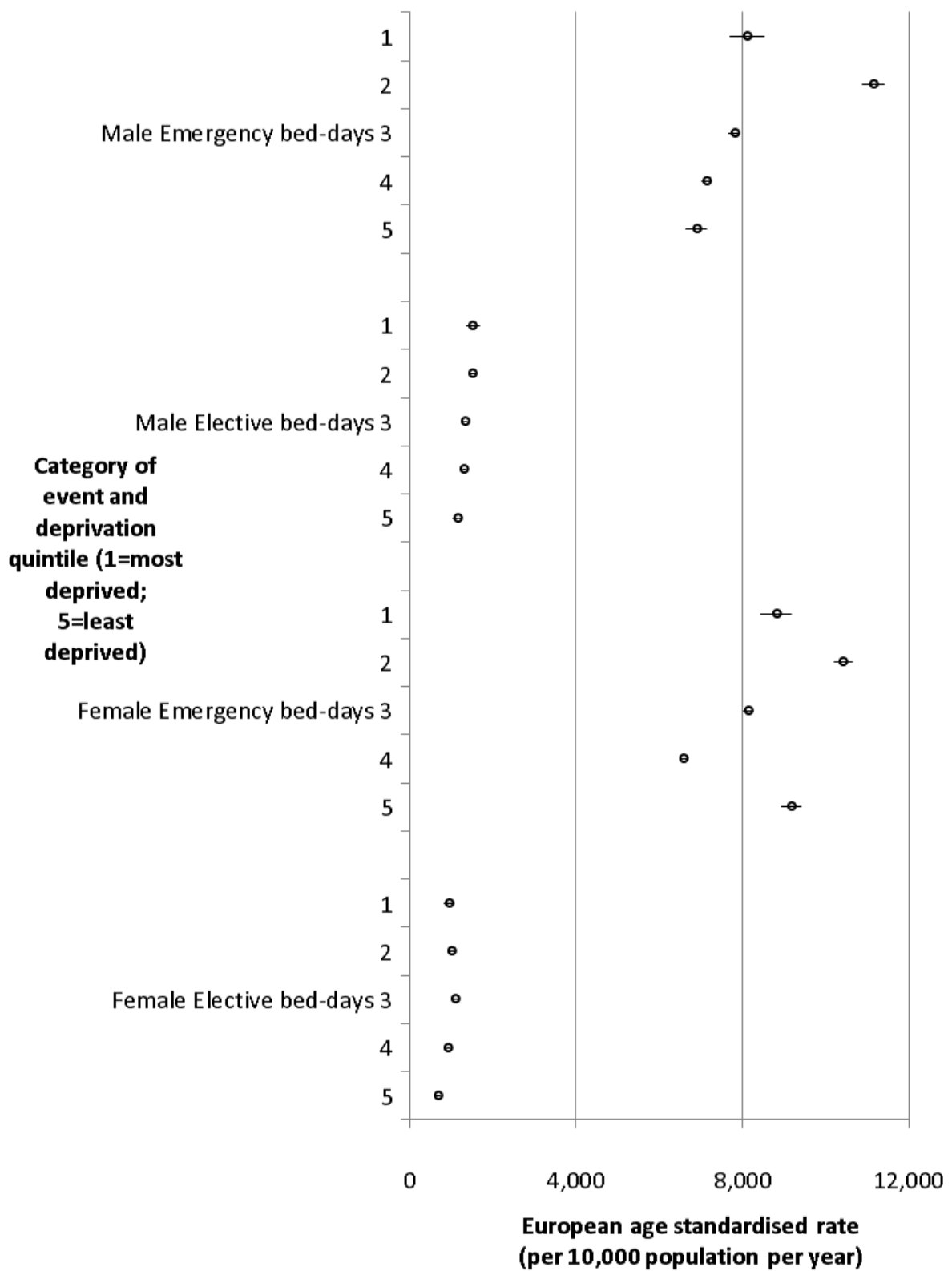
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 11: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Borders, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 12: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Borders, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Dumfries & Galloway

Table 4: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Dumfries & Galloway, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	835	268	645	3,819	1,602	75	0	6,232	886
2	1,821	683	1,608	6,772	4,273	148	0	14,128	2,844
3	2,187	868	2,278	6,857	6,928	272	0	16,958	3,455
4	1,475	636	1,785	4,341	3,834	262	0	12,274	3,088
5 (least deprived)	321	192	400	1,175	1,141	60	0	2,430	774
Females									
1 (most deprived)	960	259	708	3,531	2,055	121	382	6,901	969
2	2,110	786	1,818	6,191	5,880	136	651	21,346	3,541
3	2,356	1,009	2,303	6,383	9,228	291	693	22,037	4,579
4	1,753	741	1,764	4,019	5,118	236	556	16,918	3,459
5 (least deprived)	372	178	451	1,074	1,758	11	110	4,185	742

Figure 13: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Dumfries & Galloway, all ages, 2011/12)

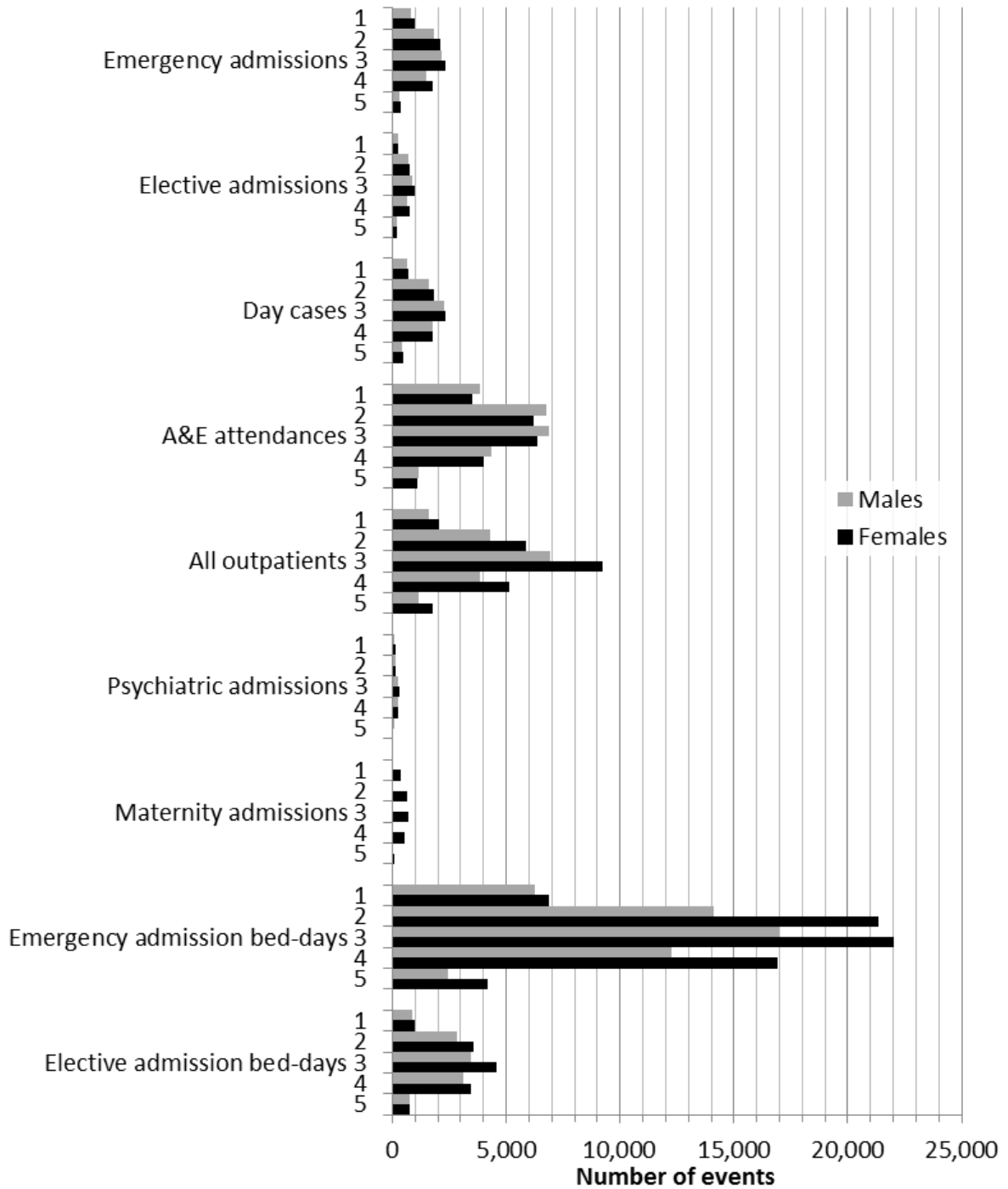
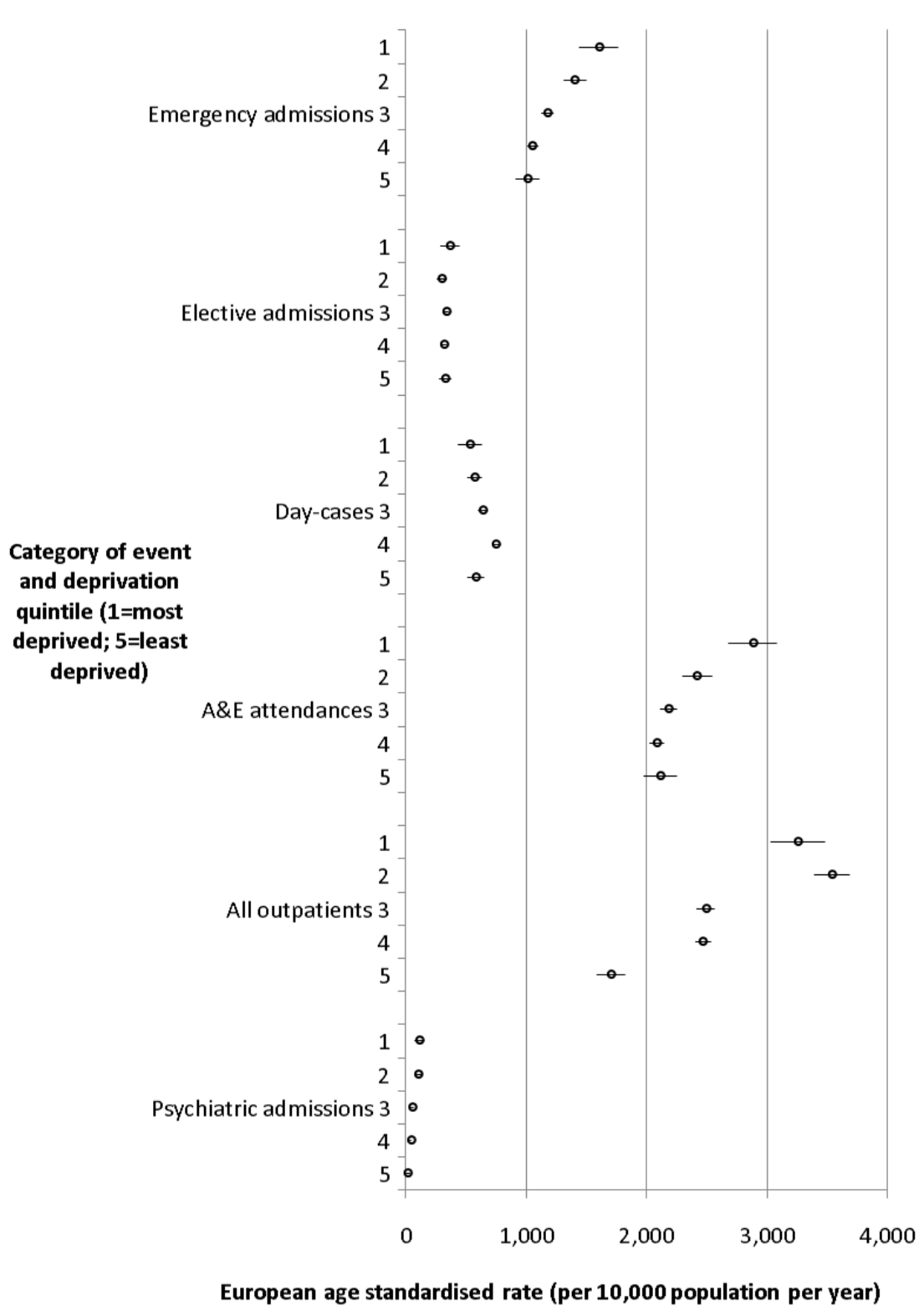
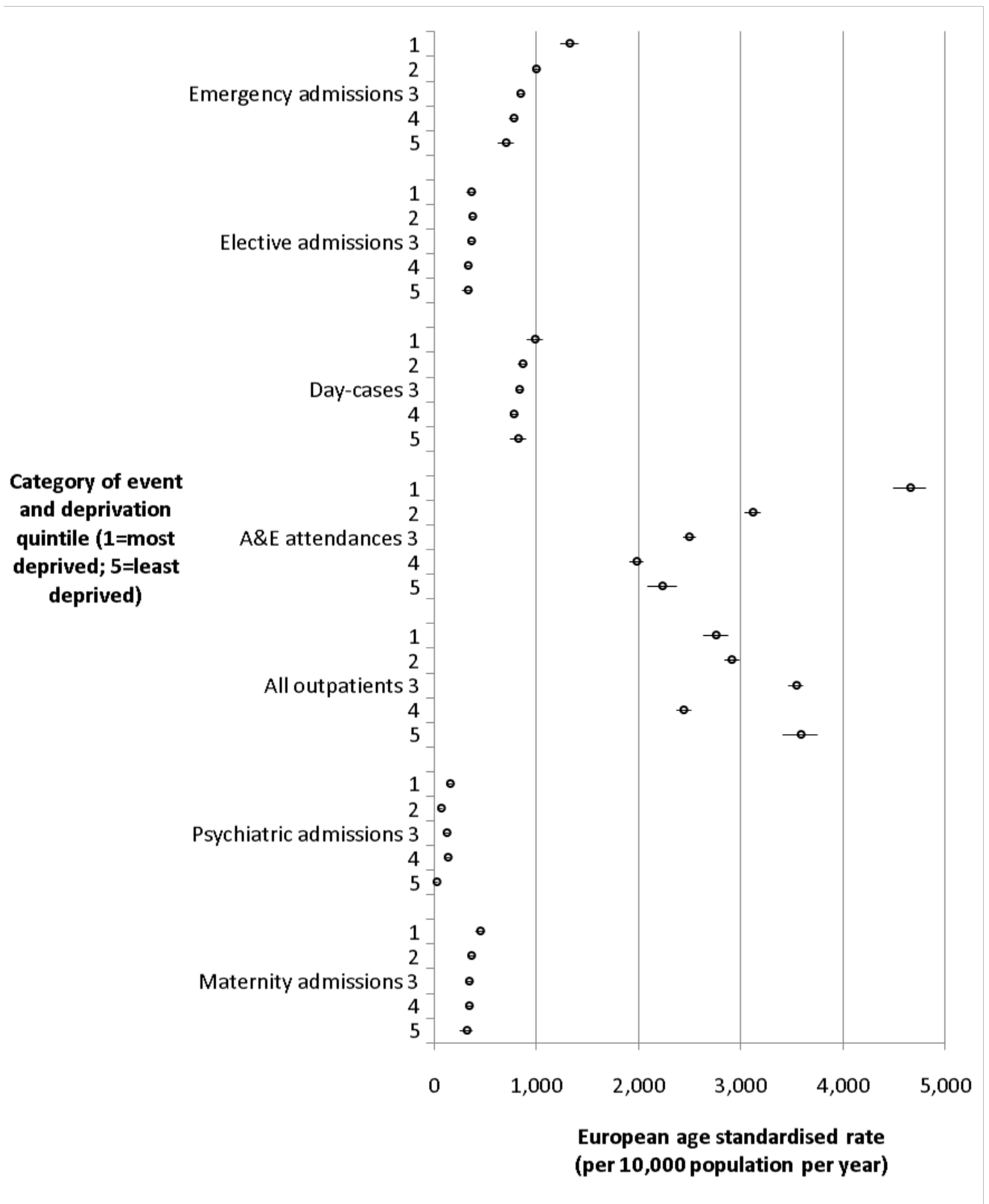


Figure 14: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Dumfries & Galloway, 2011/12)*



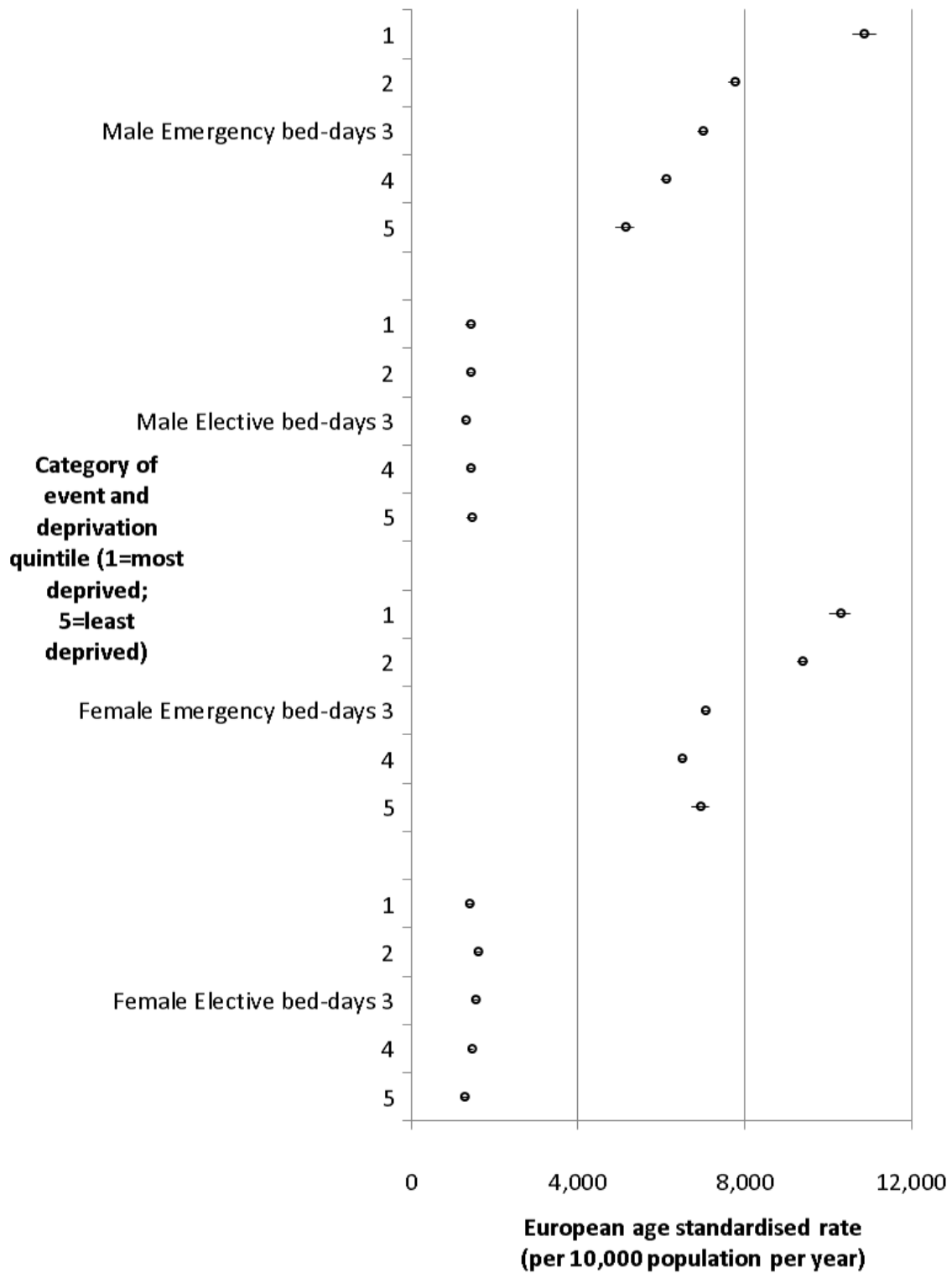
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 15: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Dumfries & Galloway, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 16: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Dumfries & Galloway, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Fife

Table 5: Annual number of hospital discharges, outpatients and bed-days by deprivation quintile and type (NHS Fife, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	3,612	1,033	2,340	12,158	11,011	215	0	23,797	3,864
2	3,656	1,298	3,334	11,443	12,795	194	0	25,324	4,932
3	3,297	1,238	2,975	9,811	11,133	149	0	23,834	4,993
4	2,587	1,186	2,628	6,592	9,592	98	0	21,146	4,209
5 (least deprived)	2,106	949	2,476	6,074	10,006	58	0	14,501	3,551
Females									
1 (most deprived)	3,988	1,148	2,795	10,647	15,978	163	3,585	29,251	4,491
2	4,142	1,422	3,715	10,341	18,425	209	3,302	31,400	5,677
3	3,615	1,449	3,524	8,587	15,057	165	2,568	28,884	5,433
4	2,873	1,222	2,587	5,840	13,211	133	1,579	24,096	5,022
5 (least deprived)	2,124	997	2,835	5,395	13,596	87	1,652	18,128	3,777

Figure 17: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Fife, all ages, 2011/12)

