

## SUPPLEMENTAL FILE

### **Additional notes on data management and analysis: Validation of cases for exclusion/inclusion into sample.**

Cases were excluded if cause of death could not be undetermined. In the 2017 and 2020/21 studies, we conducted interviews on the undetermined or unintentional death cases. These were deaths where the forensic report could not identify a cause and were mainly related to poisoning, fire-injuries, asphyxiation or blunt force, e.g. a woman found on her bed with no evidence of force entry or injuries on body. These cases were investigated by the police as ‘inquest’ cases. A total of 502 cases had undetermined cause of death in the 2017 study, of which 62 were found to be murder cases during police interviews. The remaining undetermined cases were excluded. In the 2020/21 study, a total of 117 cases were undetermined or unintentional and of these, 32 were found to be murder cases during police interviews. The rest remained unintentional/undetermined and were excluded.

In cases where sex and/or age were unknown, we used autopsy report to either exclude or include a case to the sample. The autopsy report had information on whether the deceased was an ‘adult’ or ‘child’ and this information was used if date of birth was unknown. Cases were excluded from analysis if both age and sex were unknown or where sex was unknown. This was mainly the cases where the body had decomposed. In the 2017 study, sex was unknown in 50 cases and we also excluded 9 cases where both age and sex were unknown. In the 2020/21 study, sex was unknown in only 1 case. The “undetermined age” cases were excluded in the age-group analysis but not from the overall analysis sample.

**Table S1:** Count and percentages distribution of all female murder cases in the police system by mortuary strata

Mortuary strata	1999*		2009		2017		2020/21	
	All female murder cases identified†	Police data available‡	All female murder cases identified†	Police data available‡	All female murder cases identified†	Police data available‡	All female murder cases identified†	Police data available‡
<b>Small</b>	1393 (36.7%)	1173 (84.2%)	770 (32.6%)	765 (99.4%)	628 (26.1%)	567 (90.3%)	900(37.3%)	814(90.5%)
<b>Medium</b>	836 (22.0%)	789 (94.4%)	935 (39.6%)	918 (98.2%)	773 (32.1%)	666 (86.2%)	573(23.4%)	533(92.9%)
<b>Large</b>	1564 (41.2%)	1329 (85.0%)	659 (27.9%)	642 (97.4%)	1006 (41.8%)	795 (76.0%)	936(38.9%)	830(88.7%)
<b>Total</b>	<b>3793</b>	<b>3292 (86.8%)</b>	<b>2363</b>	<b>2325 (98.4%)</b>	<b>2407</b>	<b>2028 (84.3%)</b>	<b>2409</b>	<b>2177(90.4%)</b>
*1999: 3292/3296 cases in police system are available by mortuary strata. † Percentage of murder cases across mortuary size ‡ Percentage of the female murder cases identified in each mortuary strata								

**Table S2:** Age standardised population rates for 1999, 2009 and 2017 for overall intimate partner femicide and non-intimate partner femicide and by age, and incidence rate ratios (IRR) of population rate estimates between surveys: weighted and non-imputed data

	1999			2009			IRR of Population rate Estimates: 2009/1999 (95% CI)	2017			IRR of Population Rate Estimates 2017/2009 (95% CI)	2020/21			IRR of Population Rate Estimates 2020-21/2017 (95% CI)
	Intimate Partner Femicide: - weighted = 1349 Non-Intimate Partner Femicide weighted=1335			Intimate Partner Femicide: - weighted = 1024 Non-Intimate Partner Femicide weighted=768				Intimate Partner Femicide: - weighted = 768 Non-Intimate Partner Femicide weighted=604				Intimate Partner Femicide: - weighted = 729 Non-Intimate Partner Femicide weighted=485			
	N	%	Rate per 100000 pop (95% CI)	N	%	Rate per 100000 pop (95% CI)		N	%	Rate per 100000 pop (95% CI)		N	%	Rate per 100000 pop (95% CI)	
Intimate Partner Femicide	1349	50.3	7.8 (4.9-10.7)	1024	57.1	5.1 (3.3-6.9)	0.65 (0.58-0.73)	768	56.0	3.4 (2.9-3.9)	0.67 (0.59-0.76)	729	60.1	3.2 (2.8 - 3.5)	0.94 (0.82 - 1.08)
Non-Intimate Partner Femicide	1335	49.7	9.1 (5.3-12.8)	768	42.9	4.3 (2.6-5.9)	0.47 (0.42-0.53)	604	44.0	2.8 (2.4-3.3)	0.65 (0.56-0.76)	485	39.9	2.2 (1.9 - 2.5)	0.79 (0.67 - 0.93)
<b>Intimate Partner Femicide</b>															
14-29 y	649	48.1	3.2 (2.2-4.3)	474	46.3	2.1 (1.4-2.7)	0.66 (0.56-0.77)	353	46.0	1.6 (1.3-1.8)	0.76 (0.63-0.92)	293	40.1	1.3 (1.2 - 1.4)	0.82 (0.66 - 1.01)
30-44 y	524	38.8	3.2 (2.1-4.4)	430	41.9	2.3 (1.5-3.1)	0.72 (0.60-0.86)	316	41.2	1.4 (1.2-1.5)	0.61 (0.5-0.74)	327	44.9	1.3 (1.2 - 1.5)	0.95 (0.77 - 1.18)
45-59 y	71	5.3	0.6 (0.2-1)	103	10.1	0.6 (0.4-0.9)	1.00 (0.66-1.52)	73	9.5	0.4 (0.3-0.4)	0.67 (0.44-1.01)	97	13.4	0.5 (0.3 - 0.6)	1.14 (0.75 - 1.74)
60+ y	26	1.9	0.2 (0.1-0.4)	14	1.3	0.1 (0.0-0.2)	0.50 (0.2-1.23)	19	2.4	0.1 (0.1-0.1)	1.00 (0.38-2.61)	8	0.6	0.04 (0 - 0.05)	0.38 (0.12 - 1.2)
Undetermined Age	79	5.8		4	0.4			6	0.8			8	1.1		
<b>Non-Intimate Partner Femicide</b>															
14-29 y	370	27.7	1.8 (1.1-2.6)	249	32.4	1.1 (0.7-1.5)	0.61 (0.49-0.76)	225	37.2	1.0 (0.9-1.1)	0.91 (0.71-1.17)	159	32.9	0.7 (0.6 - 0.8)	0.71 (0.54 - 0.94)
30-44 y	446	33.4	2.8 (1.9-3.7)	161	21.0	0.9 (0.6-1.2)	0.32 (0.25-0.41)	159	26.4	0.7 (0.6-0.8)	0.78 (0.57-1.05)	120	24.7	0.5 (0.4 - 0.6)	0.7 (0.5 - 0.97)
45-59 y	260	19.5	2.3 (1.4-3.1)	170	22.1	1.0 (0.7-1.4)	0.43 (0.33-0.57)	105	17.5	0.5 (0.4-0.6)	0.50 (0.36-0.70)	84	17.4	0.4 (0.3 - 0.5)	0.79 (0.53 - 1.18)
60+ y	223	16.7	1.9 (0.7-3.1)	188	24.5	1.3 (0.8-1.8)	0.68 (0.52-0.90)	111	18.3	0.6 (0.5-0.7)	0.46 (0.33-0.64)	122	25.1	0.6 (0.5 - 0.7)	0.97 (0.68 - 1.38)
Undetermined Age	37							4	0.7						

All analysis on age standardized rates was calculated using the Thembisa model except for race group that used Statistics South Africa mid population estimates

1999 female population: Overall: 15,775,803; By Age: 14-29 years: 6,976,810; 30-44 years: 4,564,389; 45-59 years: 2,427,045 & 60 + years: 1,807,559

2009 female population: Overall: 18,982,433; By Age: 14-29 years: 7,960,305; 30-44 years: 5,248,792; 45-59 years: 3,460,820 & 60 + years: 2,312,516

2017 female population: Overall: 21,520,499; By Age: 14-29 years: 7,872,159; 30-44 years: 6,459,190; 45-59 years: 4,195,543 & 60 + years: 2,993,607

2020 female population: Overall: 22,551,381; By Age: 14-29 years: 7,809,187; 30-44 years: 6,944,862; 45-59 years: 4,478,441 & 60 + years: 3,318,891

Age standardized rates were calculated to accounted for undetermined age by multiplying the age standardized rate not accounting for undetermined age with a factor calculated by taking total number of female homicide cases divided by the total number of female homicide cases minus the total number of female homicide cases with undetermined age.