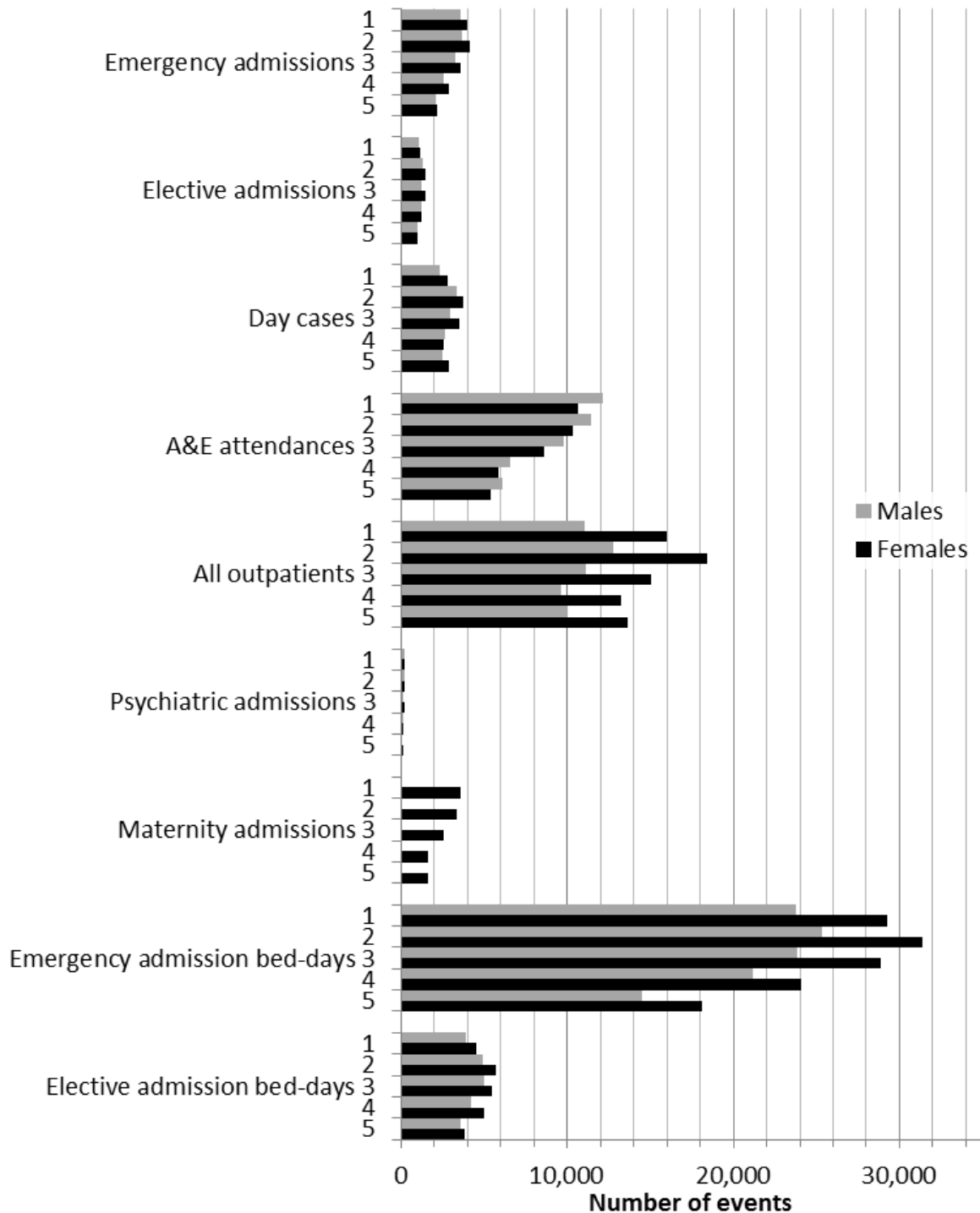
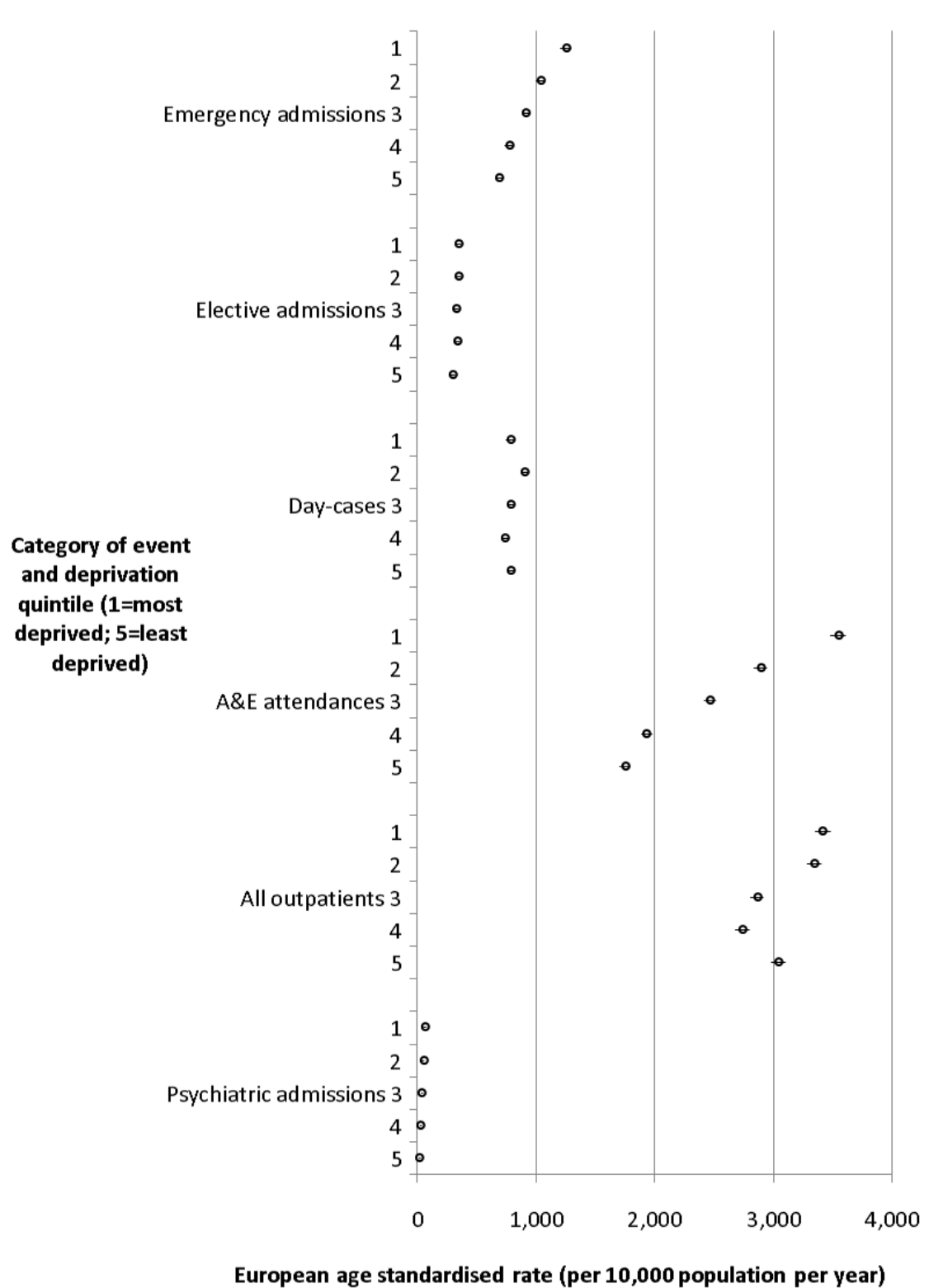
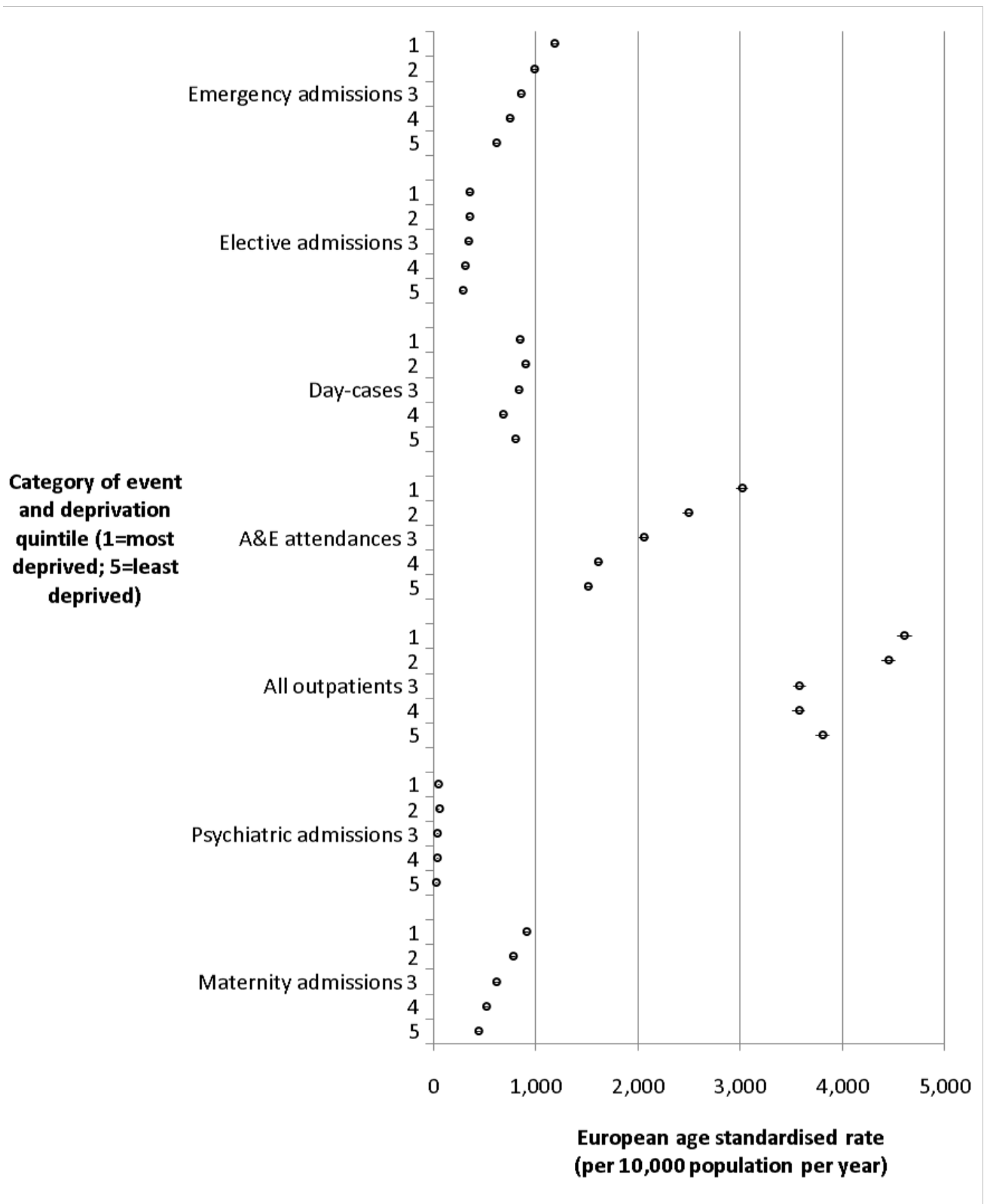


Figure 18: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Fife, 2011/12)*



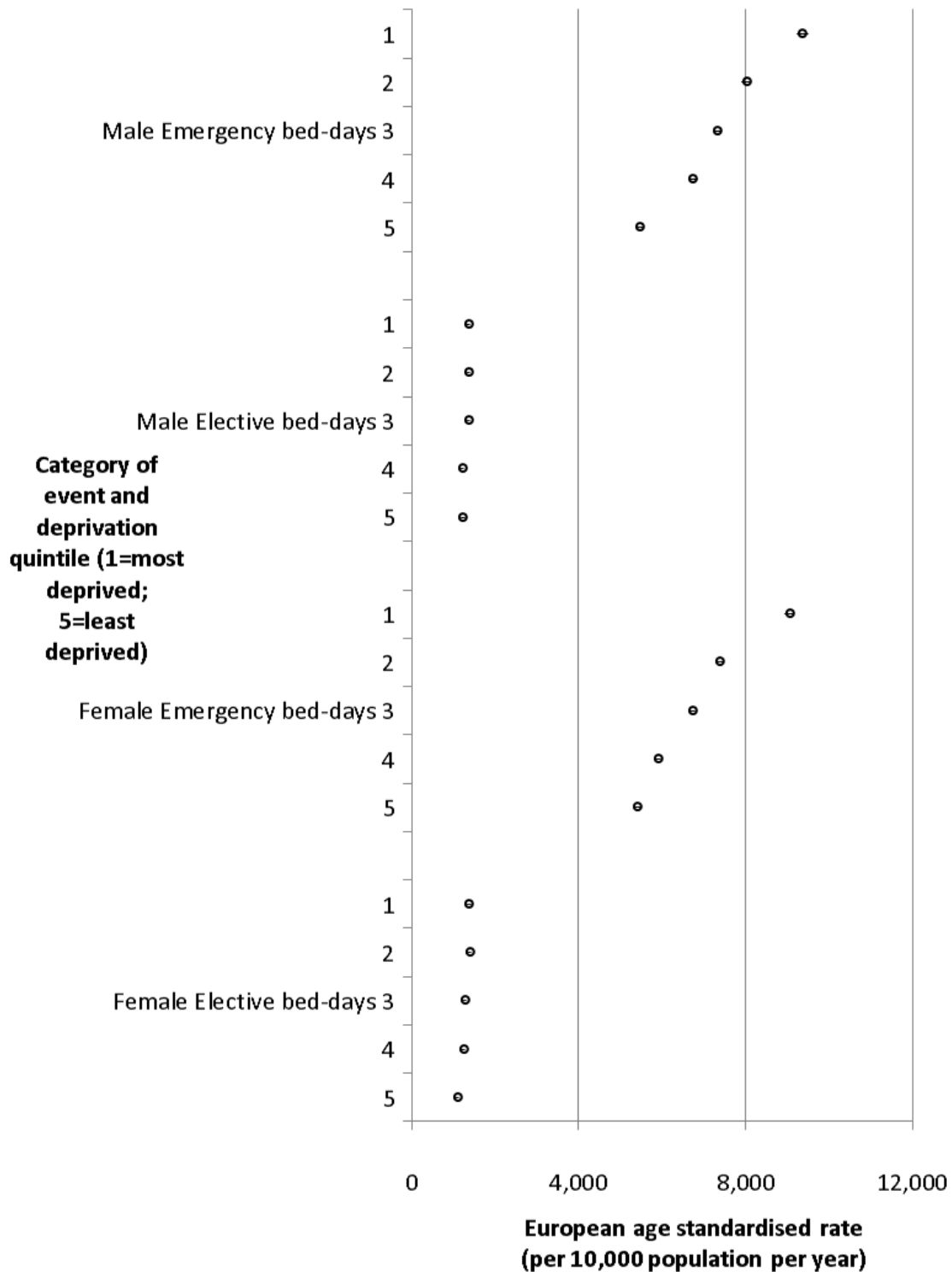
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 19: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Fife, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 20: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Fife, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Forth Valley

Table 6: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Forth Valley, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	2,250	404	726	7,223	6,220	125	0	13,767	1,717
2	3,549	848	1,420	11,007	9,286	191	0	23,020	4,357
3	2,334	667	1,076	6,973	7,117	69	0	15,768	3,042
4	2,423	762	1,363	7,147	7,794	85	0	16,154	4,078
5 (least deprived)	1,851	625	1,236	5,969	6,806	54	0	12,608	2,653
Females									
1 (most deprived)	2,407	542	1,239	6,084	8,264	149	786	16,201	2,579
2	3,898	939	1,939	9,564	12,265	132	1159	32,320	3,646
3	2,434	708	1,395	6,051	9,184	69	796	19,005	3,399
4	2,562	974	1,748	6,233	10,082	108	843	19,858	3,634
5 (least deprived)	1,914	665	1,447	5,326	8,746	54	617	14,094	2,742

Figure 21: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Forth Valley, all ages, 2011/12)

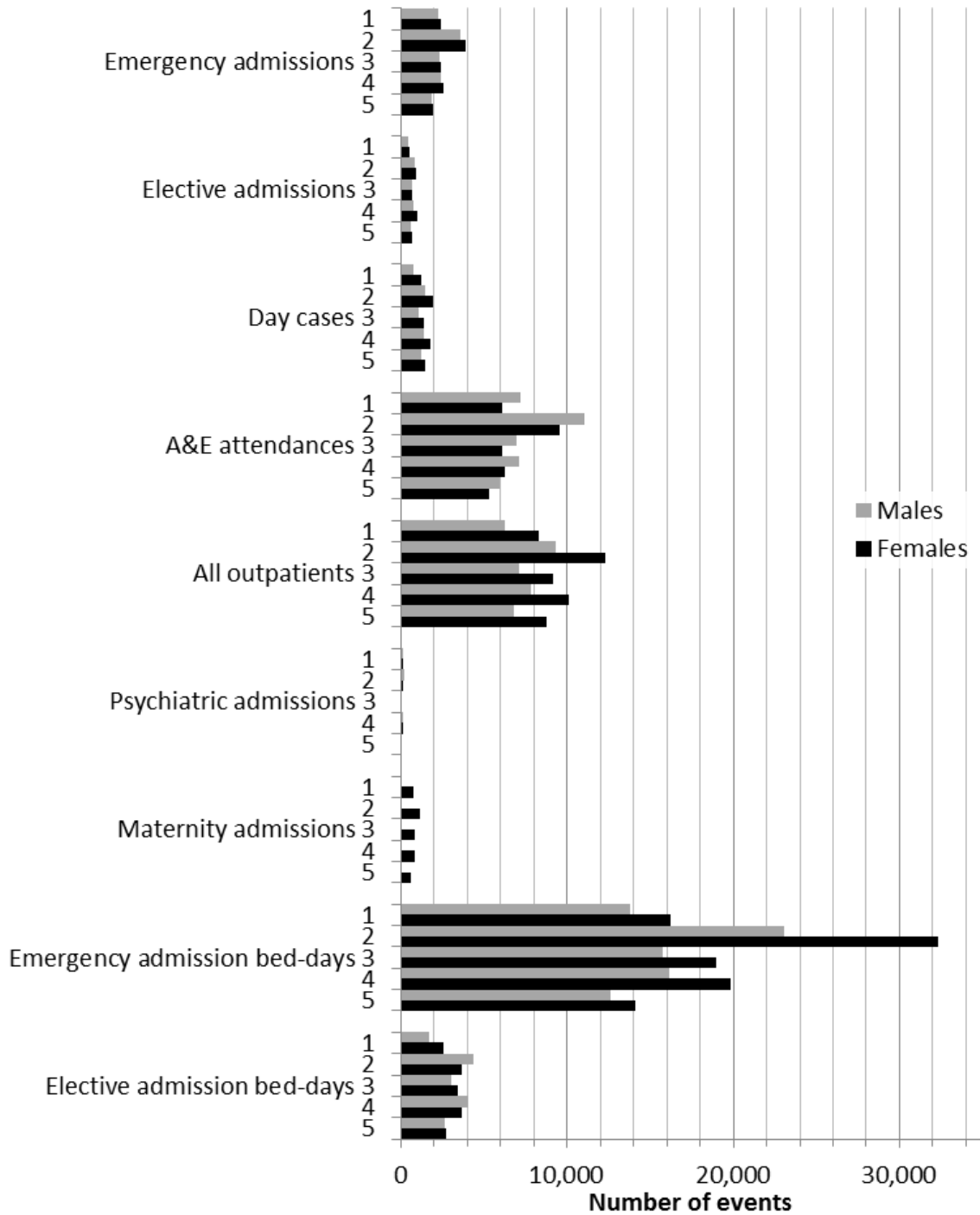
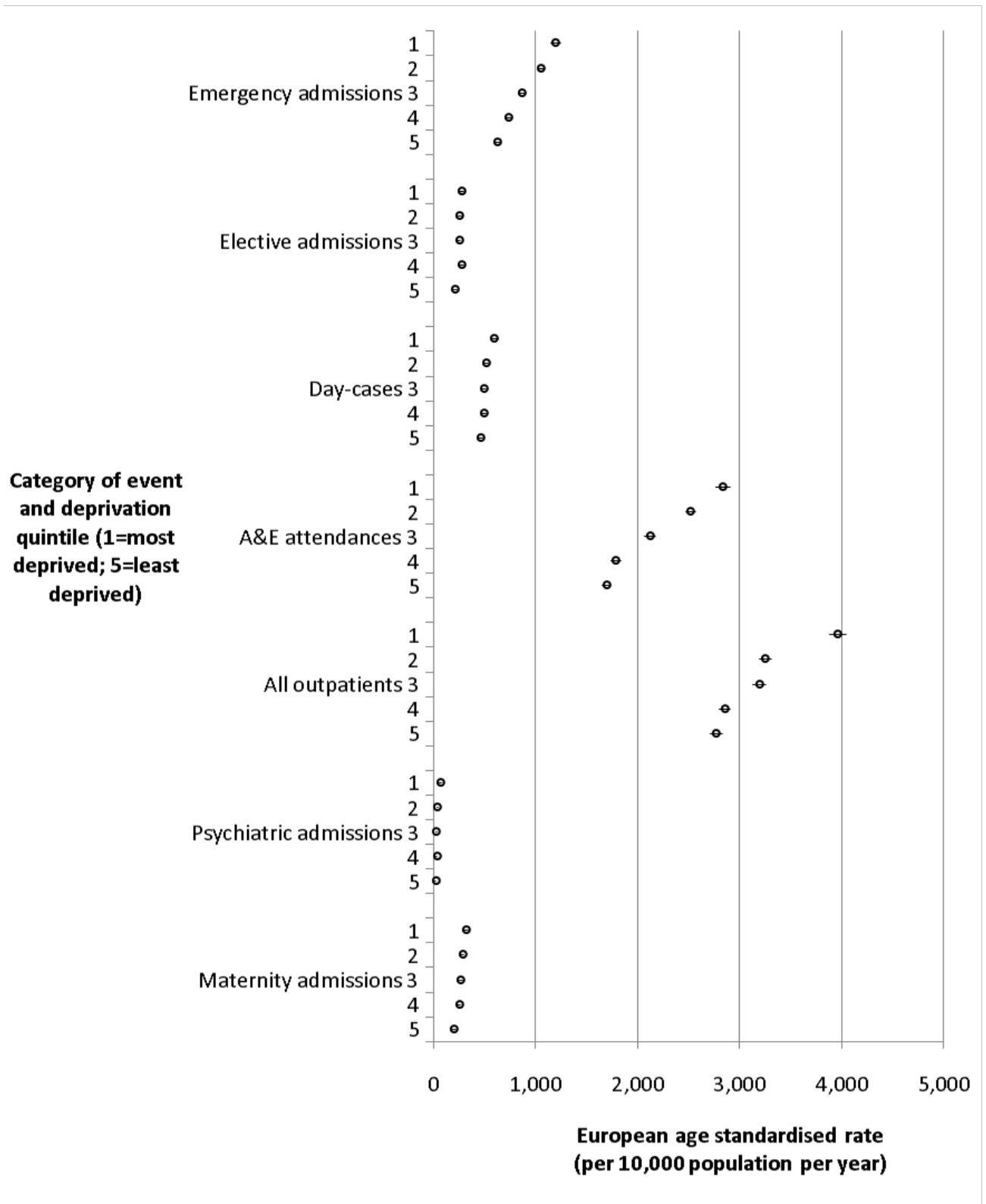
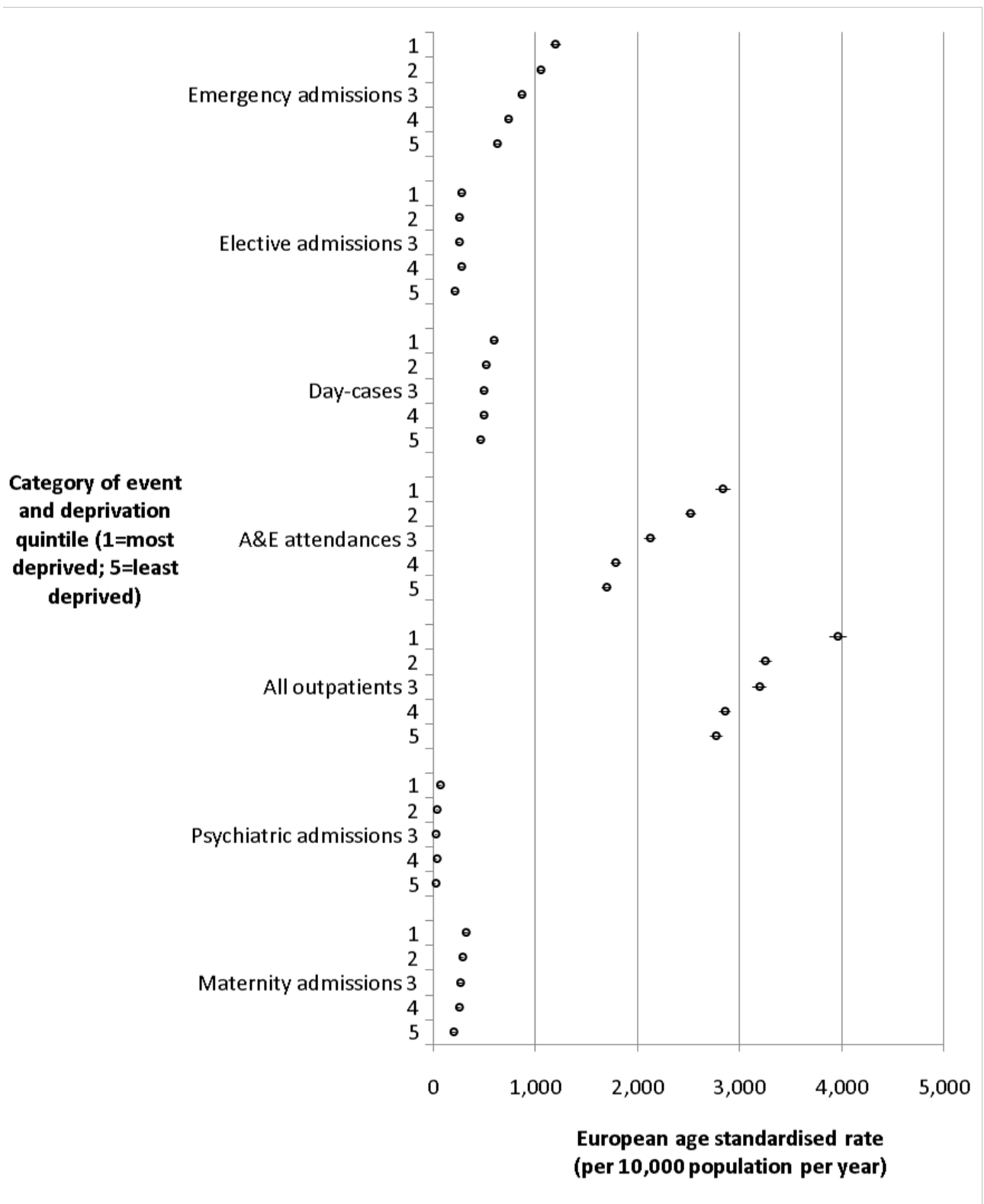


Figure 22: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Forth Valley, 2011/12)*