Incidence rate ratio (IRR) is calculated by taking the fractions of the exposed and their total population. The 95% CI (Confidence Intervals) are then adjusted from normal approximation calculation to account for the design effect of the survey.

**Table S3:** Population rates for 1999, 2009, 2017 and 2020/21 for intimate partner femicide and non-intimate partner femicide by race and incidence rate ratios (IRR) of population rate estimates between surveys: weighted and non-imputed data

	1999			2009			IRR of Population Rate Estimates $\frac{2009/1999}{(95\% \text{ CI})}$	2017			IRR of Population Rate Estimates $\frac{2017/2009}{(95\% \text{ CI})}$	2020/21			IRR of Population Rate Estimates $\frac{2020-21/2017}{(95\% \text{ CI})}$
	Intimate Partner Femicide: - weighted = 1349 Non-Intimate Partner Femicide weighted=1335			Intimate Partner Femicide: - weighted = 1024 Non-Intimate Partner Femicide weighted=768				Intimate Partner Femicide: - weighted = 768 Non-Intimate Partner Femicide weighted=604				Intimate Partner Femicide: - weighted = 729 Non-Intimate Partner Femicide weighted=485			
Race group	N	%	Rate per 100000 population (95% CI)	N	%	Rate per 100000 population (95% CI)		N	%	Rate per 100000 population (95% CI)		N	%	Rate per 100000 population (95% CI)	
<b>Intimate Partner Femicide</b>															
African	1023	75.8	8.8 (5.1-12.4)	801	78.4	5.5 (3.8-7.1)	0.62 (0.55-0.71)	649	84.6	3.9 (3.4-4.3)	0.70 (0.61-0.81)	667	91.4	3.7 (3.4 - 4.1)	0.97 (0.83 - 1.13)
Colored	252	18.7	18.3 (2.8-33.9)	173	16.9	9.9 (1.7-18.1)	0.54 (0.41-0.71)	94	12.3	4.8 (3.3-6.3)	0.48 (0.34-0.69)	51	7.0	2.5 (1.8 - 3.2)	0.52 (0.32 - 0.84)
Indian	21	1.5	4.9 (0.0-10.5)	18	1.8	3.4 (0.0-6.8)	0.69 (0.29-1.65)	8	1.0	1.3 (0.2-2.5)	0.40 (0.12-1.26)	0	0	0	0
White	53	4.0	2.7 (0.7-4.7)	28	2.8	1.3 (0.0-2.8)	0.50 (0.26-0.94)	16	2.1	0.8 (0.4-1.2)	0.58 (0.25-1.35)	12	1.6	0.6 (0.4 - 0.7)	0.75 (0.27 - 2.13)
<b>Non-Intimate Partner Femicide</b>															
African	992	75.6	8.5 (4.8-12.2)	582	76.7	4.0 (2.7-5.3)	0.47 (0.41-0.54)	516	85.4	3.1 (2.7-3.4)	0.77 (0.65-0.91)	406	83.7	2.3 (2.1 - 2.5)	0.74 (0.62 - 0.89)
Colored	192	14.6	13.9 (2.2-25.7)	115	15.2	6.6 (1.0-12.2)	0.47 (0.34-0.65)	62	10.2	3.2 (2.4-3.9)	0.48 (0.31-0.74)	69	14.1	3.4 (2.9 - 3.8)	1.07 (0.66 - 1.72)
Indian	13	1.0	3.1 (0.0-6.2)	8	1.0	1.5 (0.0-3.7)	0.49 (0.15-1.68)	0				0	0	0	0
White	116	8.9	5.9 (1.4-10.4)	52	6.8	2.5 (0.8-4.2)	0.42 (0.47-0.66)	27	4.4	1.3 (0.9-1.7)	0.52 (0.27-1.00)	11	2.2	0.5 (0.3 - 0.7)	0.41 (0.15 - 1.08)

For race groups rates: the Statistics South Africa mid population estimates were used as race population was not available for race from the Thembeisa model.  
 1999 female population: Overall: 15,458,162; By race: African: 11,683,651; Colored: 1,375,413; Indian: 424,331 & White: 1,984,767  
 2009 female population: Overall: 19,027,717; By race: African: 14,655,388; Colored: 1,744,521; Indian: 529,557 & White: 2,098,251  
 2017 female population: Overall: 21,501,234; By race: African: 16,862,856; Colored: 1,958,404; Indian: 595,297 & White: 2,084,677  
 2020 female population: Overall: 22,551,381; By race: African: 17,887,689; Coloured: 2,043,141; Indian: 618,770 & White: 2,073,236

Incidence rate ratio (IRR) is calculated by taking the fractions of the exposed and their total population. The 95% CI (Confidence Intervals) are then adjusted from normal approximation calculation to account for the design effect of the survey.

**Table S4:** Age standardised population rates for 1999, 2009, 2017 and 2020/21 for all female murders· intimate partner femicide and non-intimate partner femicide by death mechanism and incidence rate ratios (IRR) of population rate estimates between surveys: weighted and non-imputed data

	1999			2009			IRR of Population rate Estimates: <u>2009/1999</u> (95% CI)	2017			IRR of Population Rate Estimates <u>2017/2009</u> (95% CI)	2020/21			IRR of Population Rate Estimates <u>2020-21/2017</u> (95% CI)
	Intimate Partner Femicide: - weighted = 1349 Non-Intimate Partner Femicide: - weighted=1335			Intimate Partner Femicide: - weighted = 1024 Non-Intimate Partner Femicide: -weighted=768				Intimate Partner Femicide: - weighted = 768 Non-Intimate Partner Femicide: - weighted=604				Intimate Partner Femicide: - weighted = 729 Non-Intimate Partner Femicide: -weighted=485			
	N	%	Rate per 100000 pop (95% CI)	N	%	Rate per 100000 pop (95% CI)		N	%	Rate per 100000 pop (95% CI)		N	%	Rate per 100000 pop (95% CI)	
<b>Firearm deaths</b>															
All female murders	<sup>¥</sup> 1147	33.4	7.2 (2.7-11.7)	462	19.5	2.4 (1.2-3.6)	0.33 (0.29-0.39)	563	23.4	2.6 (2.1-3.1)	1.08 (0.91-1.29)	**897	37.3	4.0 (3.4-4.5)	1.54 (1.33-1.78)
Intimate Partner Femicide	†405	30.6	2.2 (0.9-3.6)	179	17.4	0.9 (0.4-1.4)	0.41 (0.32-0.52)	90	11.8	0.4 (0.3-0.6)	0.44 (0.31-0.63)	137	18.8	0.6 (0.5 - 0.7)	1.50 (1.04 - 2.17)
Non-Intimate Partner Femicide	‡434	33.7	2.9 (0.8-5)	132	17.2	0.7 (0.2-1.2)	0.24 (0.18-0.32)	106	17.6	0.5 (0.3-0.7)	0.71 (0.5-1.02)	101	20.9	0.4 (0.3 - 0.6)	0.80 (0.55 - 1.17)
<b>Stab injury deaths</b>															
All female murders	<sup>¥</sup> 1049	30.5	6.6 (3.1-10.0)	668	28.3	3.5 (2.0-5.0)	0.53 (0.46-0.61)	<sup>¥</sup> 897	37.6	4.1 (3.4-4.8)	<b>1.17 (1.02-1.35)</b>	**743	30.9	3.3 (2.8-3.7)	0.80 (0.70-0.92)
Intimate Partner Femicide	†440	33.3	2.6 (1-4.3)	322	31.5	1.6 (0.9-2.4)	0.62 (0.50-0.75)	‡345	45.0	1.6 (1.2-1.9)	1.00 (0.81-1.23)	307	42	1.3 (1.0 - 1.6)	0.81 (0.66 - 1.01)
Non-Intimate Partner Femicide	‡444	34.4	2.9 (1-4.7)	273	35.5	1.5 (0.7-2.3)	0.52 (0.42-0.64)	257	42.6	1.2 (0.9-1.5)	0.80 (0.63-1.01)	232	47.7	1.0 (0.8 - 1.3)	0.83 (0.65 - 1.07)
<b>Blunt force injury deaths</b>															
All female murders	943	24.9	6.0 (2.5-9.6)	580	24.5	3.1 (1.7-4.5)	0.52(0.45-0.60)	501	20.8	2.3 (1.9-2.8)	0.74 (0.63-0.88)	**472	19.6	2.1 (1.8-2.4)	0.91 (0.77-1.09)
Intimate Partner Femicide	449	33.3	2.6 (1-4.3)	303	29.6	1.5 (0.8-2.3)	0.58 (0.47-0.71)	204	26.5	0.9 (0.7-1.1)	0.60 (0.47-0.77)	204	27.9	0.9 (0.7 - 1.1)	1.00 (0.76 - 1.31)
Non-Intimate Partner Femicide	283	21.2	2.0 (0.5-3.6)	173	22.5	1.0 (0.4-1.7)	0.50 (0.38-0.65)	117	19.3	0.6 (0.3-0.8)	0.60 (0.43-0.83)	83	17.2	0.4 (0.3 - 0.5)	0.67 (0.45 - 0.99)
<b>1999 female population:</b> Overall: 15,775,803 <b>2009 female population:</b> Overall: 18,982,433 <b>2017 female population:</b> Overall: 21,520,499 <b>2020 female population:</b> Overall: 22,551,381															
<sup>¥</sup> N=3439; <sup>¥</sup> N=2387; †N=1322; ‡N=1290; ‡N=766    **N=2409    CI=Confidence Interval															