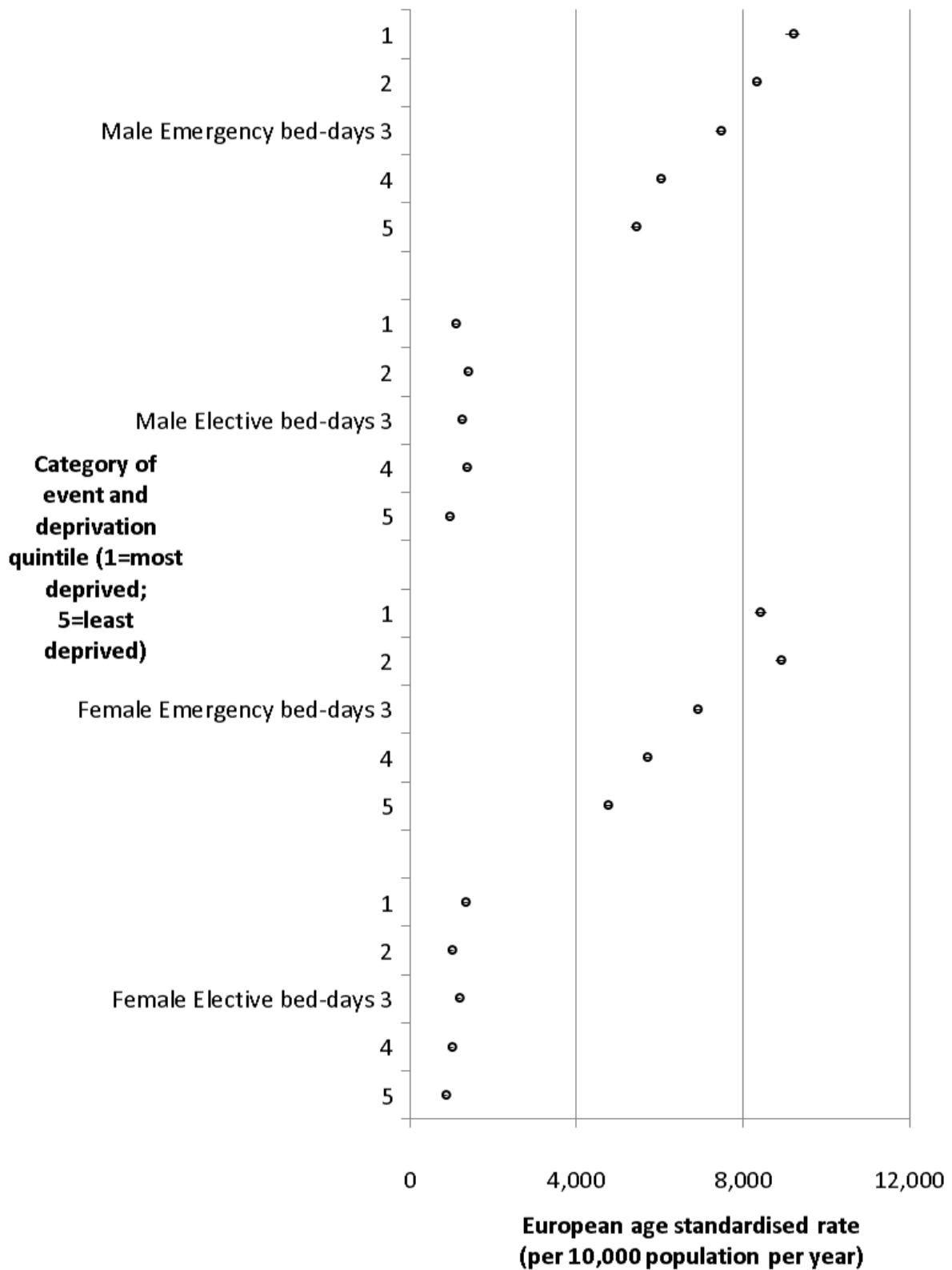
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 23: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Forth Valley, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 24: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Forth Valley, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Grampian

Table 7: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Grampian, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	2,368	494	1,331	5,878	4,007	115	0	13,069	2,139
2	3,919	1,053	2,705	8,590	7,468	194	0	27,588	5,156
3	5,504	1,818	4,719	11,459	11,588	213	0	41,426	8,293
4	6,015	2,204	5,643	12,039	12,651	204	0	42,943	9,673
5 (least deprived)	5,781	2,024	5,940	13,121	14,655	183	0	37,071	8,452
Females									
1 (most deprived)	2,192	558	1,451	4,843	5,540	99	1,615	15,150	2,570
2	4,201	1,277	3,268	8,074	11,175	208	2,423	32,474	5,481
3	5,835	2,067	5,361	10,425	16,756	252	2,618	51,991	9,619
4	6,243	2,382	6,225	11,224	18,020	226	3,383	50,320	10,735
5 (least deprived)	6,138	2,423	6,835	12,235	20,926	214	4,023	46,092	9,959

Figure 25: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Grampian, all ages, 2011/12)

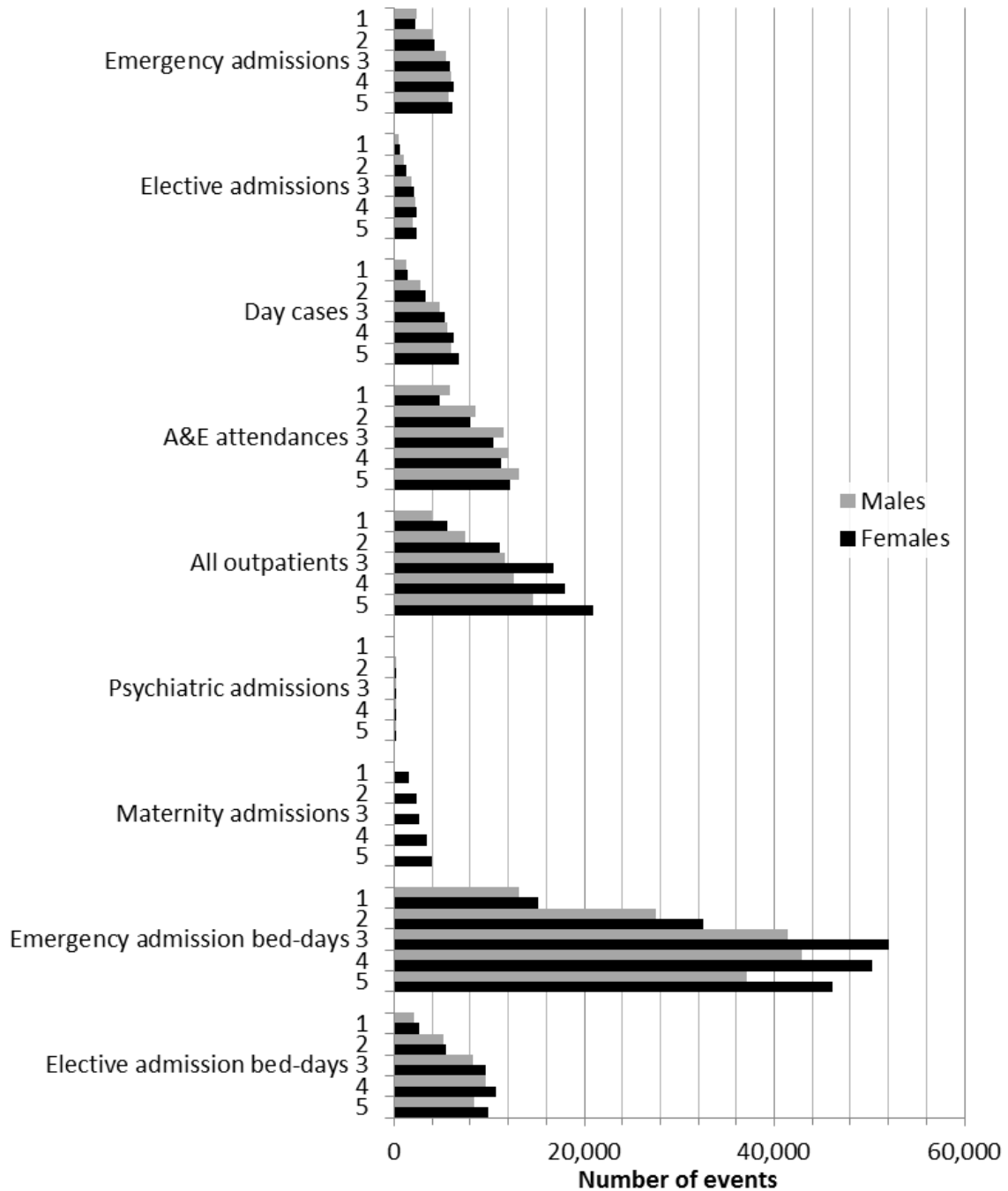
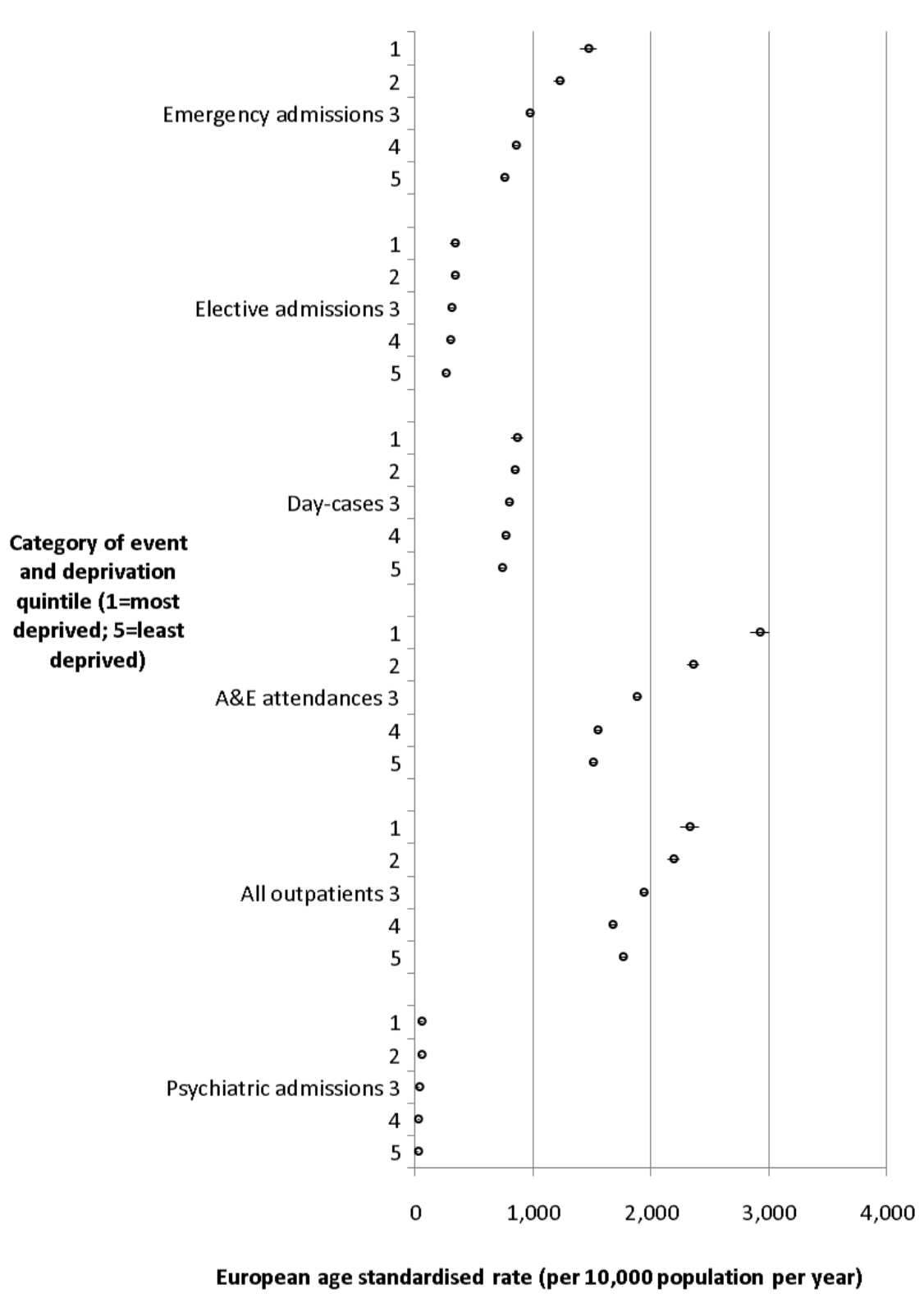
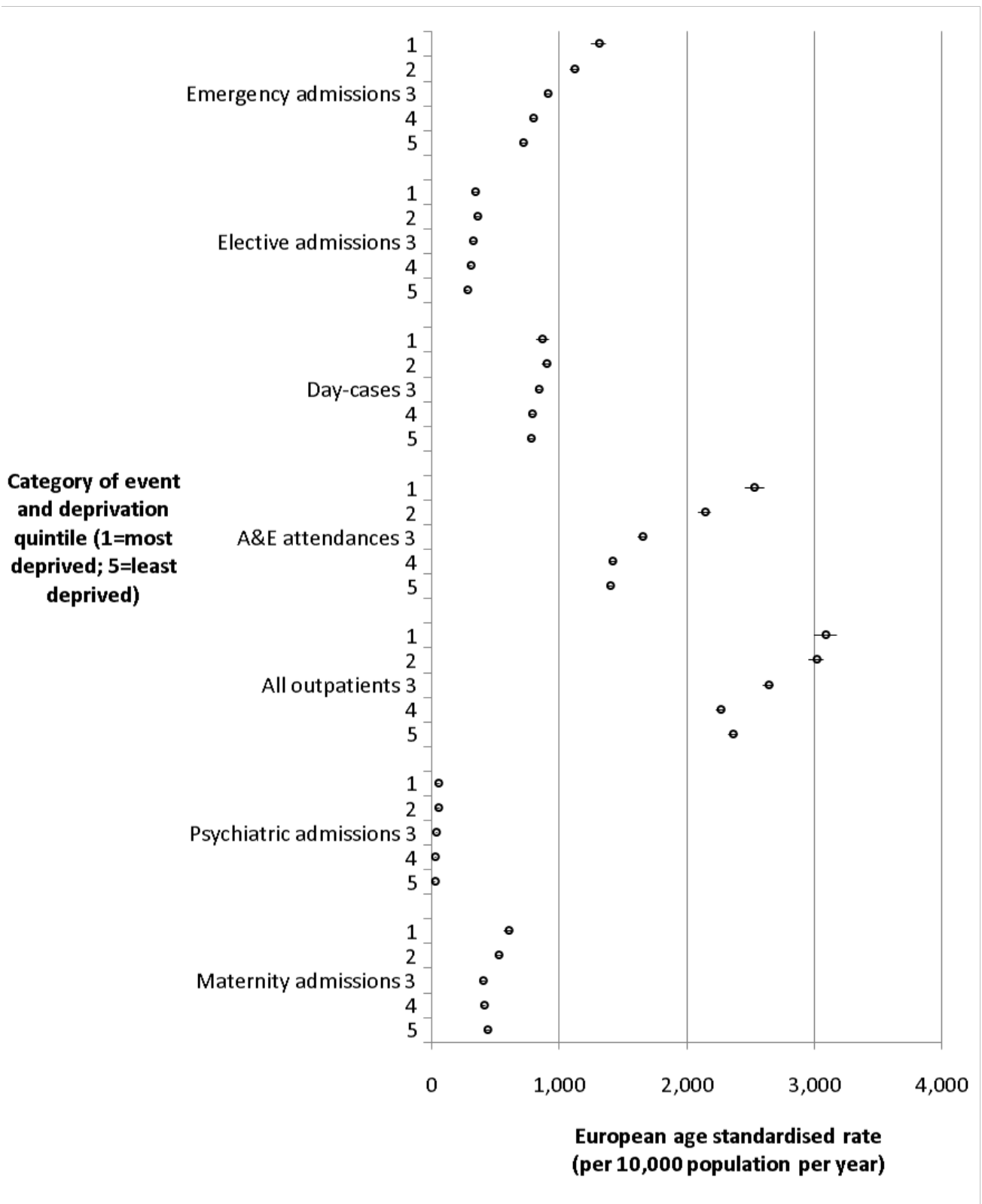


Figure 26: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Grampian, 2011/12)*



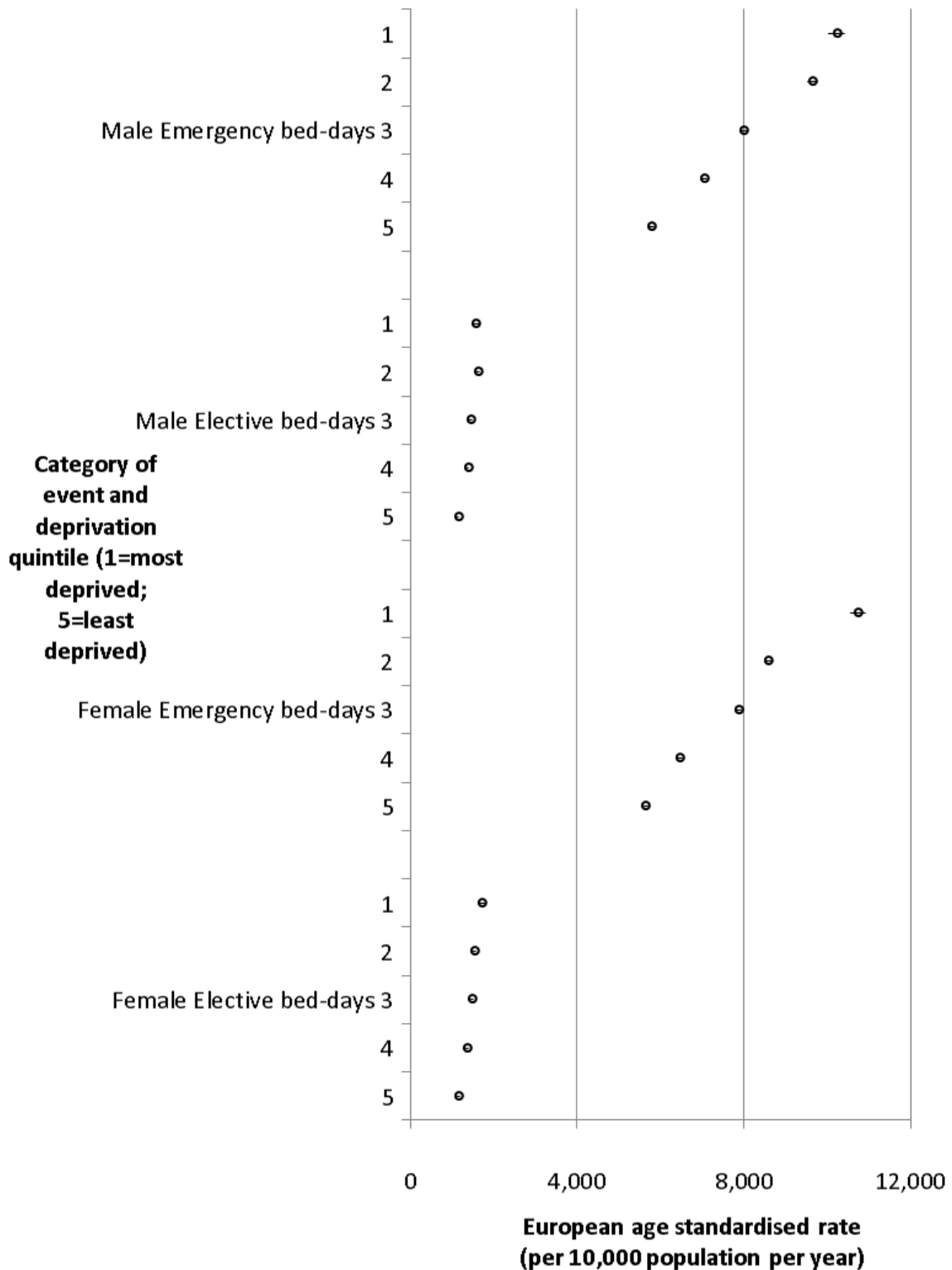
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 27: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Grampian, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 28: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Grampian, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Greater Glasgow & Clyde

Table 8: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Greater Glasgow & Clyde, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	31,983	8,046	23,047	100,222	73,833	1,621	0	215,638	33,382
2	11,640	3,727	10,128	36,862	31,271	396	0	85,987	16,384
3	7,925	2,778	8,315	26,255	22,606	277	0	55,845	11,170
4	6,662	2,646	7,806	22,296	22,128	153	0	46,910	9,435
5 (least deprived)	7,498	3,543	11,657	25,945	27,503	139	0	52,841	14,458
Females									
1 (most deprived)	34,027	10,085	29,487	93,657	107,962	1,301	14,187	286,045	41,228
2	13,124	4,614	13,375	35,263	45,935	423	5,664	124,038	19,187
3	8,991	3,371	10,204	25,617	33,833	245	4,669	78,835	14,000
4	7,246	3,128	10,042	21,349	33,110	174	3,983	59,349	13,632
5 (least deprived)	8,493	4,009	12,374	24,948	39,767	195	3,895	73,984	15,435

Figure 29: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Greater Glasgow & Clyde, all ages, 2011/12)

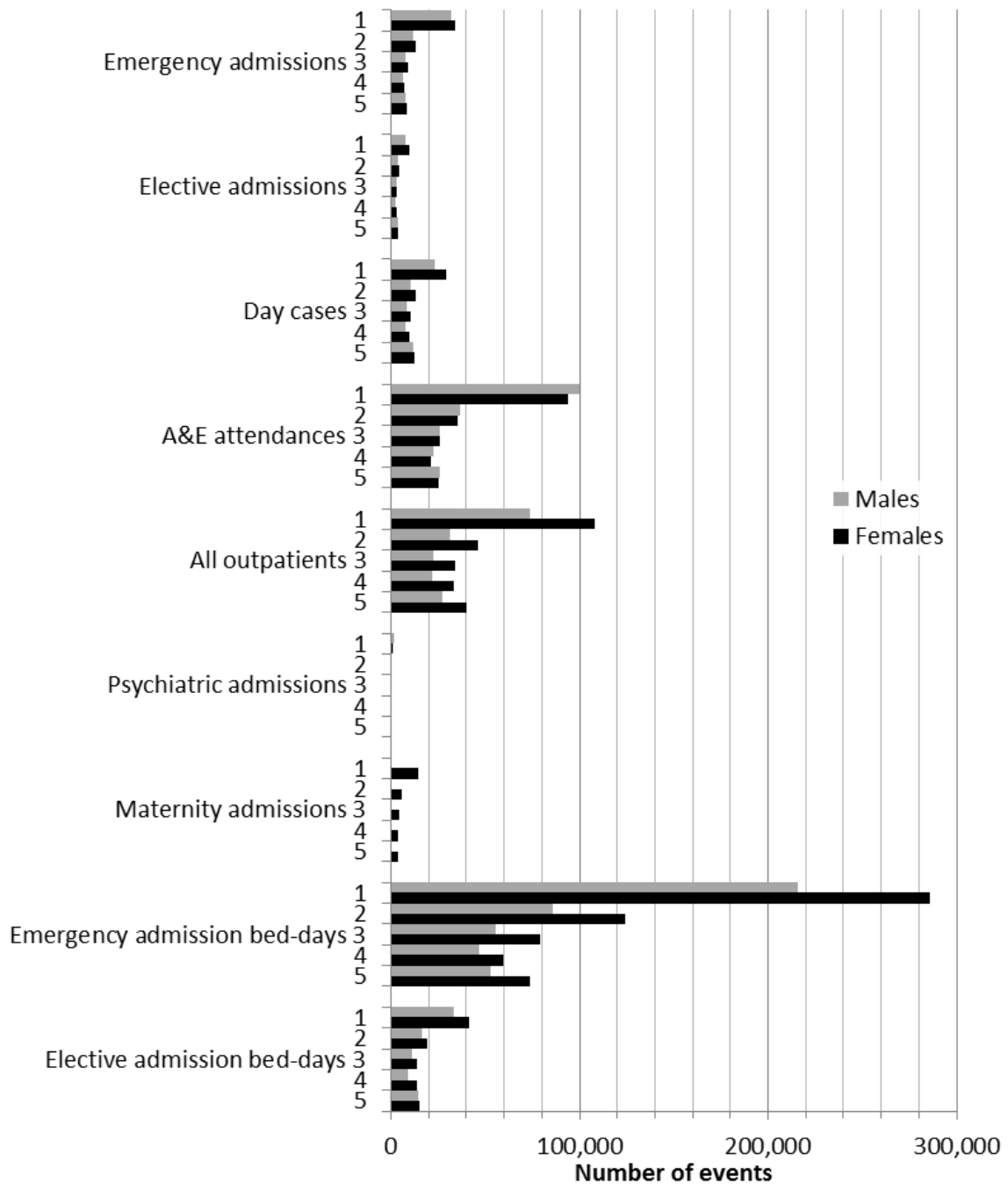
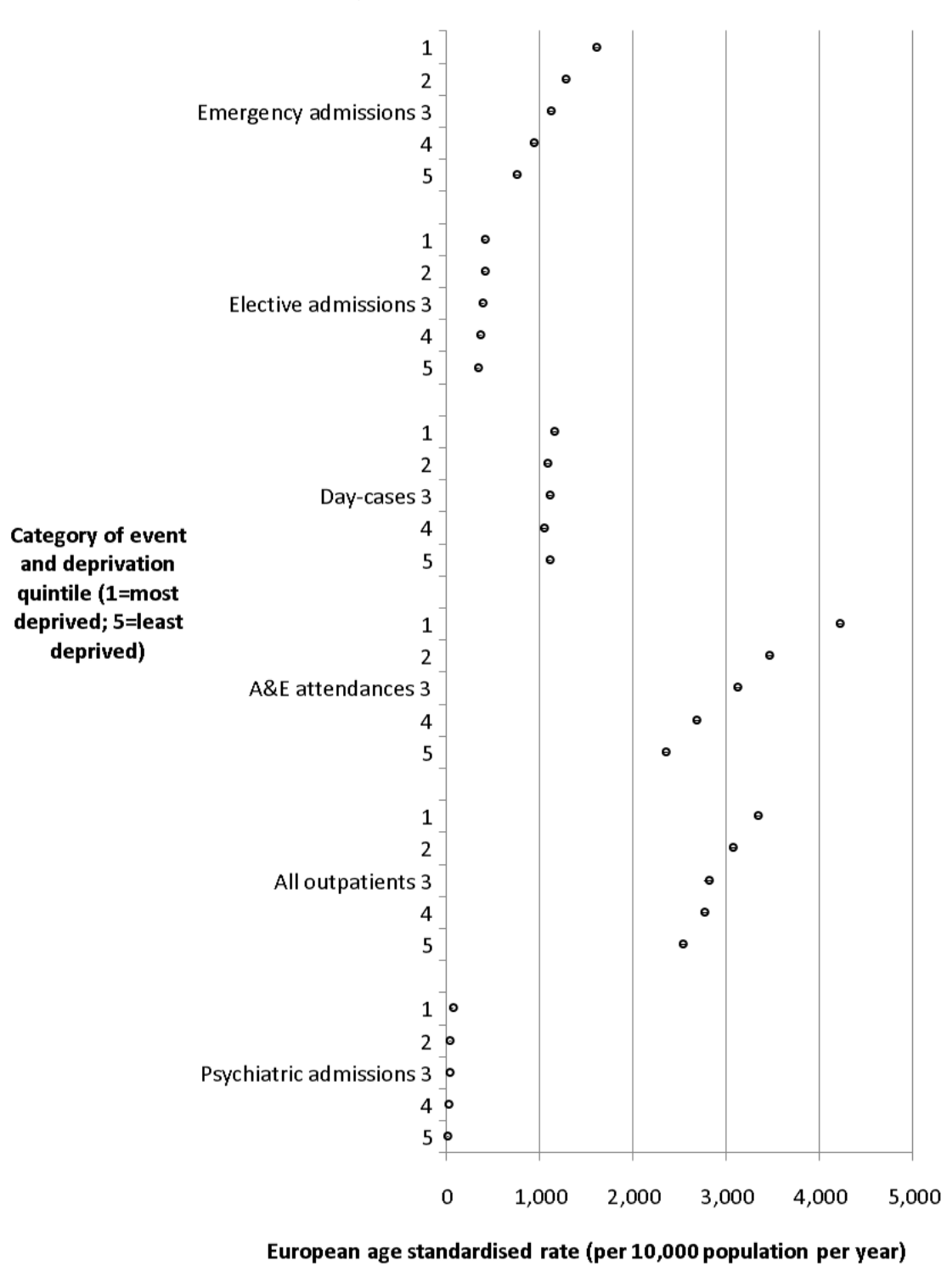
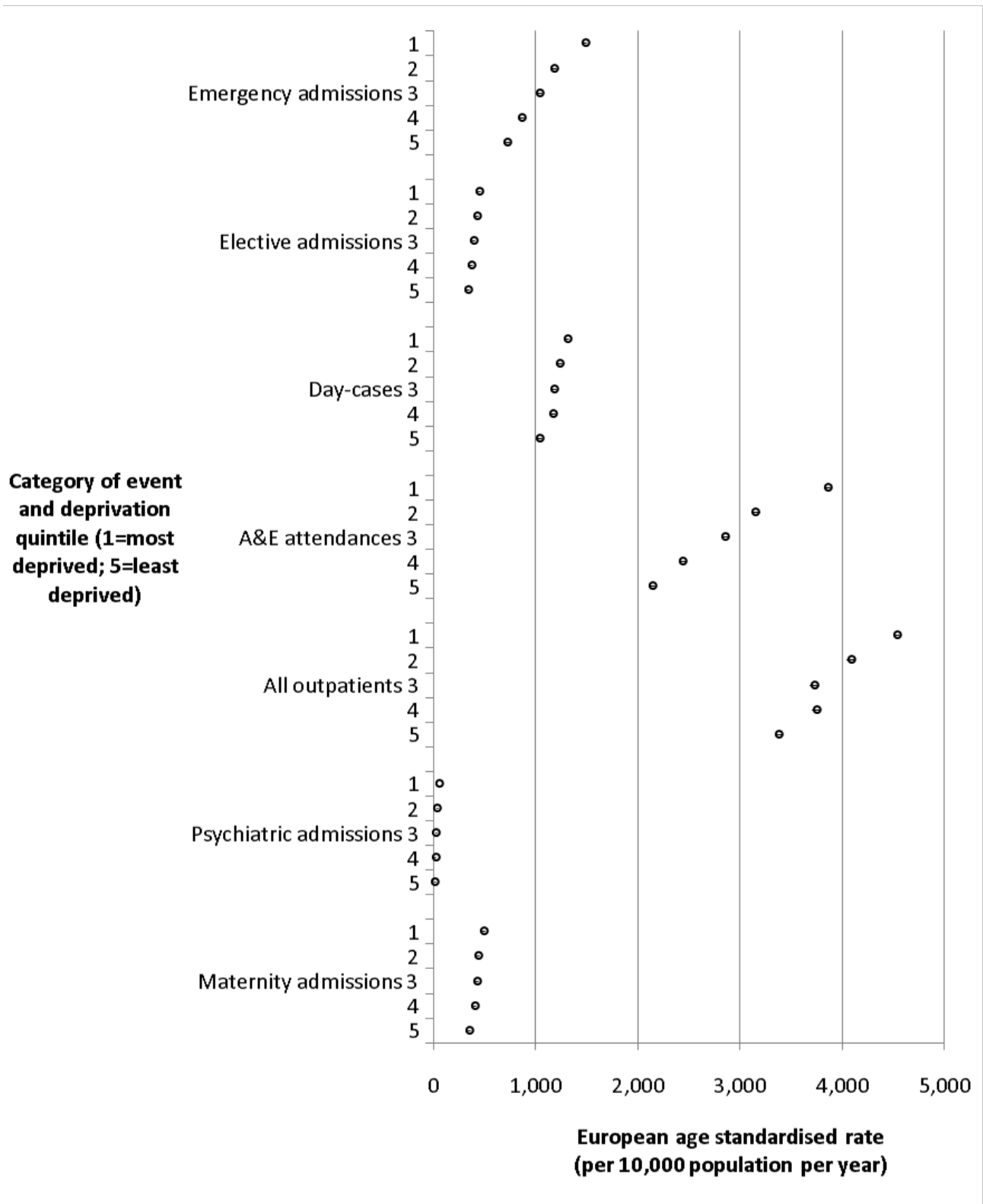