**Table S5:** Patterns in characteristics of the unknown, intimate and non-intimate perpetrator relationships for 1999, 2009, 2017 & 2020/21 (weighted).

Characteristics	Perpetrator Unknown				Intimate Femicide				Non-Intimate Partner Femicide			
	1999 Weighted count n=612 % (95% CI)	2009 Weighted count n=533 % (95% CI)	2017 Weighted count n=608 % (95% CI)	2020/21 Weighted count n=962 % (95% CI)	1999 Weighted count n=1349 % (95% CI)	2009 Weighted count n=1024 % (95% CI)	2017 Weighted count n=768 % (95% CI)	2020/21 Weighted count n=729 % (95% CI)	1999 Weighted count n=1335 % (95% CI)	2009 Weighted count n=768 % (95% CI)	2017 Weighted count n=604 % (95% CI)	2020/21 Weighted count n=485 % (95% CI)
<b>Age</b>												
Median age (iqr)	37.0 (26.0-51.0)	40.2 (30.0-53.1)	37.0 (28.0-54.0)	41.6(40.9, 42.3)	29.0 (24.0-35.0)	31.0 (24.3-37.9)	30.0 (24.0-37.0)	33.8(33.1, 34.4)	37.0 (27.0-51.0)	41.8 (26.4-59.8)	35.0 (26.0-54.0)	44.4(42.7, 46.0)
<b>Suspected rape-murder: n</b>	541	484	608	962	1322	975	768	729	1290	737	604	485
Suspected rape-murder %	30.0 (17.0-47.1)	28.4 (21.0-37.2)	10.2 (6.8)	13.2(11.3, 15.5)	11.4 (7.9-16.3)	11.1 (8.3-14.5)	2.9 (2.1-4.0)	17.0(14.5, 19.9)	13.2 (8.2-20.6)	28.6 (22.3-35.8)	12.6 (9.3-16.8)	18.4(15.2, 22)
<b>Pregnancy: n</b>	612	533	472	962	1349	1024	590	729	1335	768	417	485
Pregnancy %	2.6 (1.0-6.6)	4.7 (3.0-7.2)	0	0.4(0.2, 0.9)	2.5 (1.1-5.6)	3.6 (2.5-5.3)	0	1.6(1.0, 2.8)	1.1 (0.4-3.3)	3.2 (1.8-5.5)	0.6 (0.3-1.4)	1.7(0.9, 3.2)
<b>Gunshot injury: n</b>	541	533	608	962	1322	1024	768	729	1290	768	604	485
Gunshot injuries %	39.2 (23.9-57.1)	28.4 (21.0-37.1)	38.2 (32.3-44.4)	57.3(54.1, 60.4)	30.6 (21.1-42.1)	17.4 (12.1-24.6)	11.8 (9.6-14.3)	18.8(16.5, 21.3)	33.7 (24.0-44.9)	17.2 (11.6-24.7)	17.6 (15.4-20.0)	20.9(17.9, 24.2)
<b>Stabs injuries: n</b>	541	533	608	962	1322	1024	768	729	1290	768	604	485
Stab injuries %	17.4 (11.7-25.1)	12.1 (7.6-18.7)	25.0 (20.7-29.9)	16.3(14.4, 18.4)	33.3 (26.3-41.1)	31.5 (25.4-38.2)	45.0 (41.2-48.9)	42.0(38.6, 45.5)	34.4 (24.4-46.0)	35.5 (29.2-42.4)	42.6(38.1-47.3)	47.7(44.5, 51.0)
<b>Blunt force injuries: n</b>	612	533	608	962	1349	1024	768	729	1335	768	604	485
Blunt force injuries %	21.7 (11.5-37.3)	17.2 (11.5-24.8)	14.8 (11.5-18.9)	14.2(12.3, 16.4)	33.3 (24.9-42.9)	29.6 (24.0-35.8)	26.5(23.8-29.5)	27.9(25.2, 30.9)	21.2 (15.0-29.2)	22.5 16.9-29.3)	19.3 (15.9-23.3)	17.2(14.5, 20.1)
<b>Undetermined injuries: n</b>	612	533	608	962	1349	1024	768	729	1335	768	604	485
Undetermined injuries %	5.1 (2.4-10.6)	10.9 (5.7-19.7)	2.1 (1.0-4.6)	2(1.6, 2.6)	4.4 (2.4-8.0)	2.6 (1.3-5.3)	1.2 (0.4-3.2)	1.2(0.7, 2.0)	1.6 (0.7-3.9)	0.2 (0.0-1.7)	2.1 (0.9-4.7)	0.6(0.2, 2.2)
<b>Place body found n</b>	612	527	608	962	1349	1021	768	729	1335	762	604	485
Victims home %	33.9(23.7-45.9)	48.4 (41.9-54.9)	49.6 (46.5-52.8)	51.7(50.2, 53.1)	75.0 (69.5-79.8)	66.9 (62.1-71.4)	61.6 (57.7-65.3)	60.1(57.2, 63)	56.9 (48.4-65.0)	58.2 (52.0-64.1)	53.5 (49.5-57.5)	56.9(53.1, 60.6)
Public space %	37.8 (28.8-47.6)	40.7 (34.8-47.0)	38.7 (36.2-41.3)	37.5(35.9, 39.1)	13.8 (9.6-19.5)	24.3 (20.4-28.6)	20.2 (17.7-22.9)	21.5(19.1, 24.1)	23.1 (18.4-28.5)	33.4 (28.6-38.7)	31.3 (27.3-35.7)	31.6(28.6, 34.8)
Other %	28.3 (18.0-41.6)	10.9 (8.0-14.7)	11.7 (9.9-13.7)	10.9(9.3, 12.6)	11.2 (8.0-15.5)	8.8 (6.6-11.5)	18.3 (16.0-20.8)	18.4(16.1, 20.9)	20.1 (14.9-26.4)	8.4 (6.0-11.6)	15.2 (12.8-18.0)	11.5(9.7, 13.6)
Other place body found included: Perpetrators home; someone else's home, workplace, recreational setting/bar/shebeen /educational setting (school/tech/university), unknown												

## **Strobe Check List**

	<b>Item No</b>	<b>Recommendation</b>	<b>Page No</b>
<b>Title and abstract</b>	1	(a) Indicate the study's design with a commonly used term in the title or the abstract	1
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	3
<b>Introduction</b>			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	5
Objectives	3	State specific objectives, including any prespecified hypotheses	6
<b>Methods</b>			
Study design	4	Present key elements of study design early in the paper	7
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	6-7
Participants	6	(a) Give the eligibility criteria, and the sources and methods of selection of participants	6-7
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	7-9
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	7-9
Bias	9	Describe any efforts to address potential sources of bias	8
Study size	10	Explain how the study size was arrived at	6-7
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	7-9
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	10
		(b) Describe any methods used to examine subgroups and interactions	10
		(c) Explain how missing data were addressed	10-11

		(d) If applicable, describe analytical methods taking account of sampling strategy	9-11
		(e) Describe any sensitivity analyses	11
<b>Results</b>			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	Fig 1
		(b) Give reasons for non-participation at each stage	NA
		(c) Consider use of a flow diagram	Fig1
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	NA
		(b) Indicate number of participants with missing data for each variable of interest	Fig1
Outcome data	15*	Report numbers of outcome events or summary measures	NA
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	Results and tables Supplemental file
		(b) Report category boundaries when continuous variables were categorized	NA
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	NA
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Supplementary file
<b>Discussion</b>			
Key results	18	Summarise key results with reference to study objectives	18-19
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	20
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	18-20

Generalisability	21	Discuss the generalisability (external validity) of the study results	National study
<b>Other information</b>			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Done