Figure 30: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Greater Glasgow & Clyde, 2011/12)*



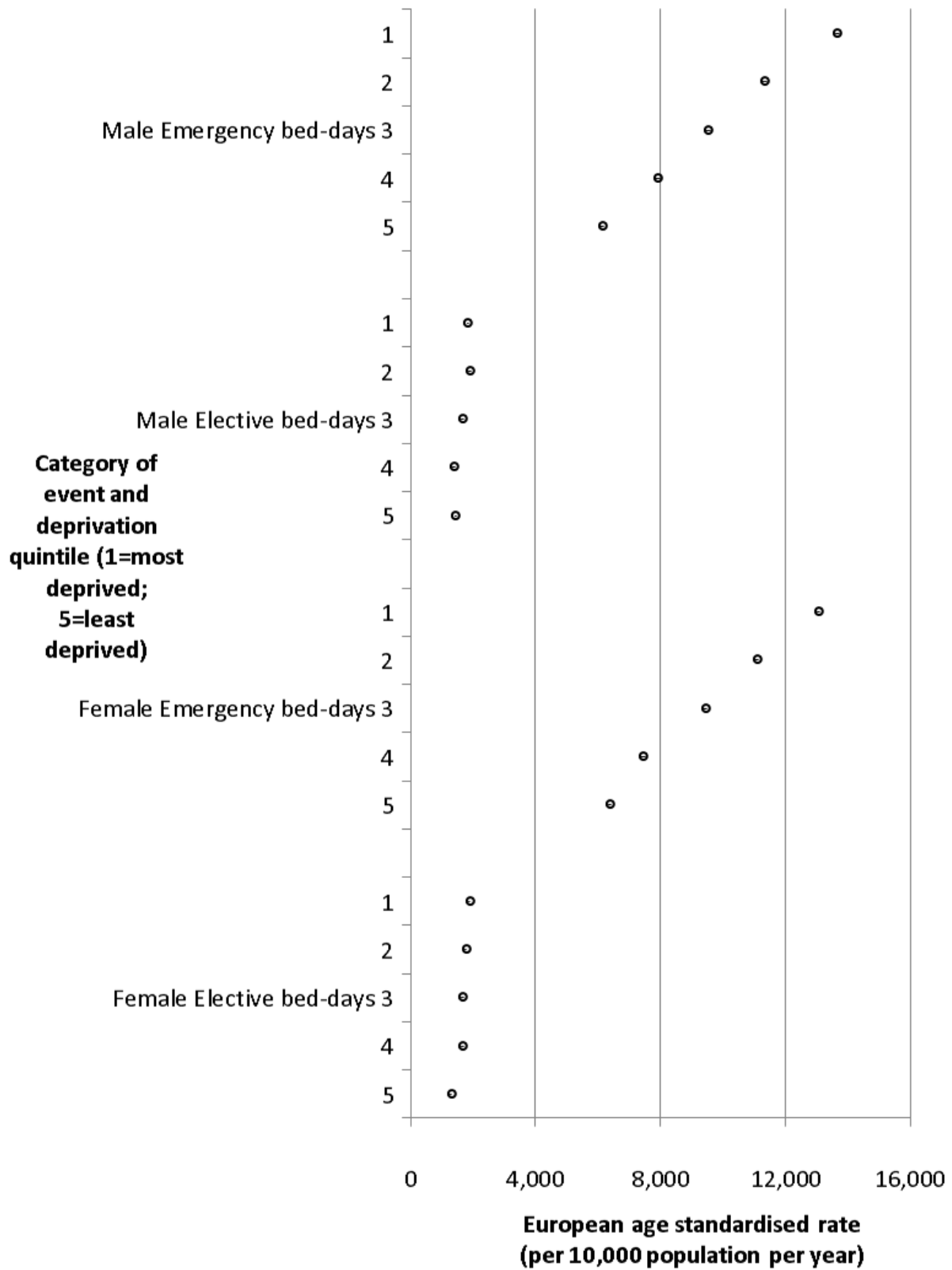
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 31: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Greater Glasgow & Clyde, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 32: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Greater Glasgow & Clyde, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Highland

Table 9: Annual number of hospital discharges, outpatients and bed-days by deprivation quintile and type (NHS Highland, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	2,013	502	1,081	4,175	3,837	146	0	14,088	2,402
2	3,442	1,165	2,361	5,890	8,158	175	0	22,787	5,218
3	5,451	2,465	4,790	8,055	13,323	216	0	36,727	11,950
4	3,467	1,501	3,158	6,758	11,323	134	0	24,599	6,829
5 (least deprived)	1,039	483	1,207	2,494	3,580	29	0	7,570	1,927
Females									
1 (most deprived)	1,909	585	1,243	3,462	5,515	102	675	14,177	2,850
2	3,682	1,360	2,824	5,209	11,126	145	1,096	30,380	6,577
3	5,485	2,733	5,241	7,147	17,426	165	1,565	46,876	12,292
4	3,490	1,526	3,617	5,946	14,873	145	1,202	29,492	6,719
5 (least deprived)	1,153	474	1,308	2,322	4,503	22	351	9,953	1,785

Figure 33: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Highland, all ages, 2011/12)

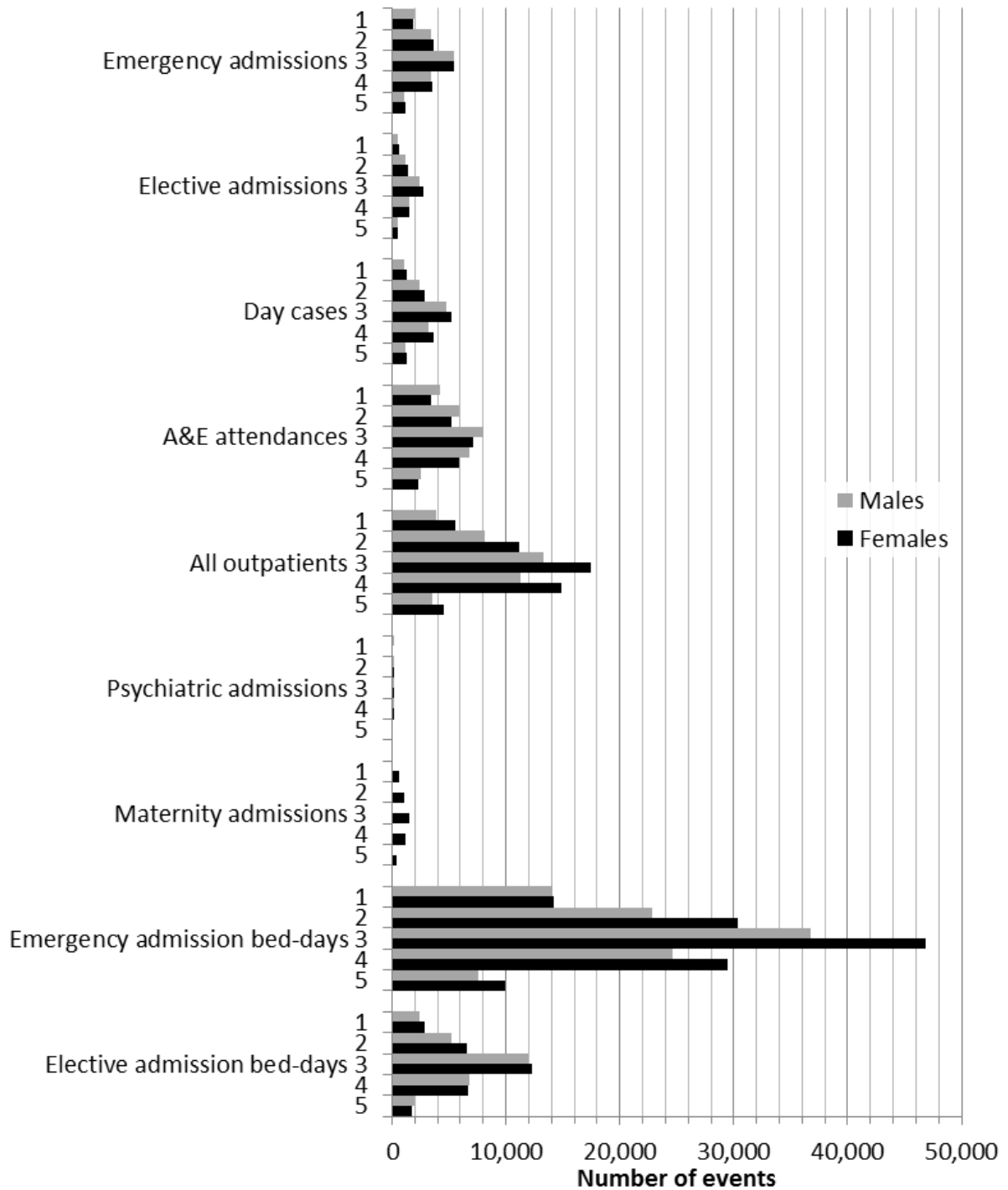
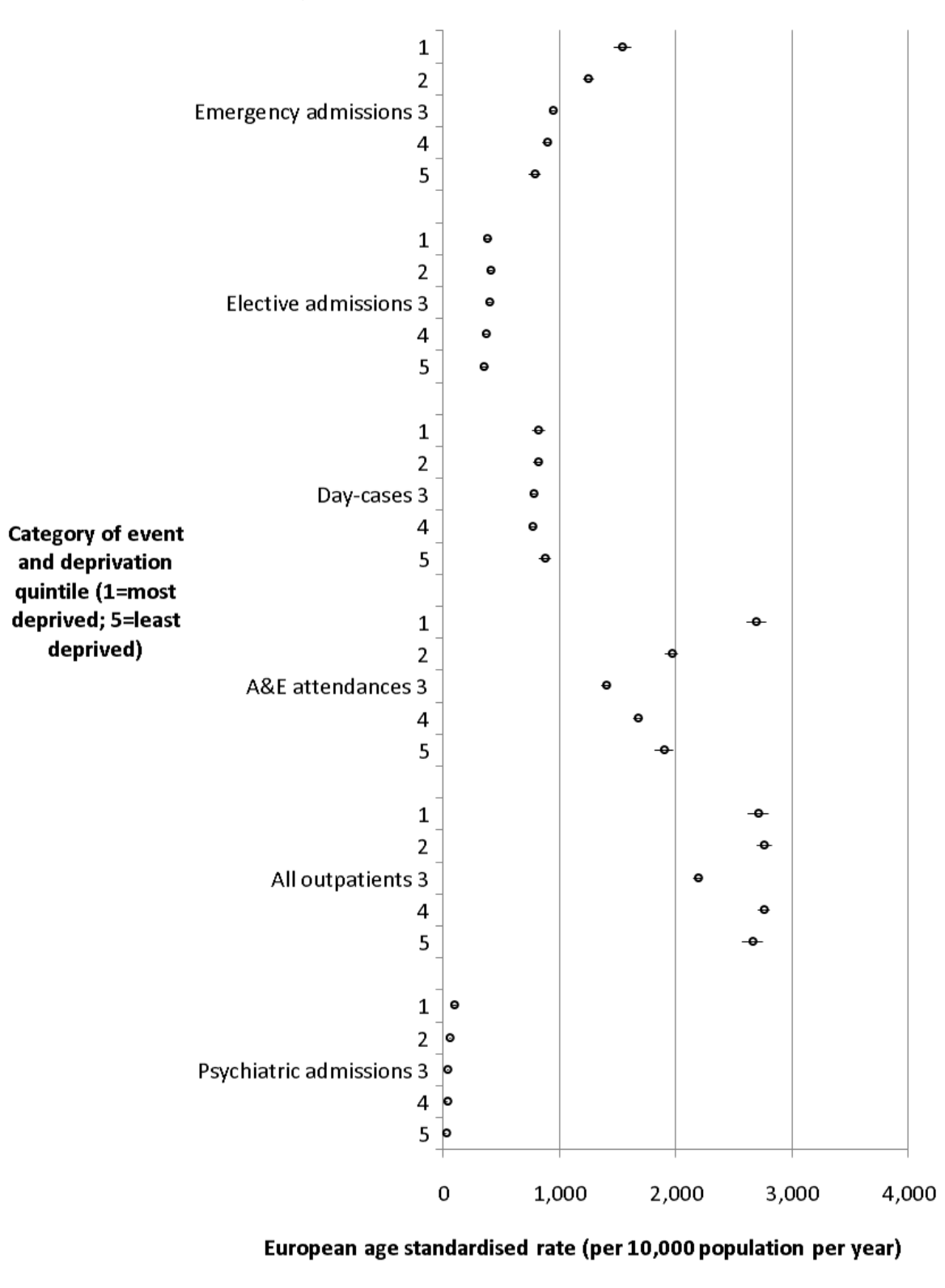
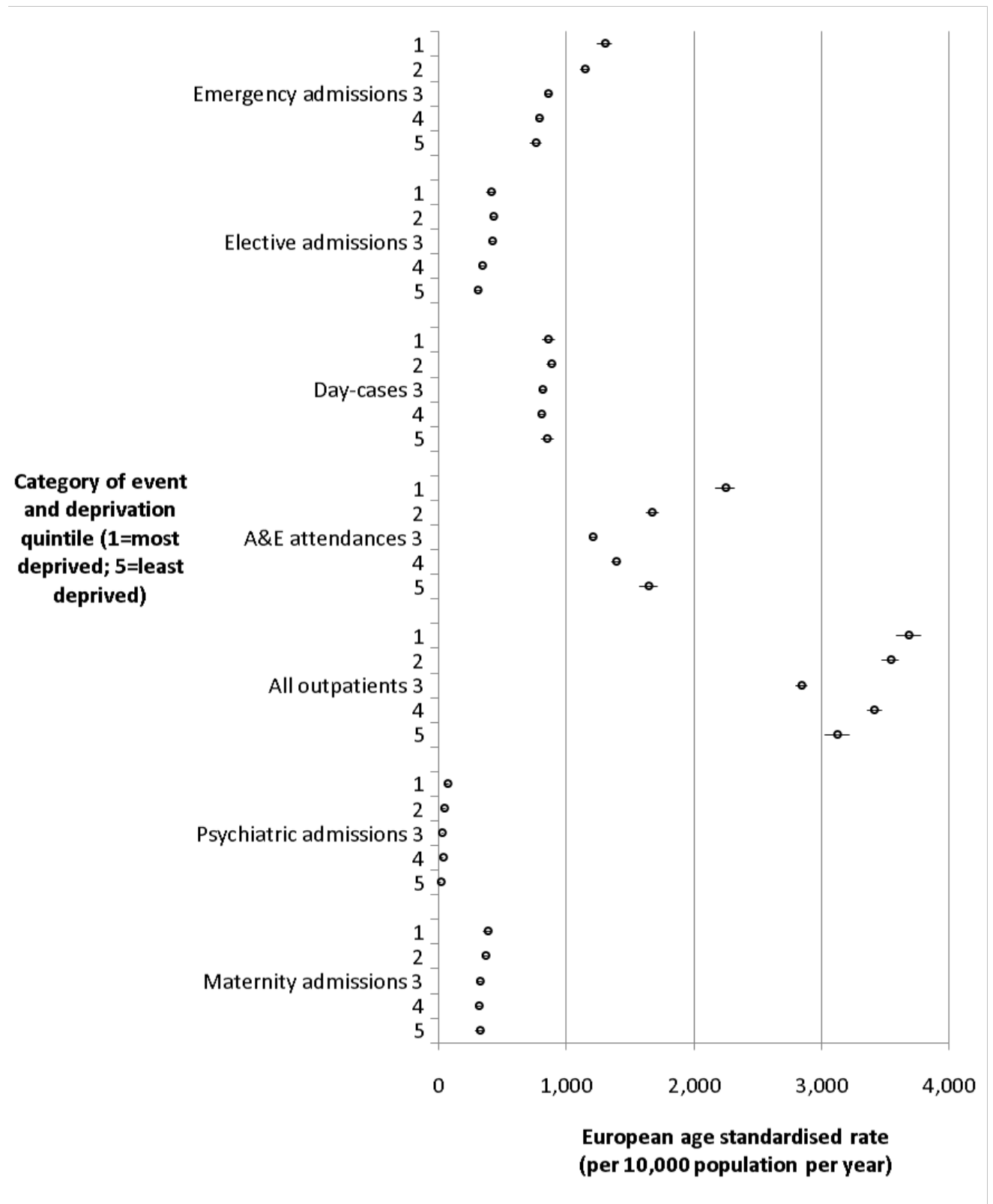


Figure 34: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Highland; 2011/12)*



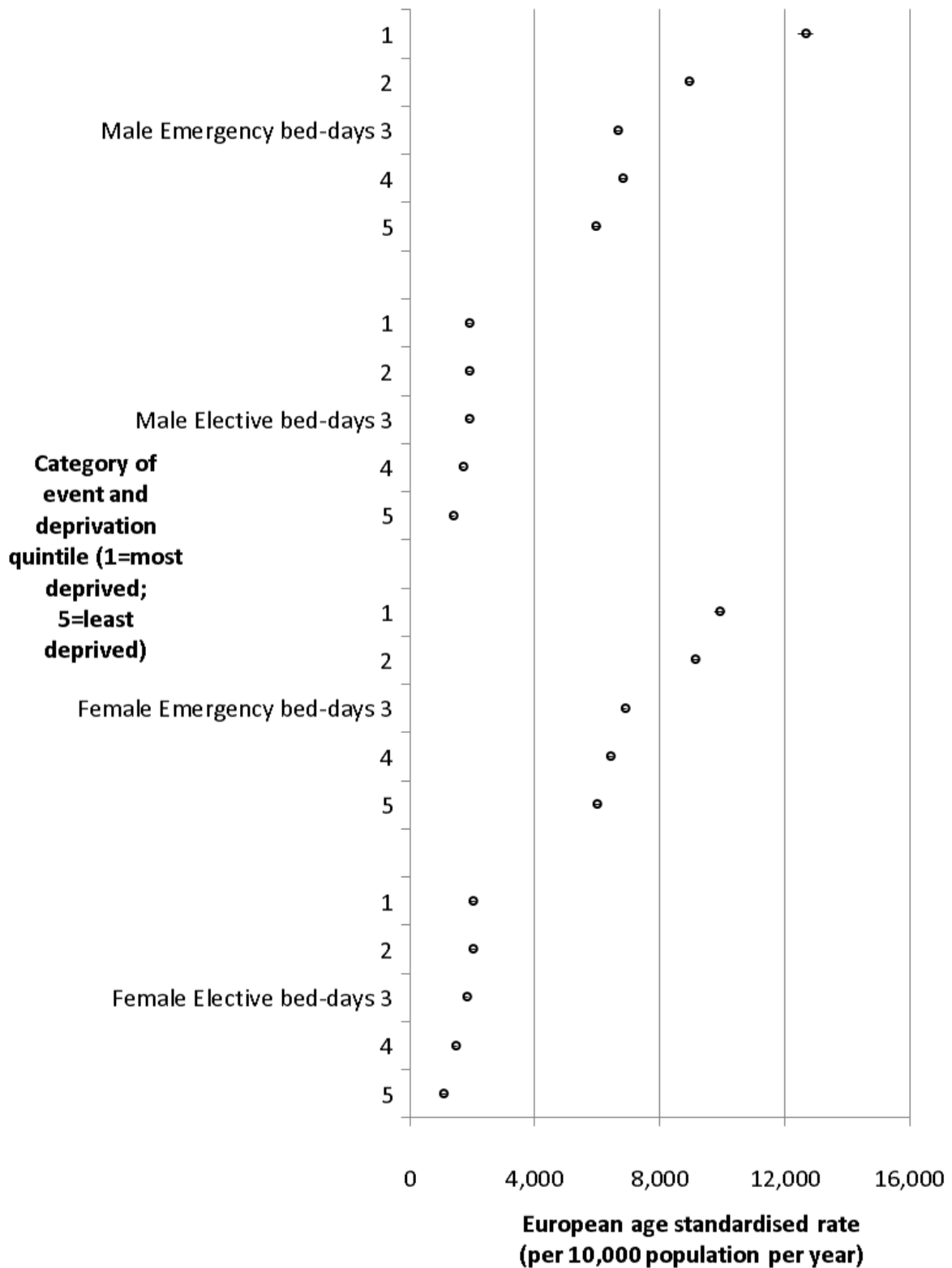
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 35: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Highland, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 36: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Highland, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Lanarkshire

Table 10: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Lanarkshire, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	9,540	2,001	6,591	31,940	20,766	462	0	54,988	10,017
2	9,089	2,297	7,516	28,568	21,401	388	0	52,664	10,308
3	5,977	1,763	5,607	18,869	16,497	169	0	37,088	7,712
4	3,393	1,121	3,645	11,441	9,056	82	0	20,623	5,224
5 (least deprived)	2,433	859	3,021	8,537	8,510	48	0	13,190	3,722
Females									
1 (most deprived)	10,465	2,348	8,238	28,737	27,622	450	6,374	69,487	10,434
2	9,773	2,617	9,644	25,996	28,924	316	5,626	67,512	10,998
3	6,663	1,973	6,949	17,813	21,998	170	3,799	46,395	9,668
4	3,513	1,225	4,509	9,934	11,800	110	2,377	22,221	5,791
5 (least deprived)	2,463	959	3,694	7,484	11,243	71	1,592	15,549	3,583

Figure 37: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Lanarkshire, all ages, 2011/12)

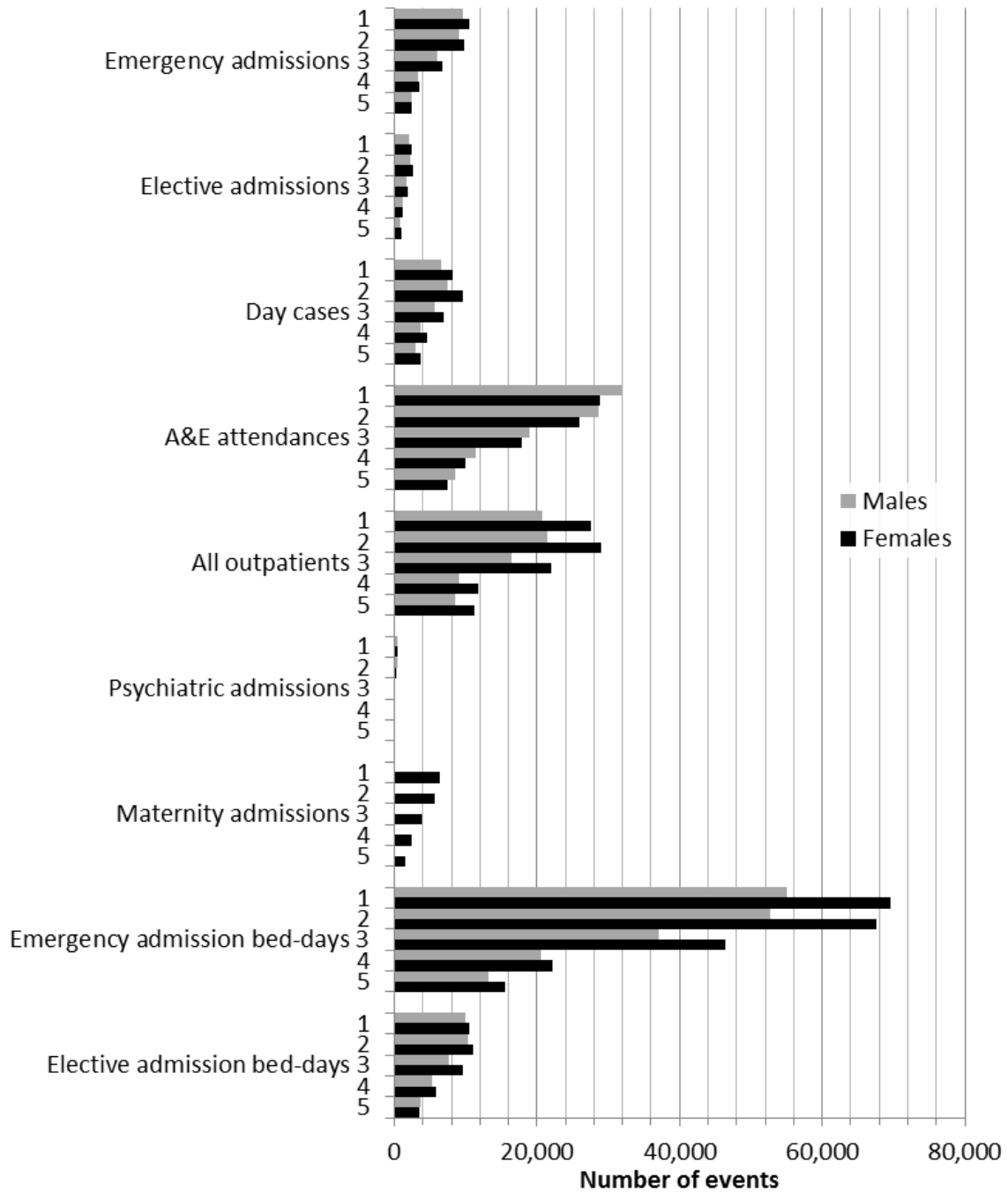
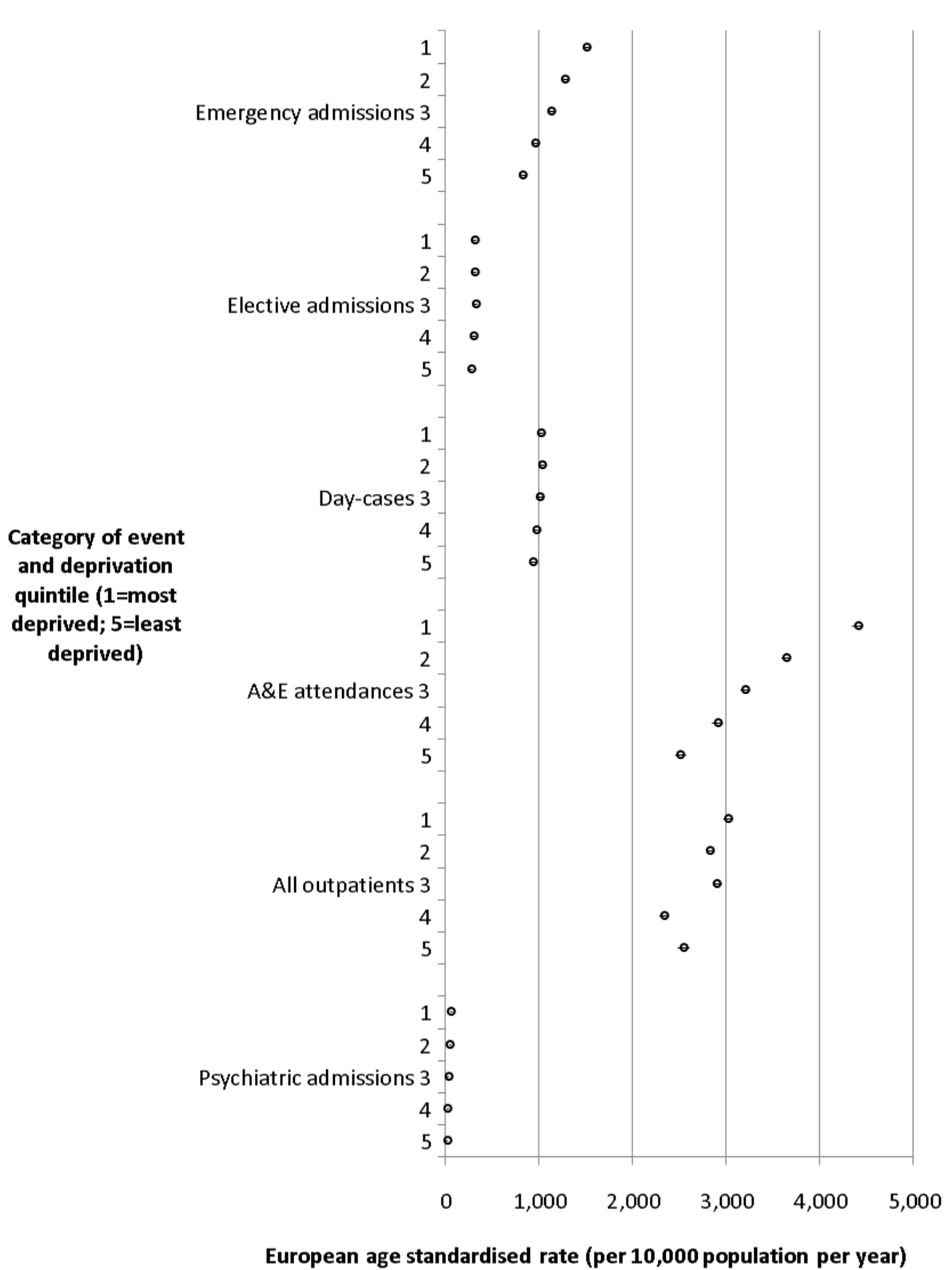
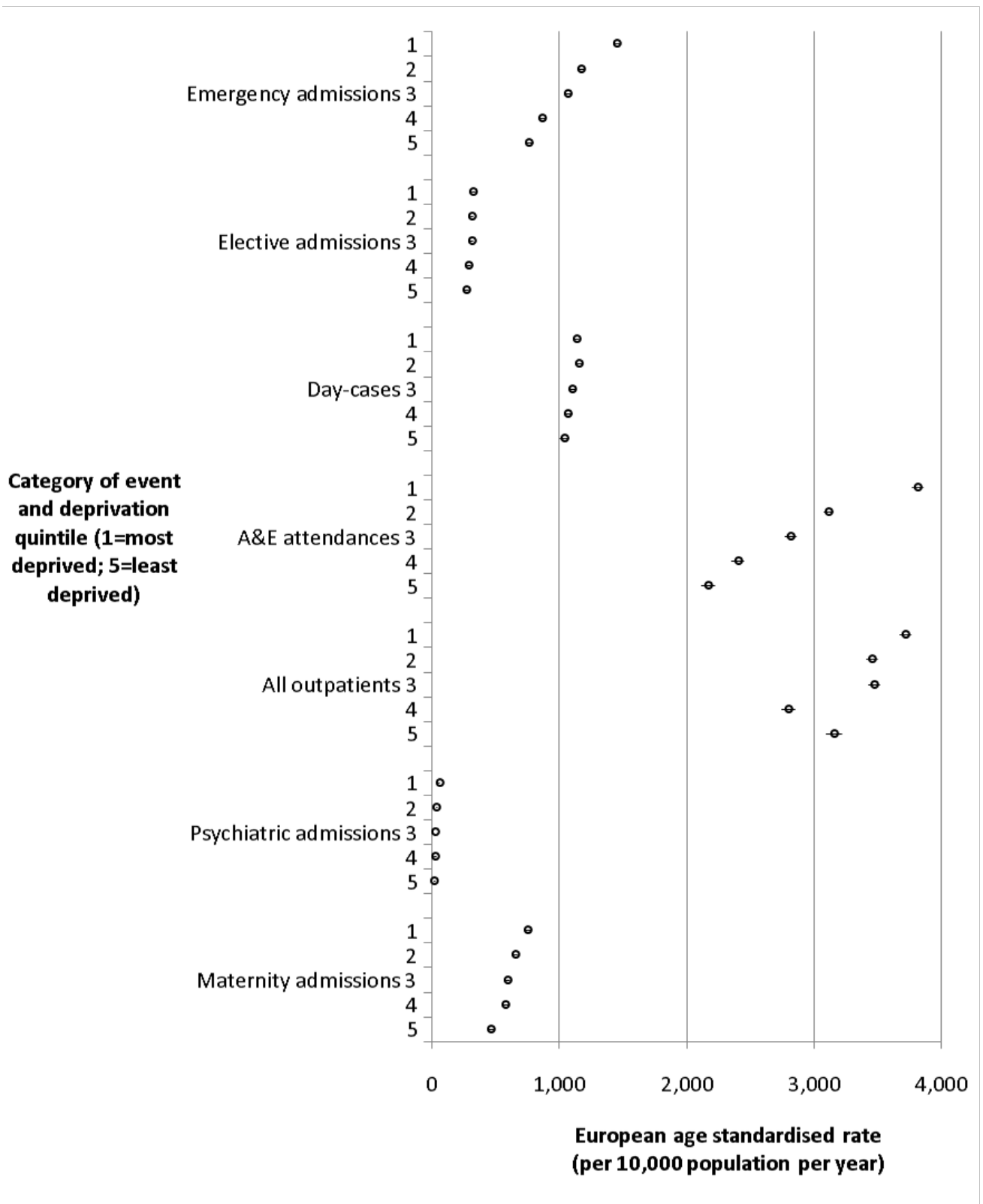


Figure 38: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Lanarkshire; 2011/12)*



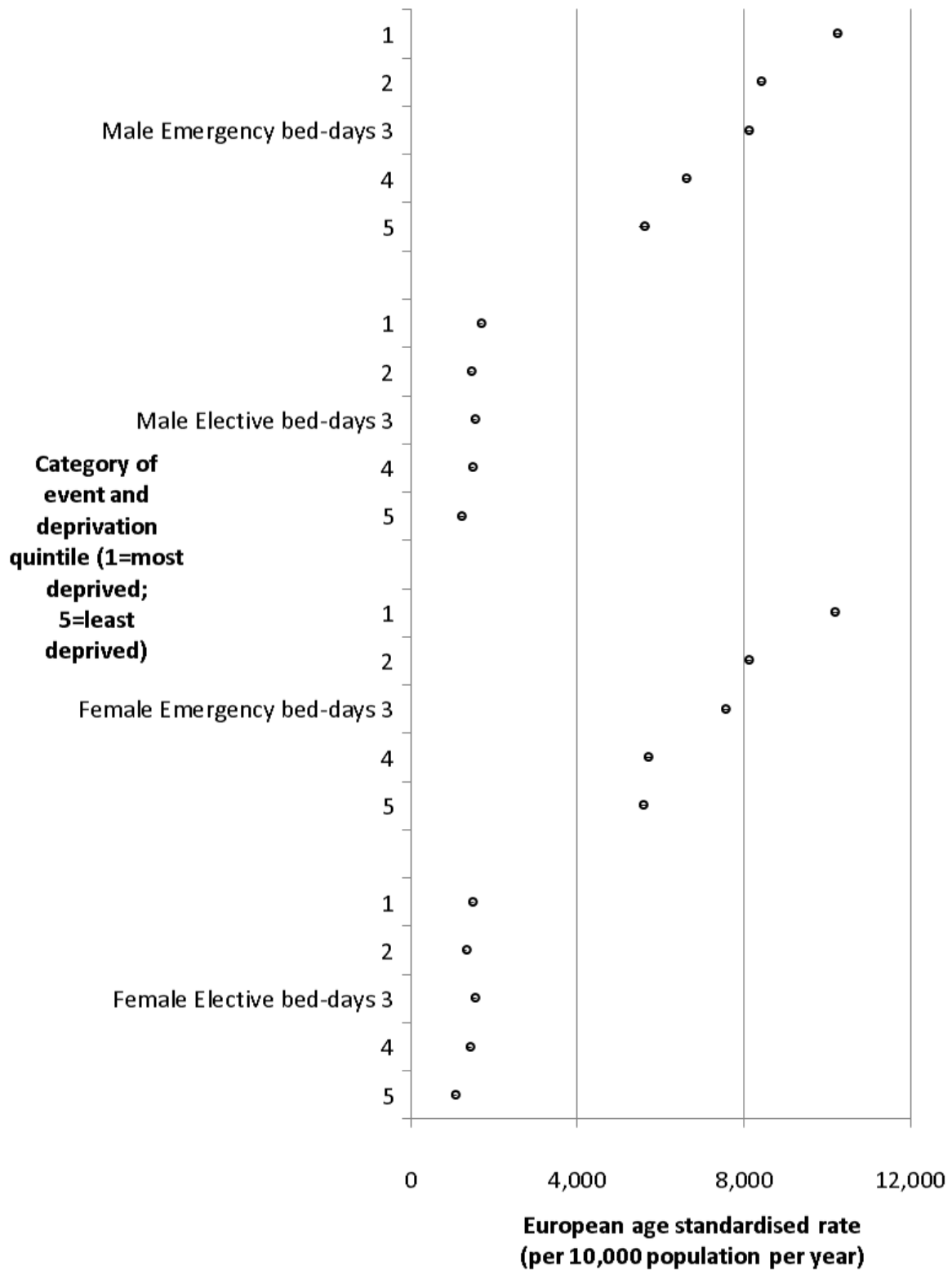
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 39: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Lanarkshire, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 40: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Lanarkshire, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Lothian

Table 11: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Lothian, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	6,642	1,577	3,164	22,290	16,700	348	0	41,745	7,317
2	9,011	2,356	5,097	28,419	23,562	442	0	58,682	10,169
3	5,985	1,866	4,078	19,668	20,504	270	0	40,977	8,821
4	5,765	2,067	4,286	19,373	19,261	218	0	38,856	9,236
5 (least deprived)	8,115	3,156	7,903	30,804	31,221	224	0	62,076	14,118
Females									
1 (most deprived)	6,719	1,785	4,170	20,141	23,687	311	3,003	48,727	7,513
2	9,449	2,830	6,363	26,218	33,510	423	3,334	76,983	14,342
3	6,585	2,072	5,281	19,154	29,281	292	2,748	55,757	9,449
4	6,297	2,336	5,355	18,017	26,759	207	2,485	54,843	11,313
5 (least deprived)	9,045	3,494	9,016	28,546	43,587	280	3,759	87,227	16,565

Figure 41: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Lothian, all ages, 2011/12)

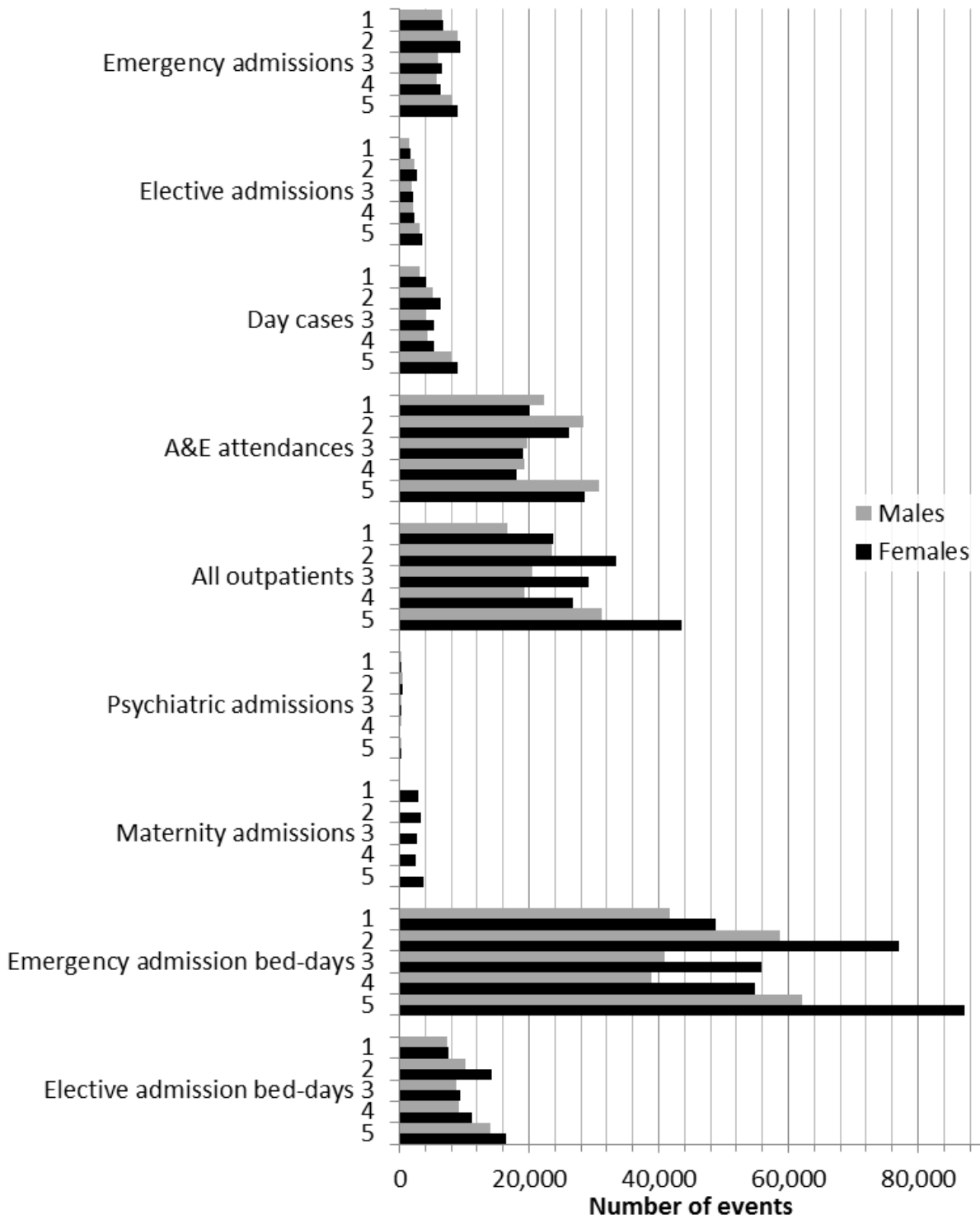
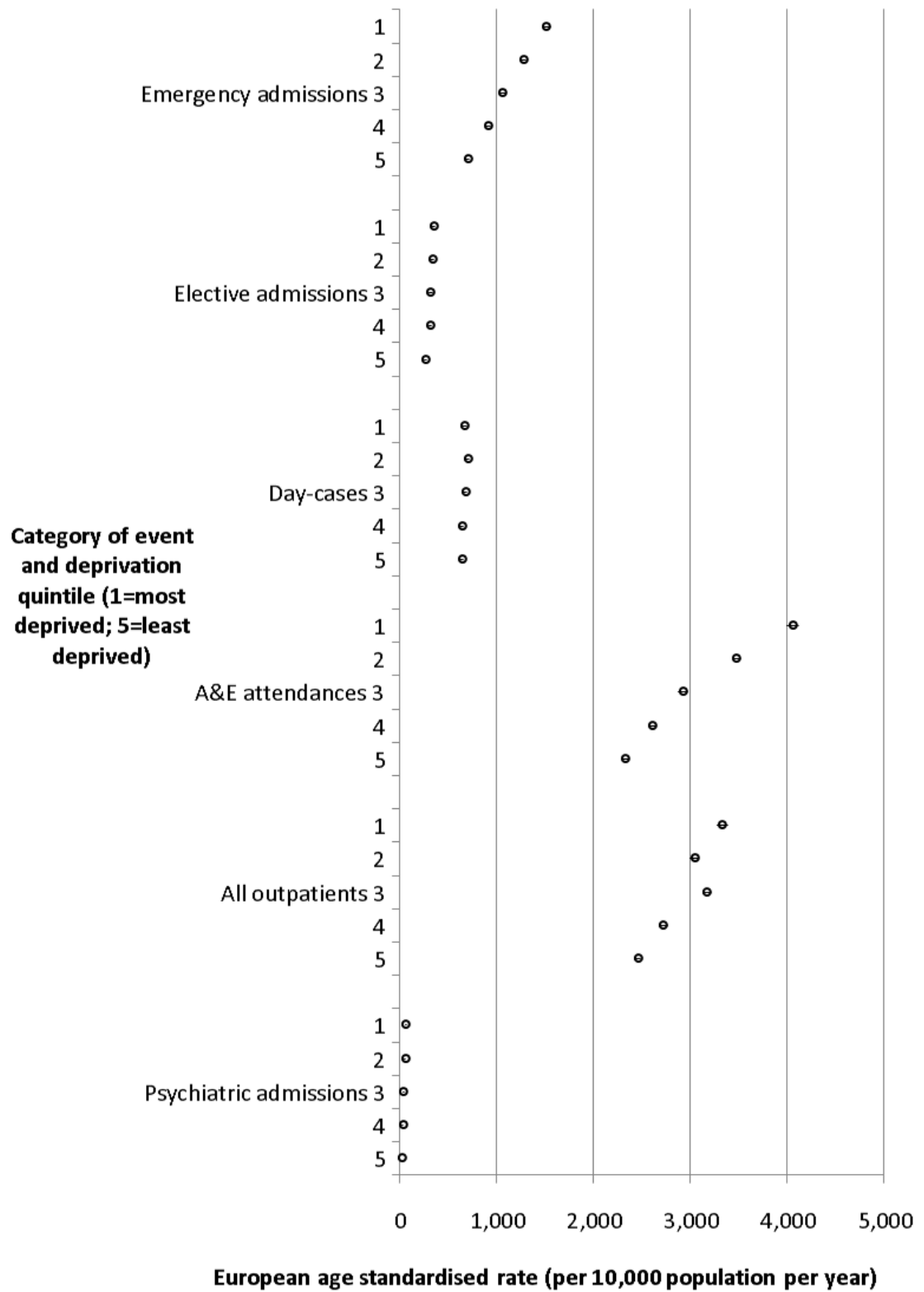
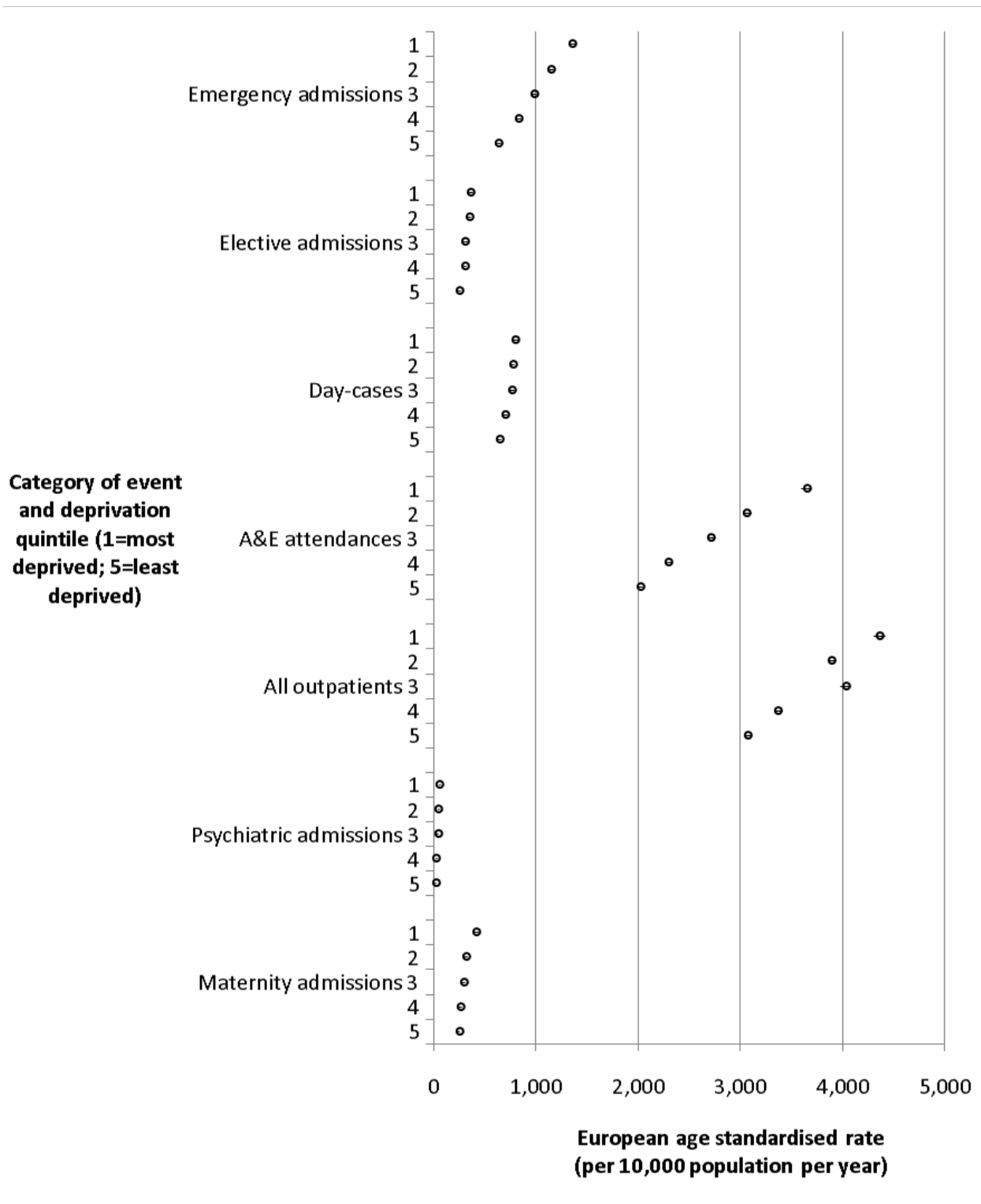


Figure 42: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Lothian; 2011/12)*



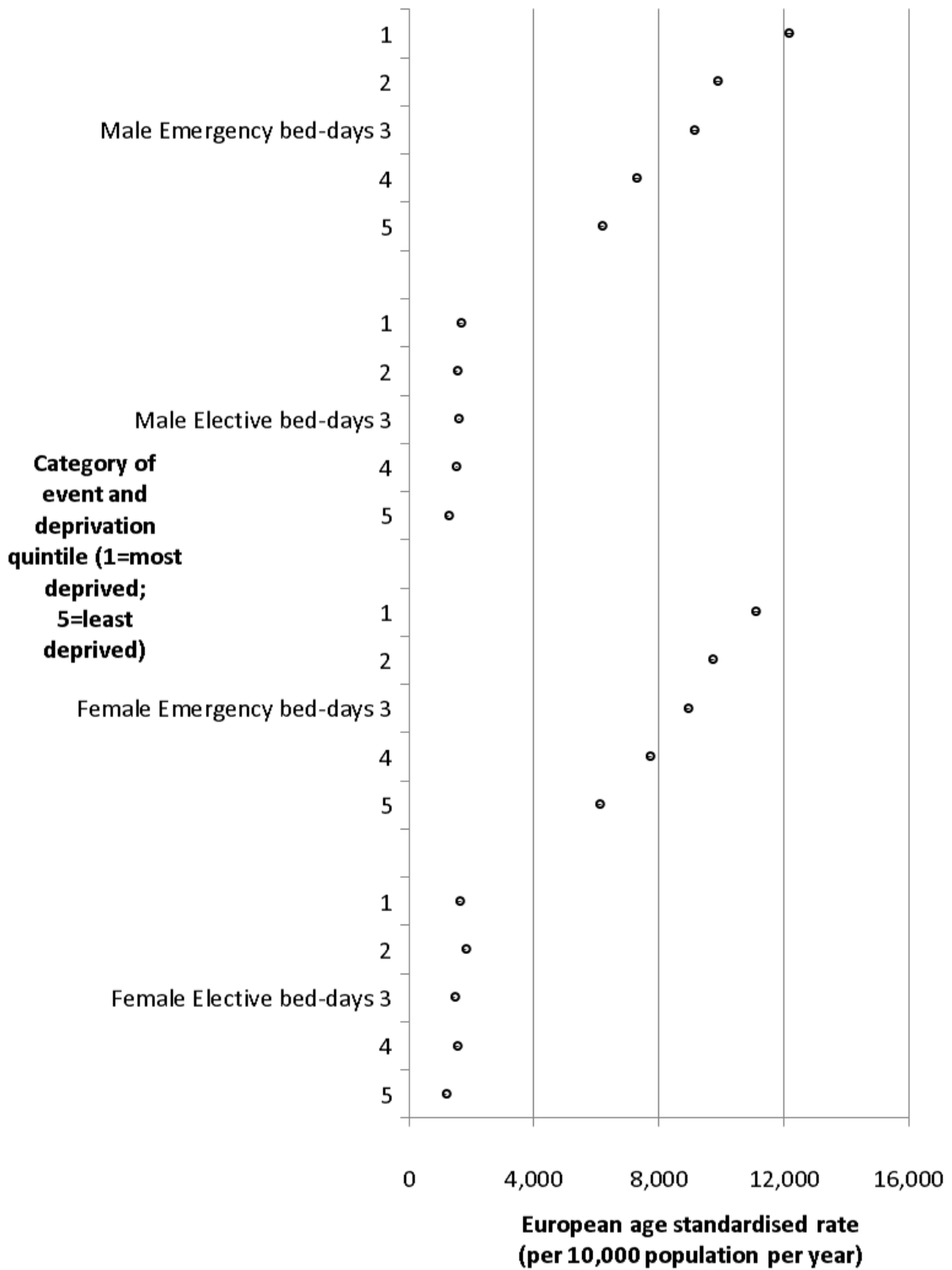
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 43: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Lothian, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 44: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Lothian, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

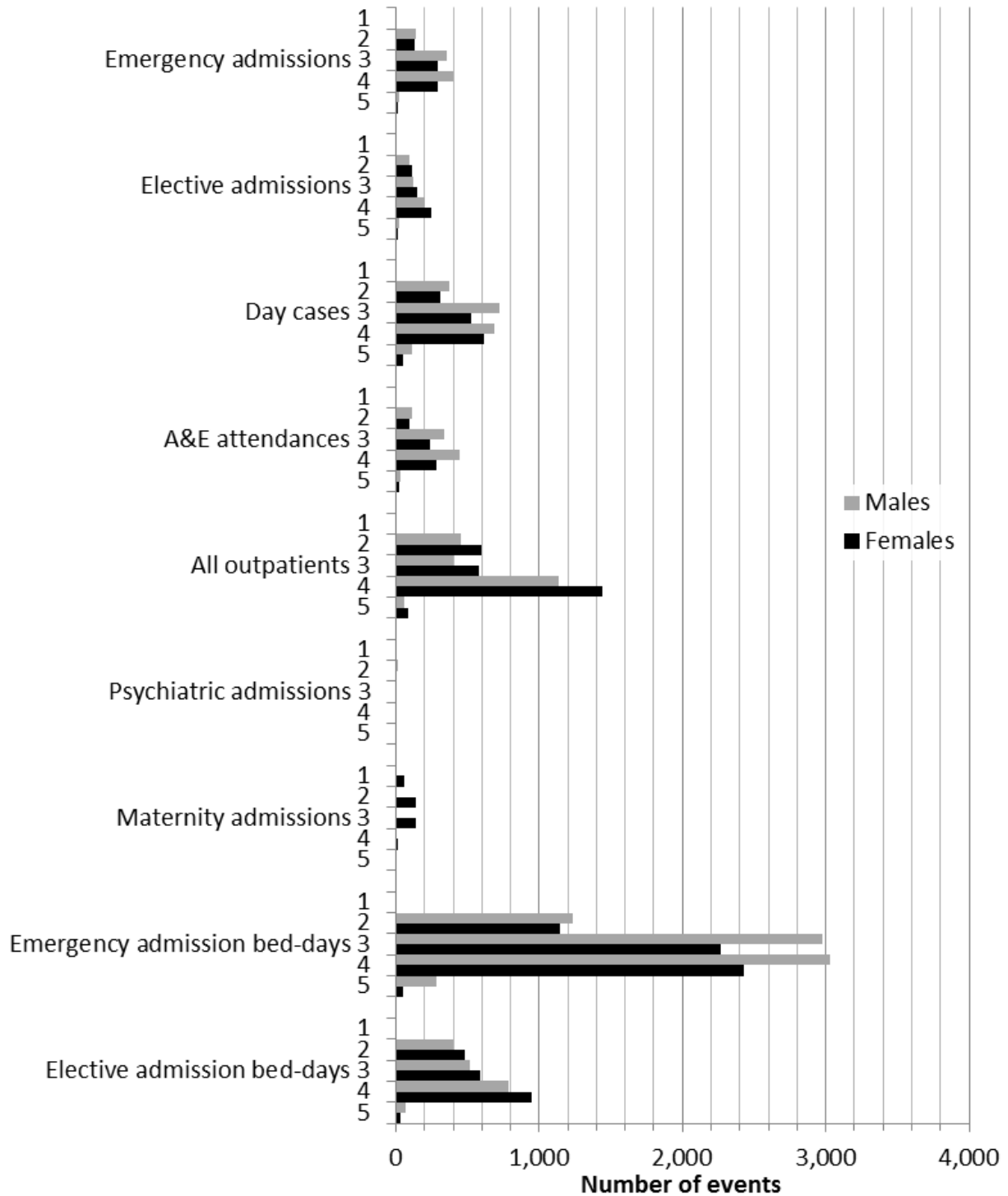
NHS Orkney

Table 12: Annual number of hospital discharges, outpatients and bed-days by deprivation quintile and type (NHS Orkney, all ages, 2011/12)*

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	0	0	0	0	0	0	0	0	0
2	137	97	369	109	452	11	0	1,234	402
3	358	123	726	338	404	9	0	2,977	518
4	402	202	684	447	1139	5	0	3,026	782
5 (least deprived)	25	19	112	33	62	0	0	279	70
Females									
1 (most deprived)	0	0	0	0	0	0	0	0	0
2	127	112	306	96	601	2	58	1,144	485
3	294	152	523	241	576	7	136	2,268	589
4	292	245	616	285	1439	2	136	2,425	943
5 (least deprived)	15	16	46	20	90	0	13	53	36

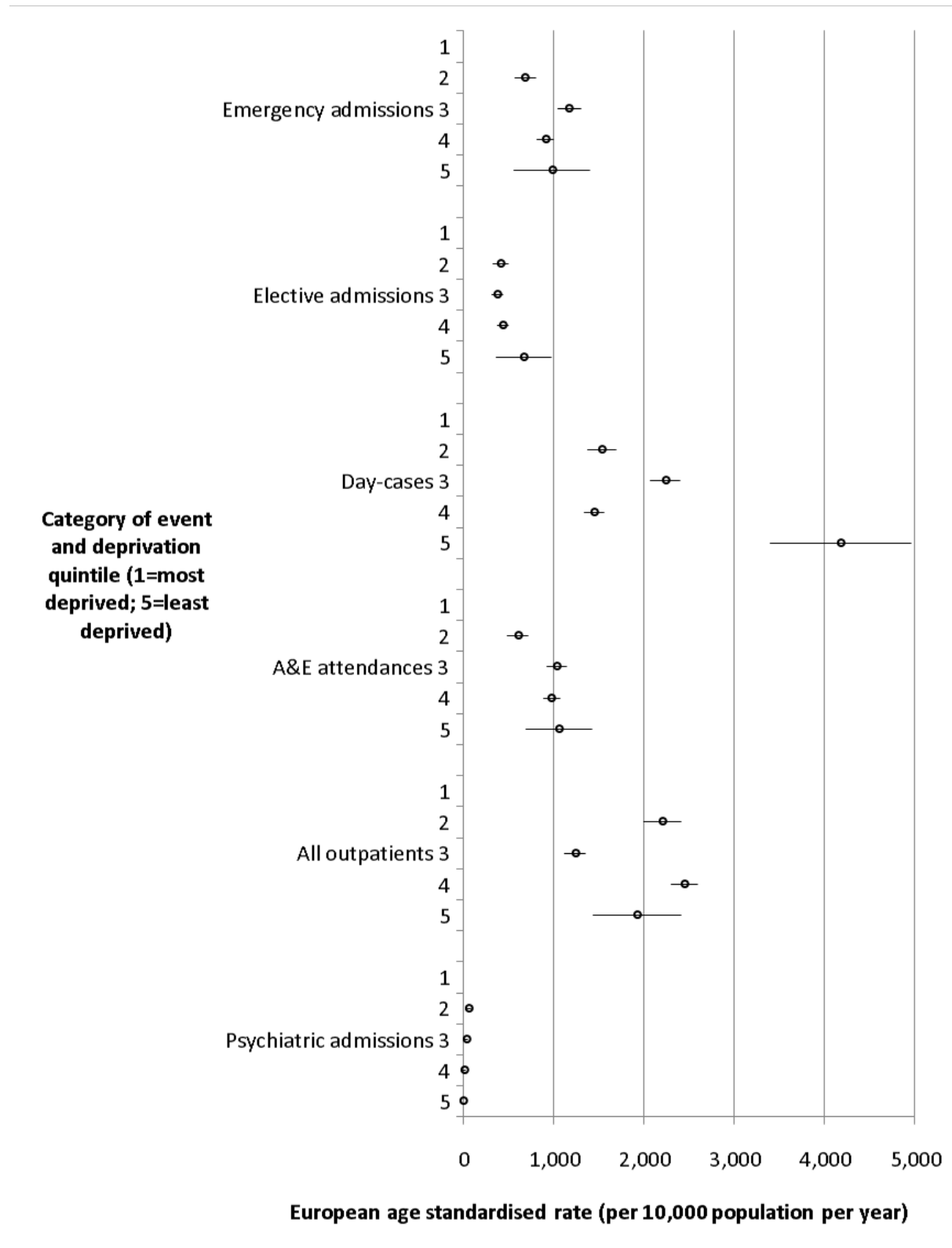
* Note: there are no areas within NHS Orkney within the most deprived quintile of Scottish datazones.

Figure 45: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Orkney, all ages, 2011/12)*



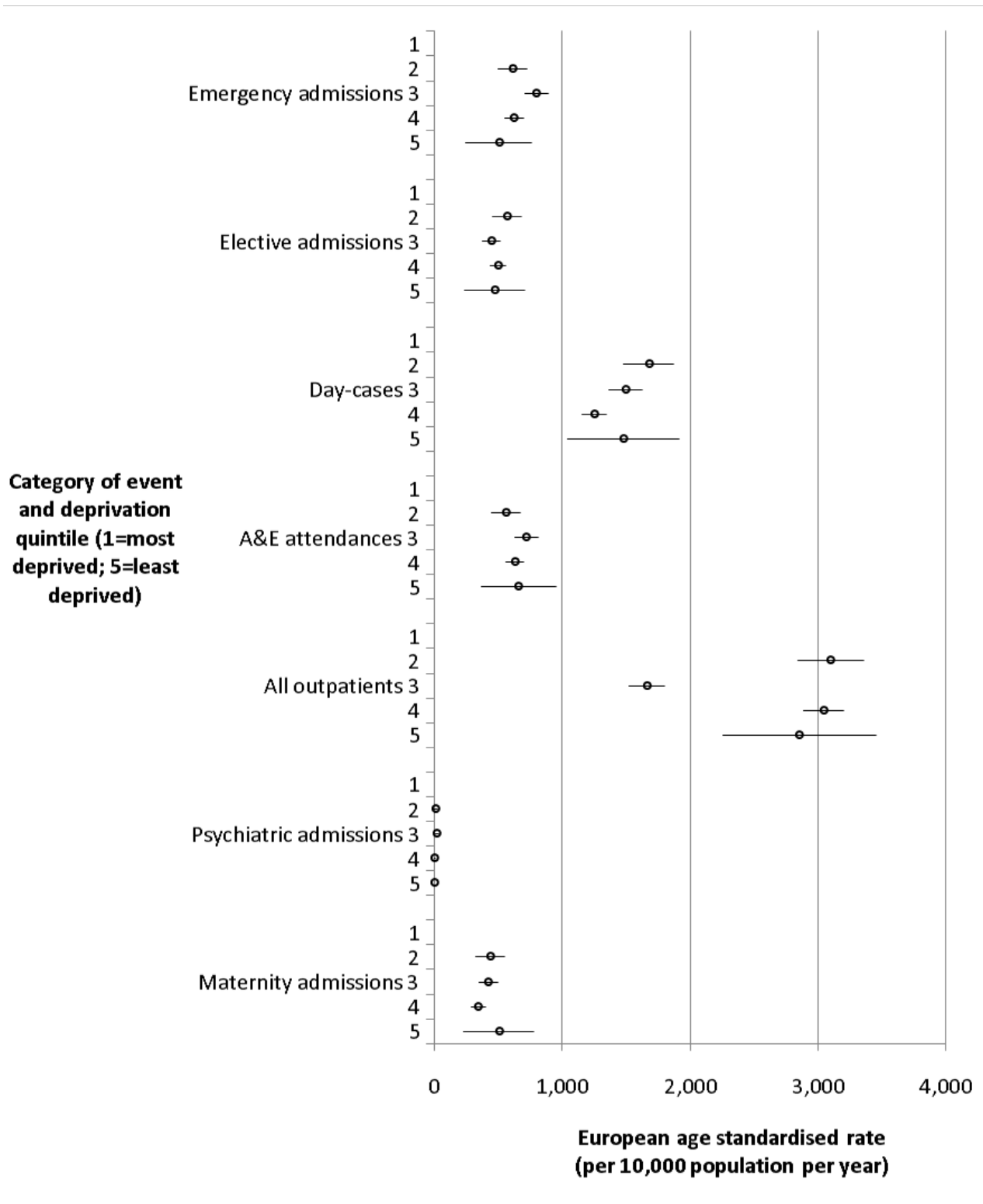
* Note: there are no areas within NHS Orkney within the most deprived quintile of Scottish datazones.

Figure 46: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Orkney; 2011/12)*



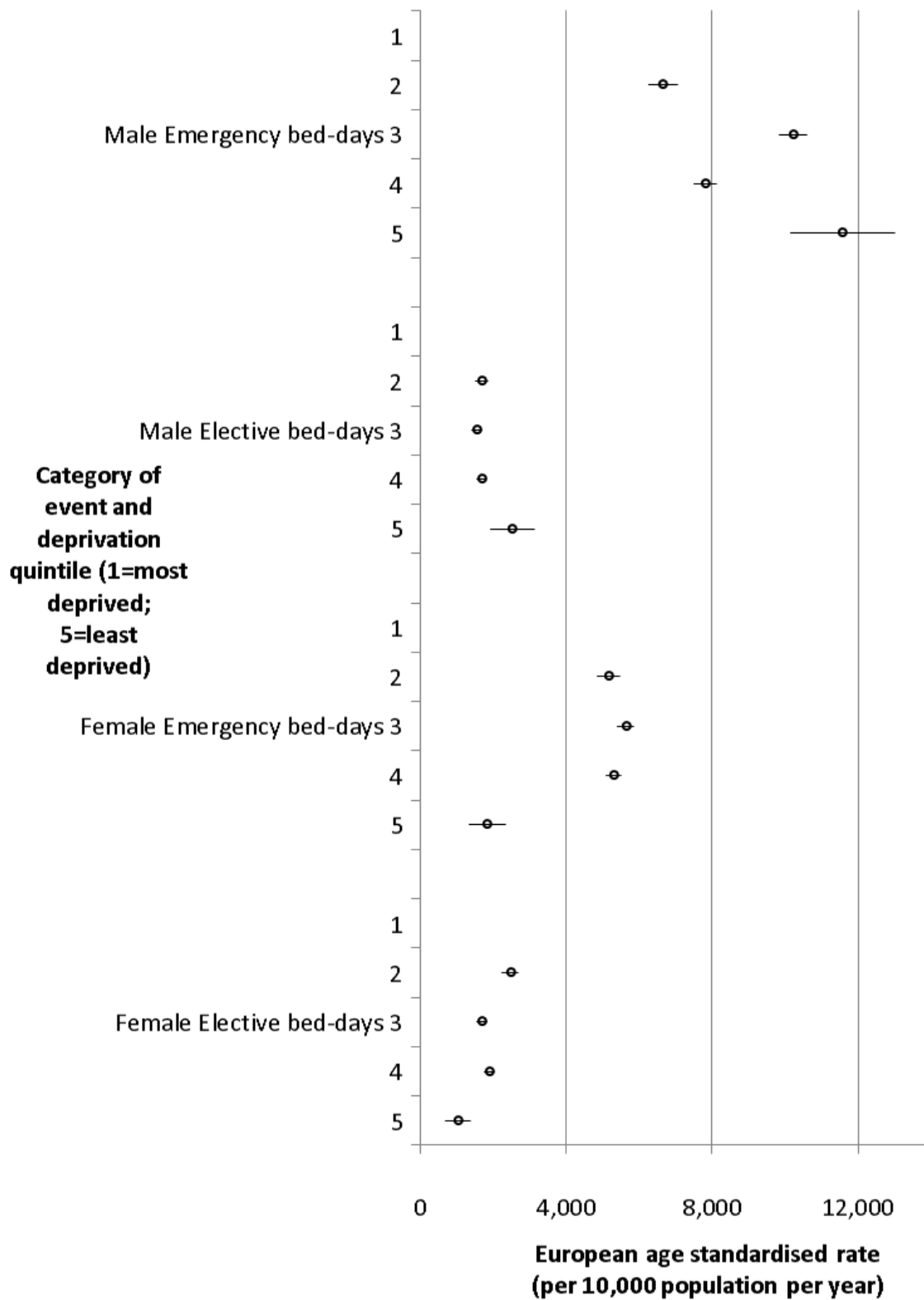
* Notes: there are no areas within NHS Orkney within the most deprived quintile of Scottish datazones; the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 47: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Orkney, 2011/12)*



* Notes: there are no areas within NHS Orkney within the most deprived quintile of Scottish datazones; the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 48: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Orkney, 2011/12)*



* Notes: there are no areas within NHS Orkney within the most deprived quintile of Scottish datazones; the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

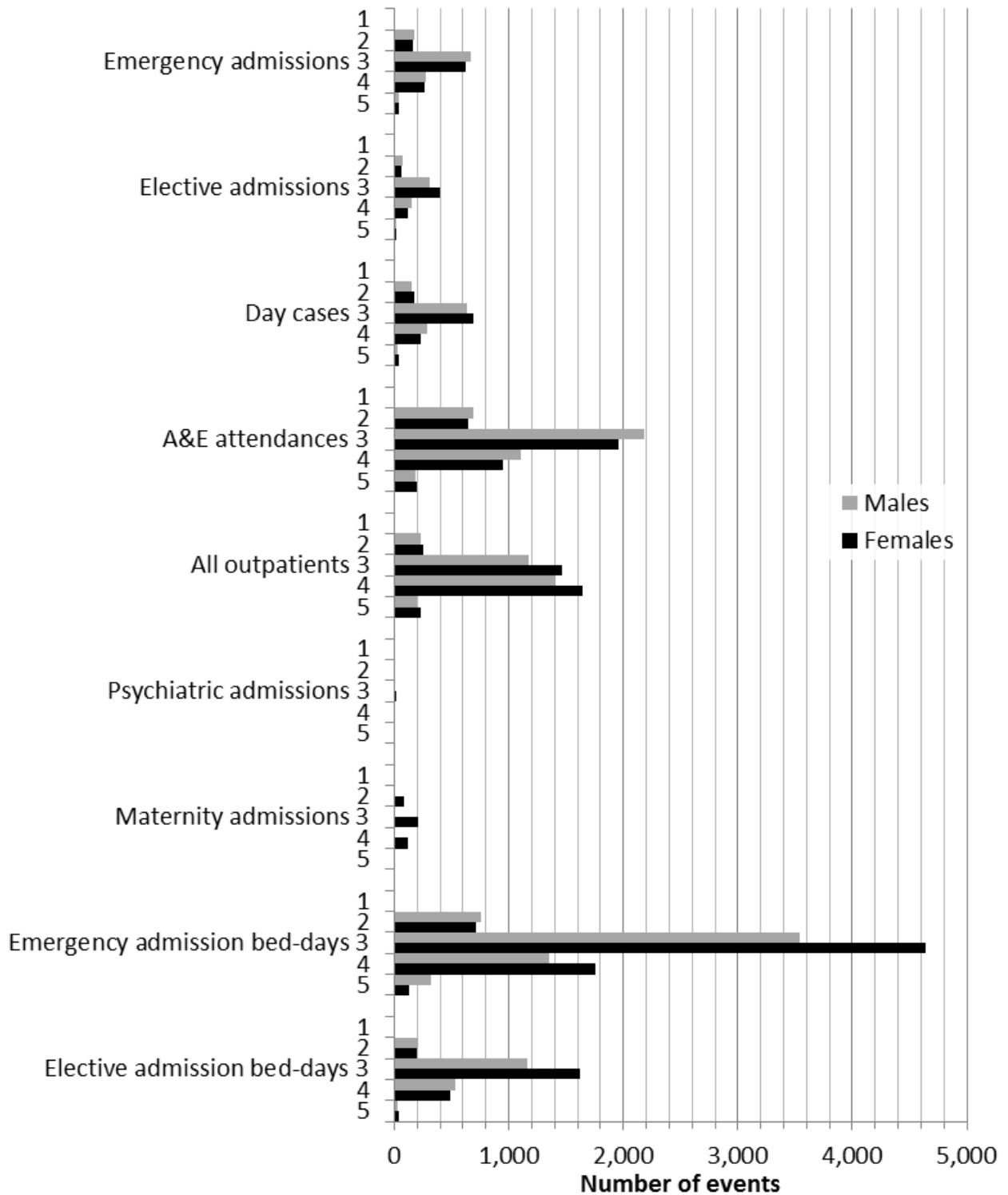
NHS Shetland

Table 13: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Shetland, all ages, 2011/12)*

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	0	0	0	0	0	0	0	0	0
2	179	75	149	692	229	1	0	753	212
3	665	307	637	2,187	1,175	10	0	3,536	1,159
4	280	153	283	1,104	1,409	6	0	1,349	534
5 (least deprived)	36	14	32	183	193	0	0	324	33
Females									
1 (most deprived)	0	0	0	0	0	0	0	0	0
2	165	67	175	643	250	2	79	718	195
3	619	394	695	1,953	1,463	12	207	4,641	1,621
4	267	122	229	950	1,644	0	119	1,756	492
5 (least deprived)	45	18	41	196	234	0	7	134	35

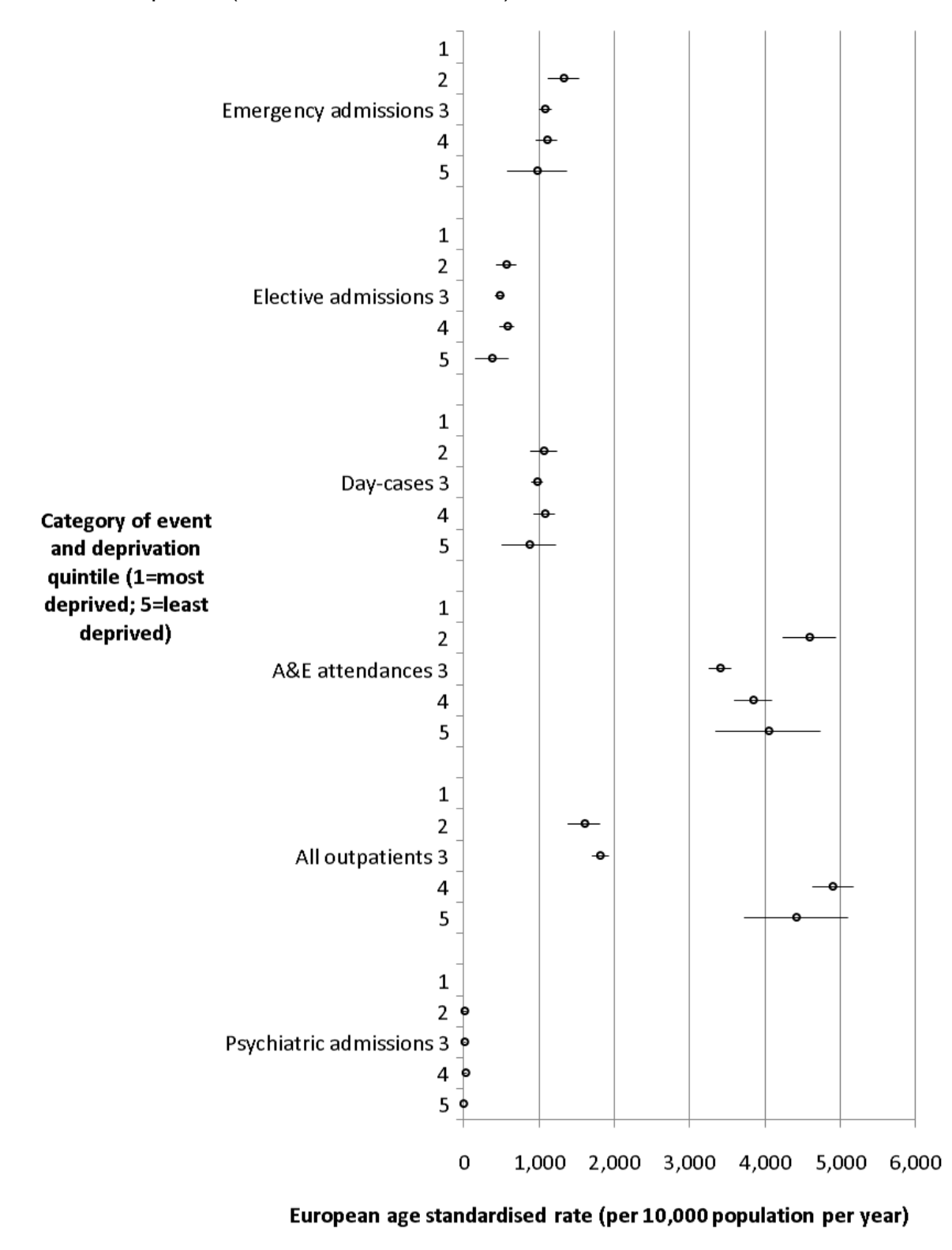
* Note: there are no areas within NHS Shetland within the most deprived quintile of Scottish datazones.

Figure 49: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Shetland, all ages, 2011/12)*



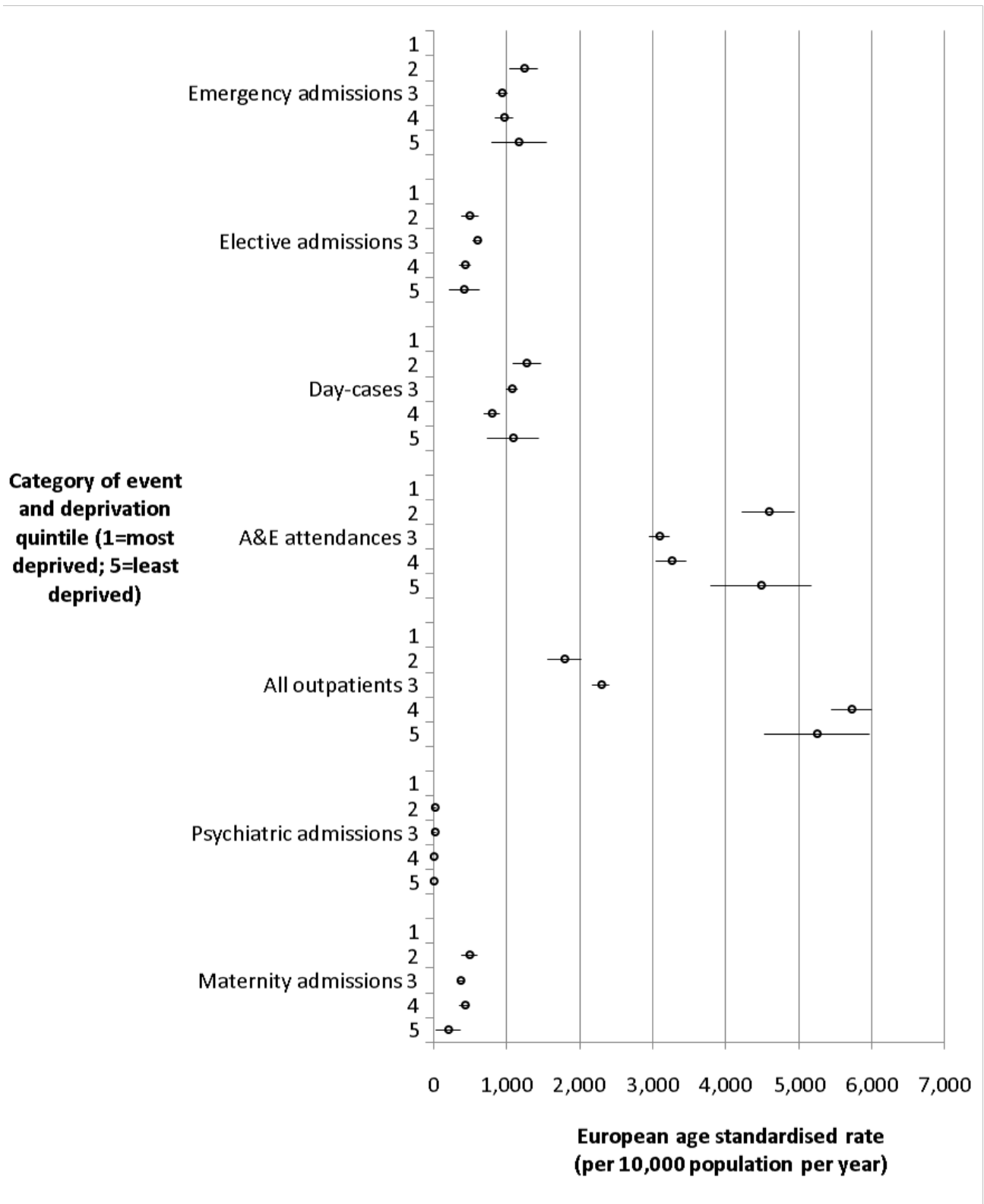
* Notes: there are no areas within NHS Shetland within the most deprived quintile of Scottish datazones; the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 50: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Shetland; 2011/12)*



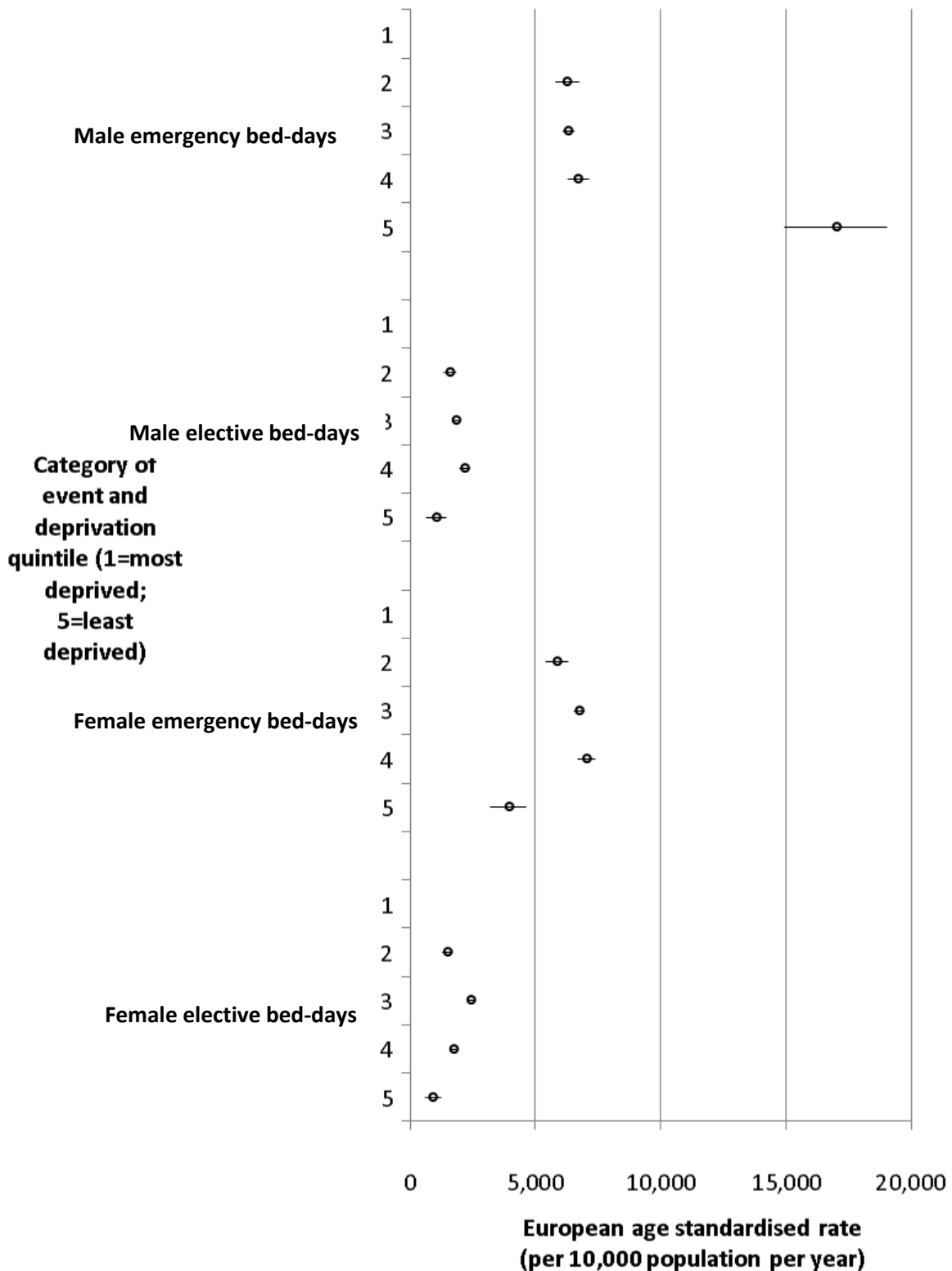
* Notes: there are no areas within NHS Shetland within the most deprived quintile of Scottish datazones; the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 51: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Shetland; 2011/12)*



* Notes: there are no areas within NHS Shetland within the most deprived quintile of Scottish datazones; the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 52: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Shetland, 2011/12)*



* Notes: there are no areas within NHS Shetland within the most deprived quintile of Scottish datazones; the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Tayside

Table 14: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Tayside, all ages, 2011/12)

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	4,345	1,166	1,321	11,491	13,372	256	0	26,899	4,682
2	3,721	1,130	1,162	11,632	11,143	268	0	27,201	4,384
3	3,414	1,299	1,346	10,666	11,070	167	0	25,464	4,479
4	5,123	2,104	2,289	14,114	17,778	199	0	36,702	7,607
5 (least deprived)	2,794	1,171	1,229	6,479	10,683	95	0	21,004	4,408
Females									
1 (most deprived)	4,463	1,629	1,731	9,573	17,524	218	1,474	35,247	6,480
2	3,943	1,478	1,499	10,848	14,422	223	1,402	32,992	5,863
3	3,553	1,544	1,629	9,576	14,117	192	1,083	30,672	5,197
4	5,037	2,556	2,640	13,055	22,798	231	1,620	41,115	9,471
5 (least deprived)	2,994	1,485	1,551	6,107	13,958	94	746	25,515	5,409

Figure 53: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Tayside, 2011/12)

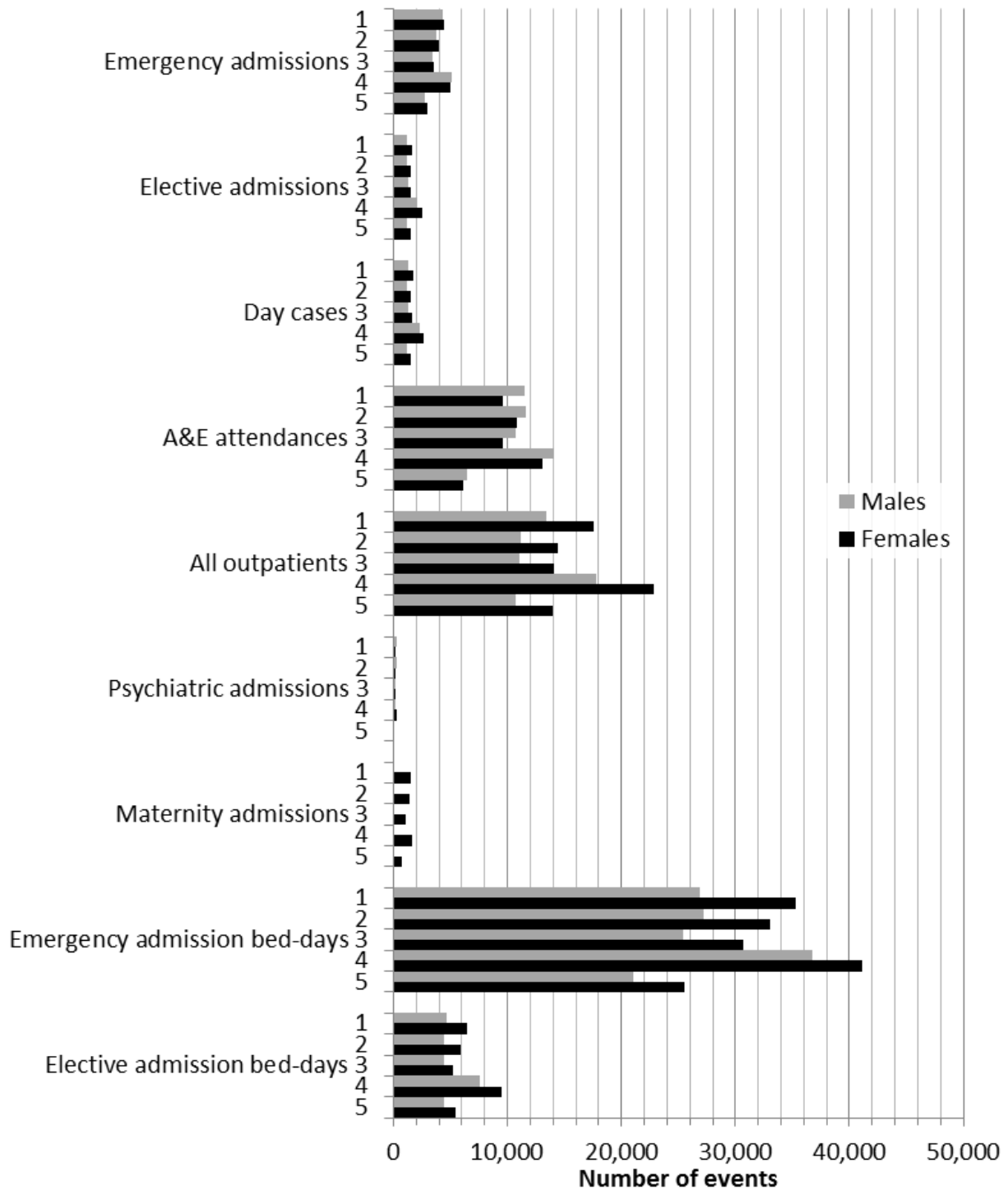
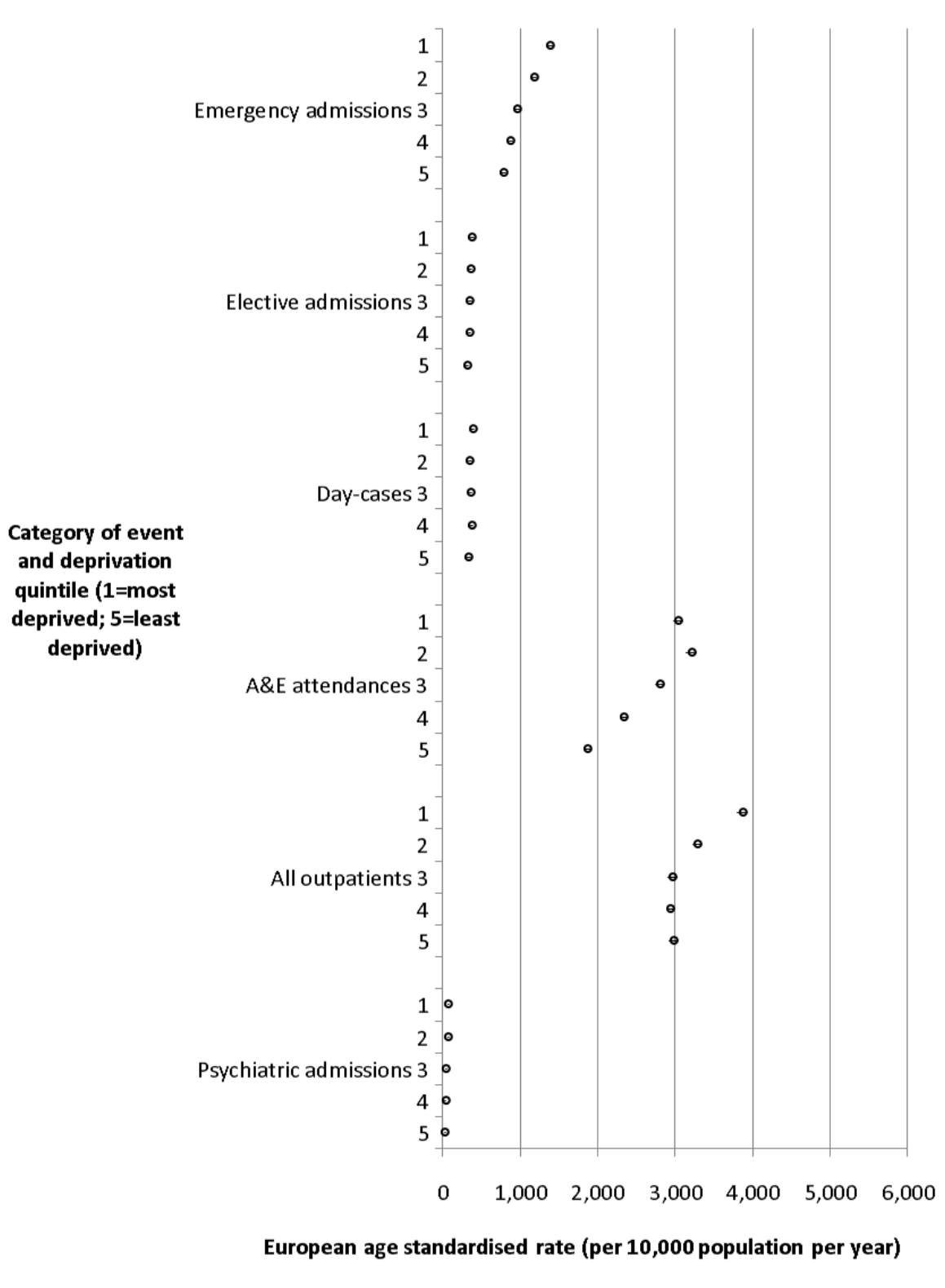
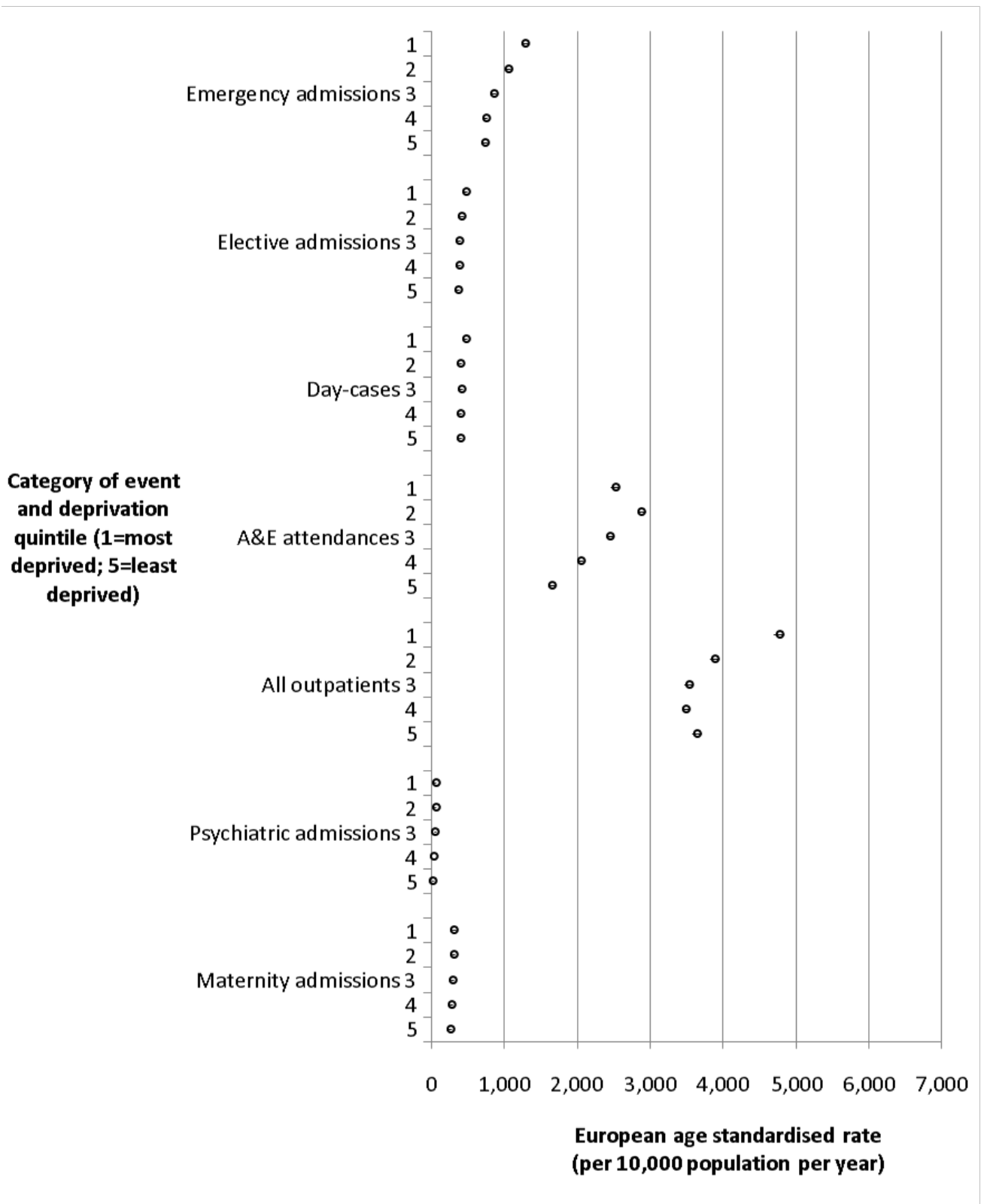


Figure 54: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Tayside; 2011/12)*



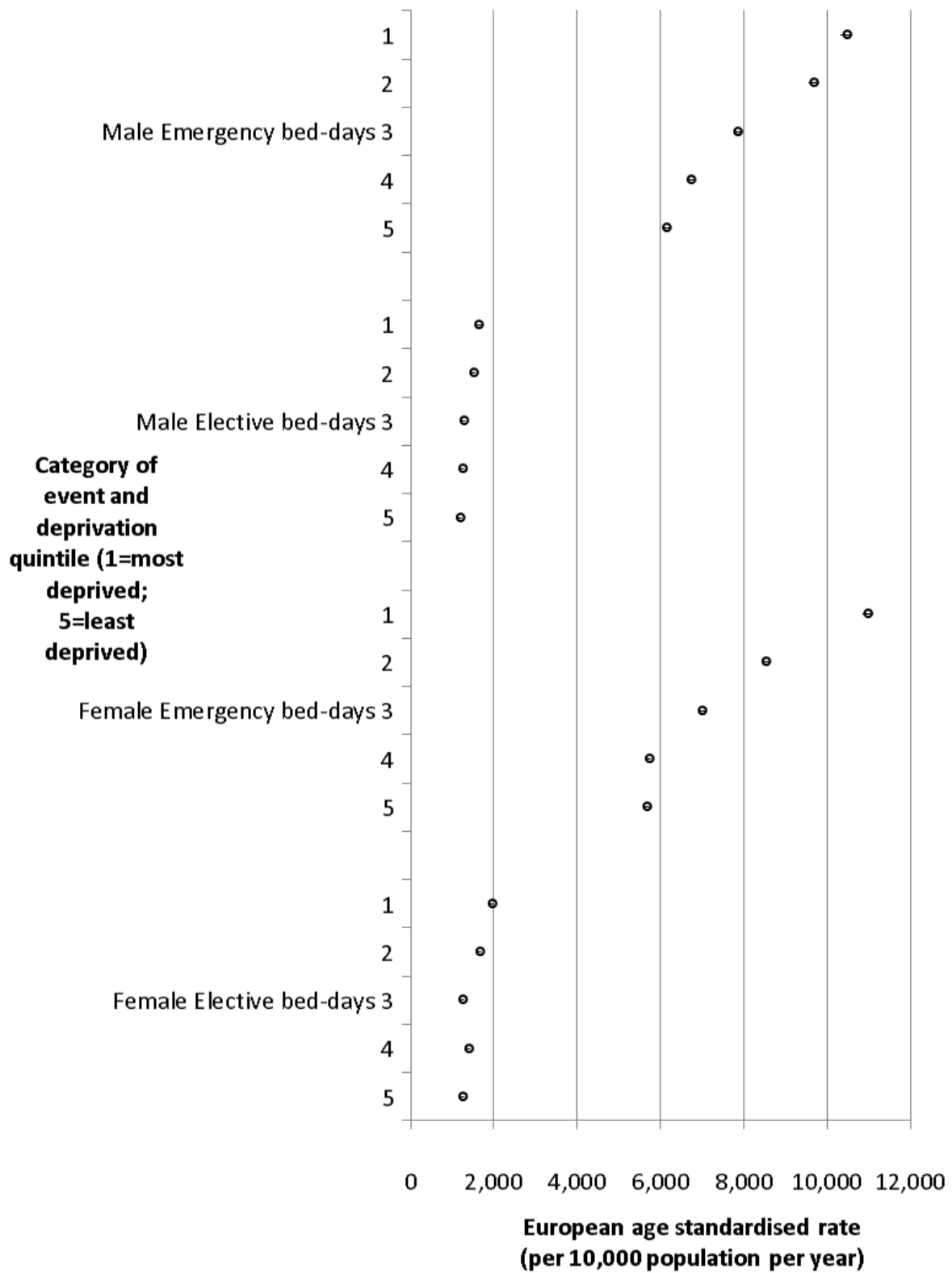
* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 55: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Tayside; 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 56: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Tayside, 2011/12)*



* Note: the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

NHS Western Isles

Table 15: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile and type (NHS Western Isles, all ages, 2011/12)*

Deprivation quintile	Hospital discharges and outpatient appointments							Bed-days	
	All general hospital emergency admissions	All general hospital elective admissions	All general hospital day cases	A&E attendances	All general hospital outpatients	Psychiatric hospital admissions	Maternity hospital admissions	General hospital emergency admissions	General hospital elective admissions
Males									
1 (most deprived)	0	0	0	0	0	0	0	0	0
2	980	515	909	2,390	1,723	23	0	8,034	2,792
3	481	286	451	1,195	2,168	8	0	4,165	1,331
4	0	0	0	0	0	0	0	0	0
5 (least deprived)	0	0	0	0	0	0	0	0	0
Females									
1 (most deprived)	0	0	0	0	0	0	0	0	0
2	945	598	882	2,056	2,368	21	870	10,933	3,172
3	443	264	410	1,020	2,750	17	452	5,893	1,342
4	0	0	0	0	0	0	0	0	0
5 (least deprived)	0	0	0	0	0	0	0	0	0

* Note: all areas within NHS Western Isles are within the second and third deprivation quintiles for Scotland.

Figure 57: Annual number of hospital discharges, outpatients and bed-days by Scottish deprivation quintile (1=most deprived, 5=least deprived) and type (NHS Western Isles, all ages, 2011/12)

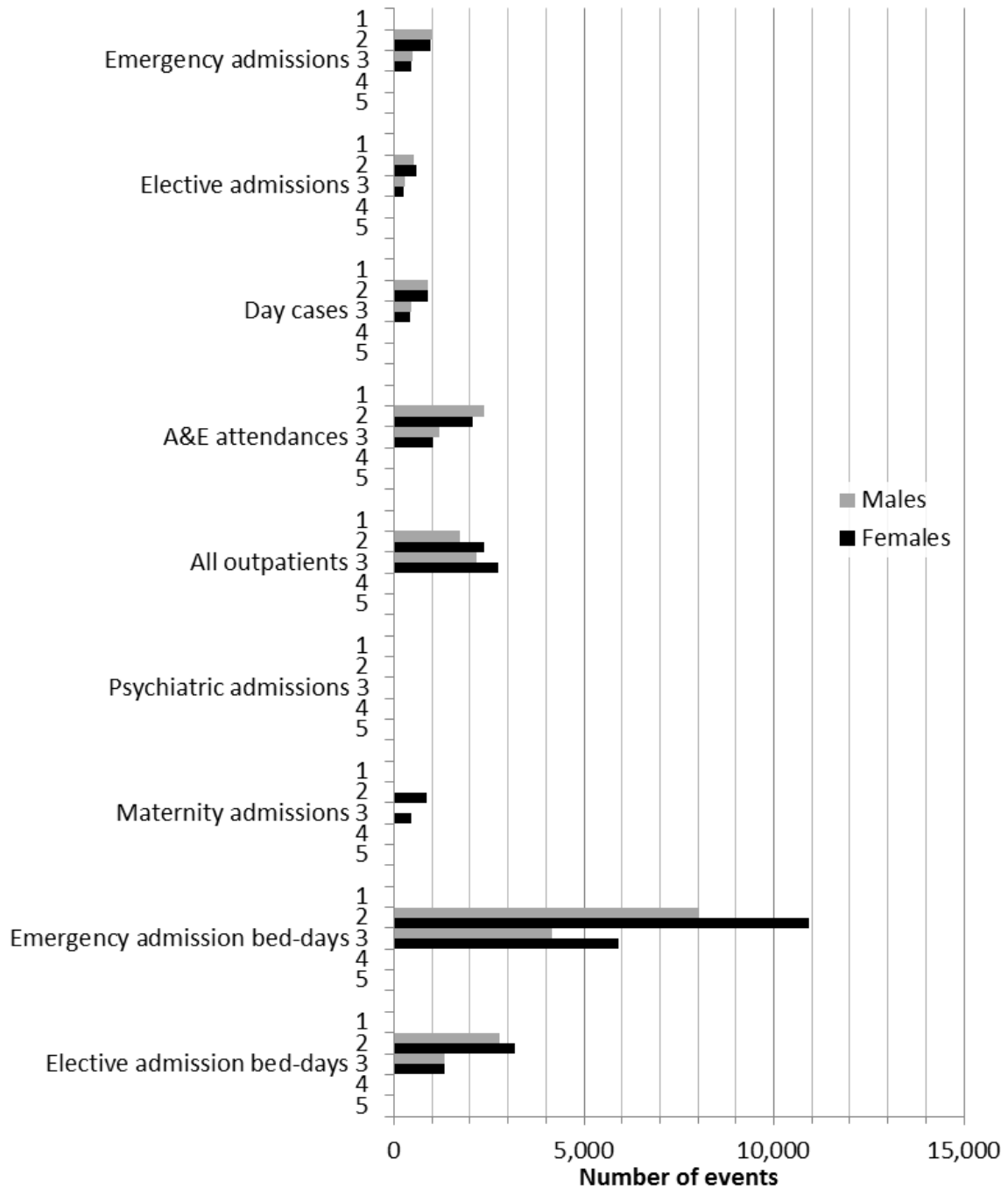
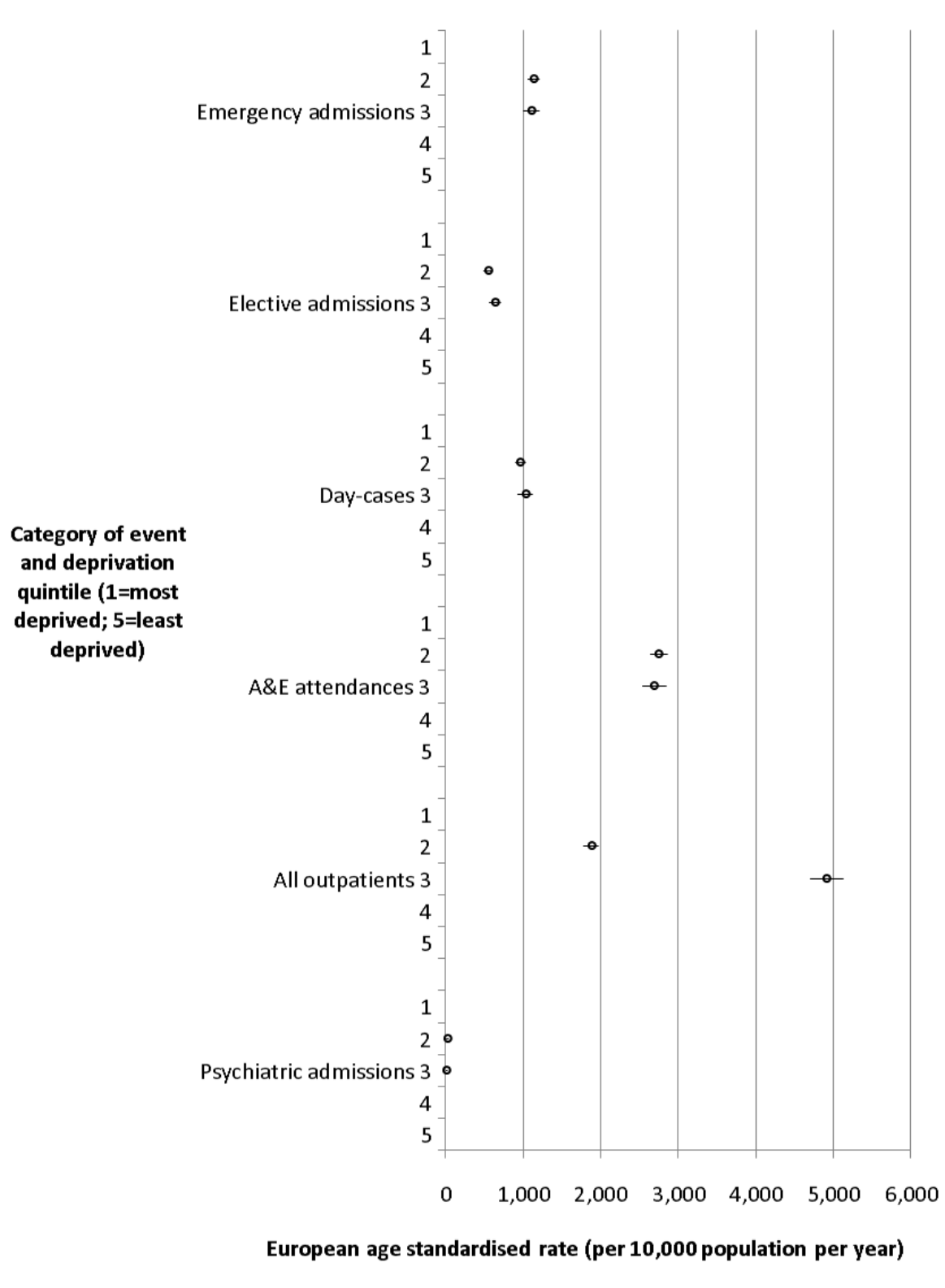
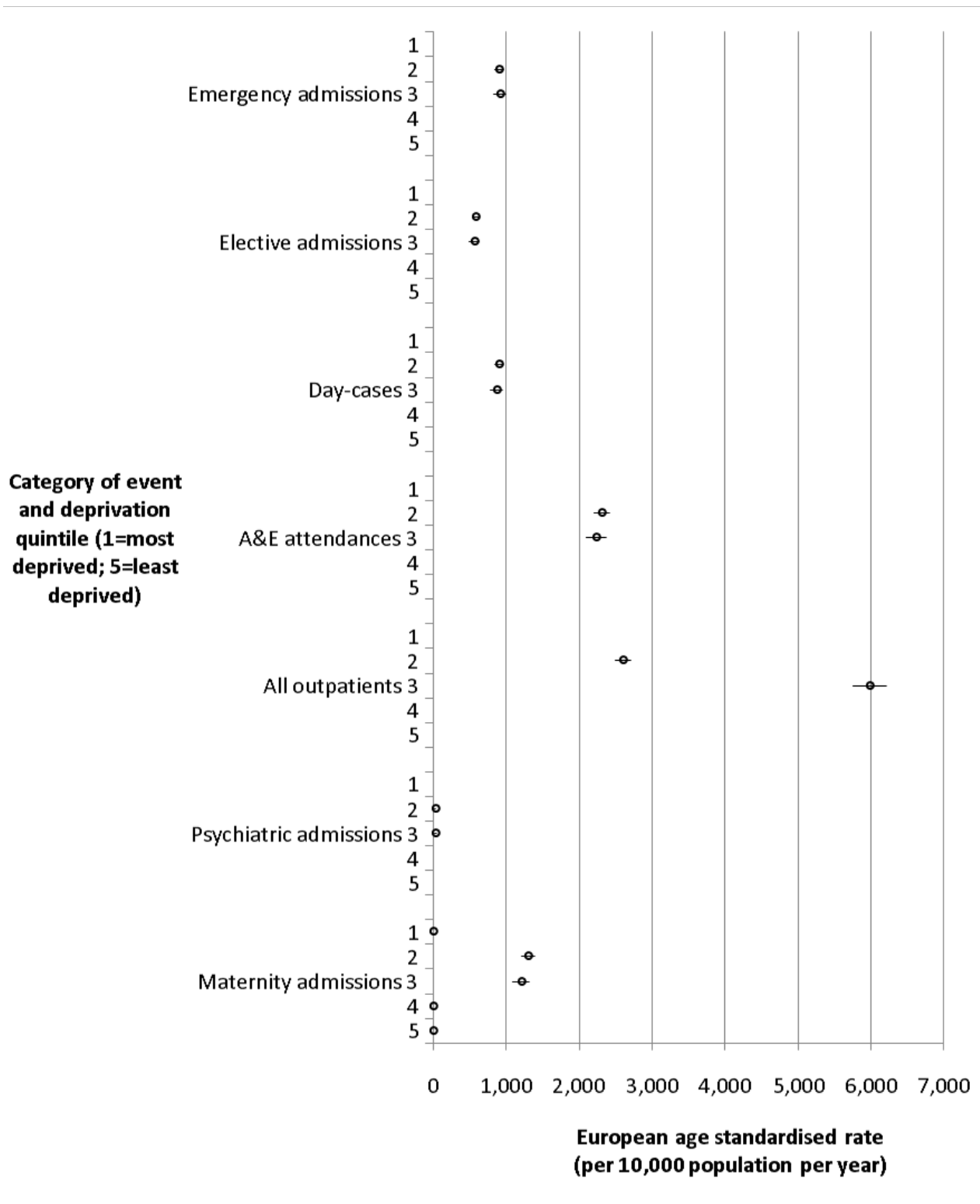


Figure 58: Male European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile*



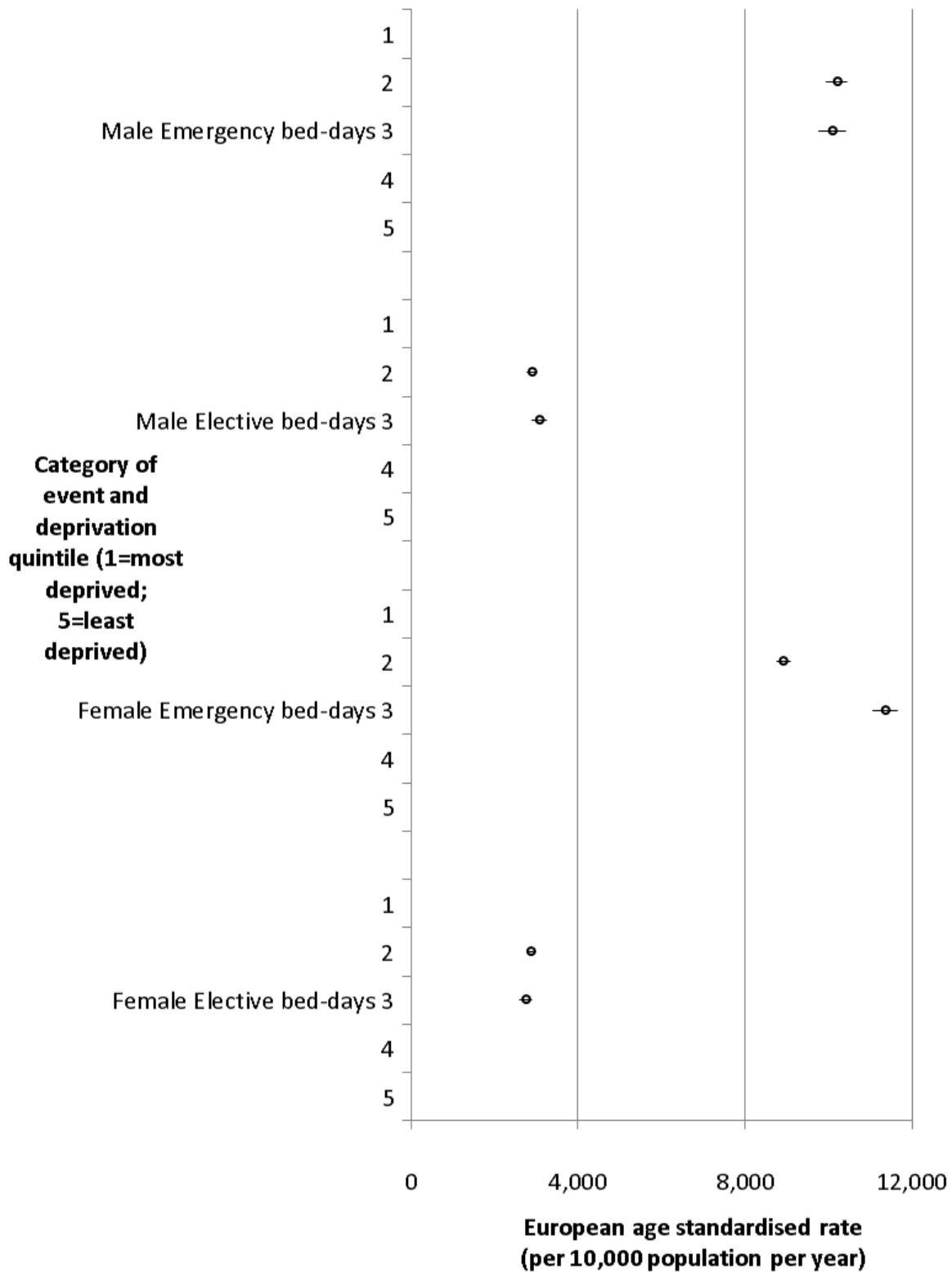
* Notes: all areas within NHS Western Isles are within the second and third deprivation quintiles for Scotland; the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 59: Female European age-standardised hospital admission and outpatient attendances per 10,000 population per year by Scottish deprivation quintile (NHS Western Isles, 2011/12)*



* Notes: all areas within NHS Western Isles are within the second and third deprivation quintiles for Scotland; the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

Figure 60: European age-standardised bed-day rate per 10,000 population per year by Scottish deprivation quintile (NHS Western Isles, 2011/12)*



* Notes: all areas within NHS Western Isles are within the second and third deprivation quintiles for Scotland; the 95% confidence intervals are plotted on the graph but are too narrow to be visible for all categories.

References

- ¹ *Health Promoting Hospitals*. Copenhagen: WHO Europe; 2002.
- ² *Long-term monitoring report on health inequalities*. Edinburgh: Scottish Government; 2013.
- ³ McCartney G, Hart C, Watt G. How can socioeconomic inequalities in hospital admissions be explained? A cohort study. *BMJ Open*. 2013;3:e002433. doi:10.1136/bmjopen-2012-002433
- ⁴ Hart JT. The inverse care law. *Lancet*. 1971;297:405–12.
- ⁵ Hirst A, Delvaux J, Rinne S, Short C, McGregor A. *Multiple and Complex Needs Initiative: Programme Evaluation Report*. Edinburgh: Scottish Government Social Research; 2009.
- ⁶ Fischbacher C. *Identifying 'deprived individuals': Are there better alternatives to the Scottish Index of Multiple Deprivation (SIMD) for socioeconomic targeting in individually based programmes addressing health inequalities in Scotland?* Edinburgh: ISD Scotland and ScotPHO; 2014.
www.scotpho.org.uk/publications/reports-and-papers/1165-identifying-qdeprived-individualsq-are-there-better-alternatives-to-the-scottish-index-of-multiple-deprivation-simd-for-socioeconomic-targeting-in-individually-based-programmes-addressing-health-inequalities-in-scotland on 15th June 2014

