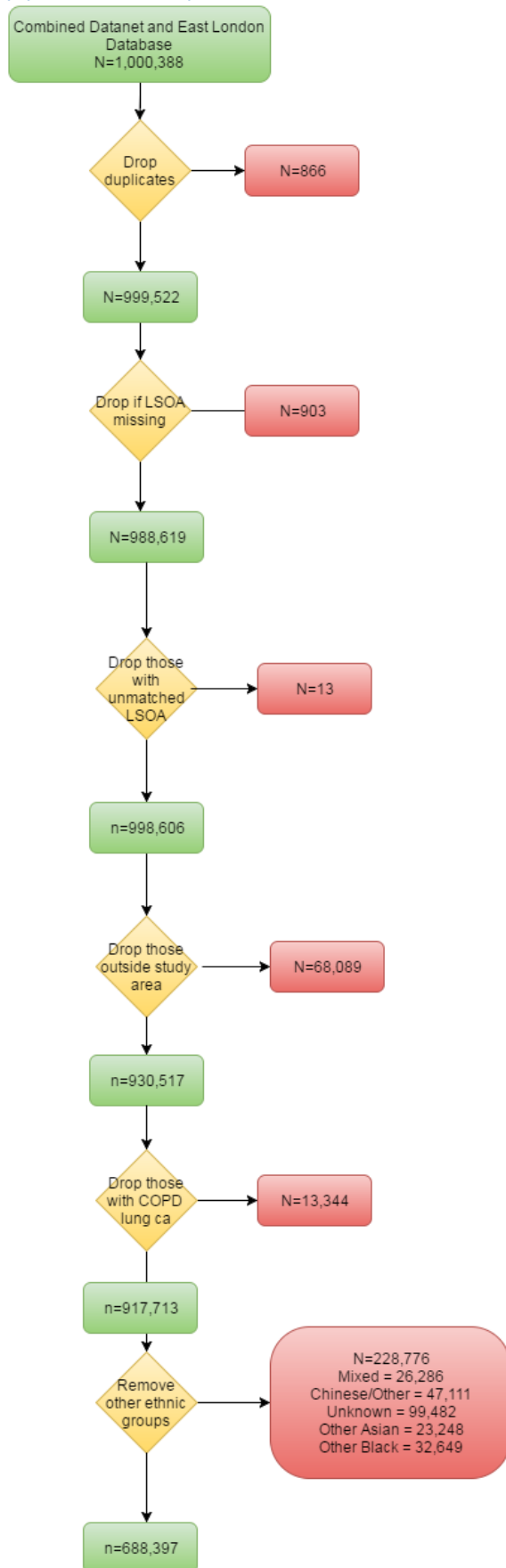


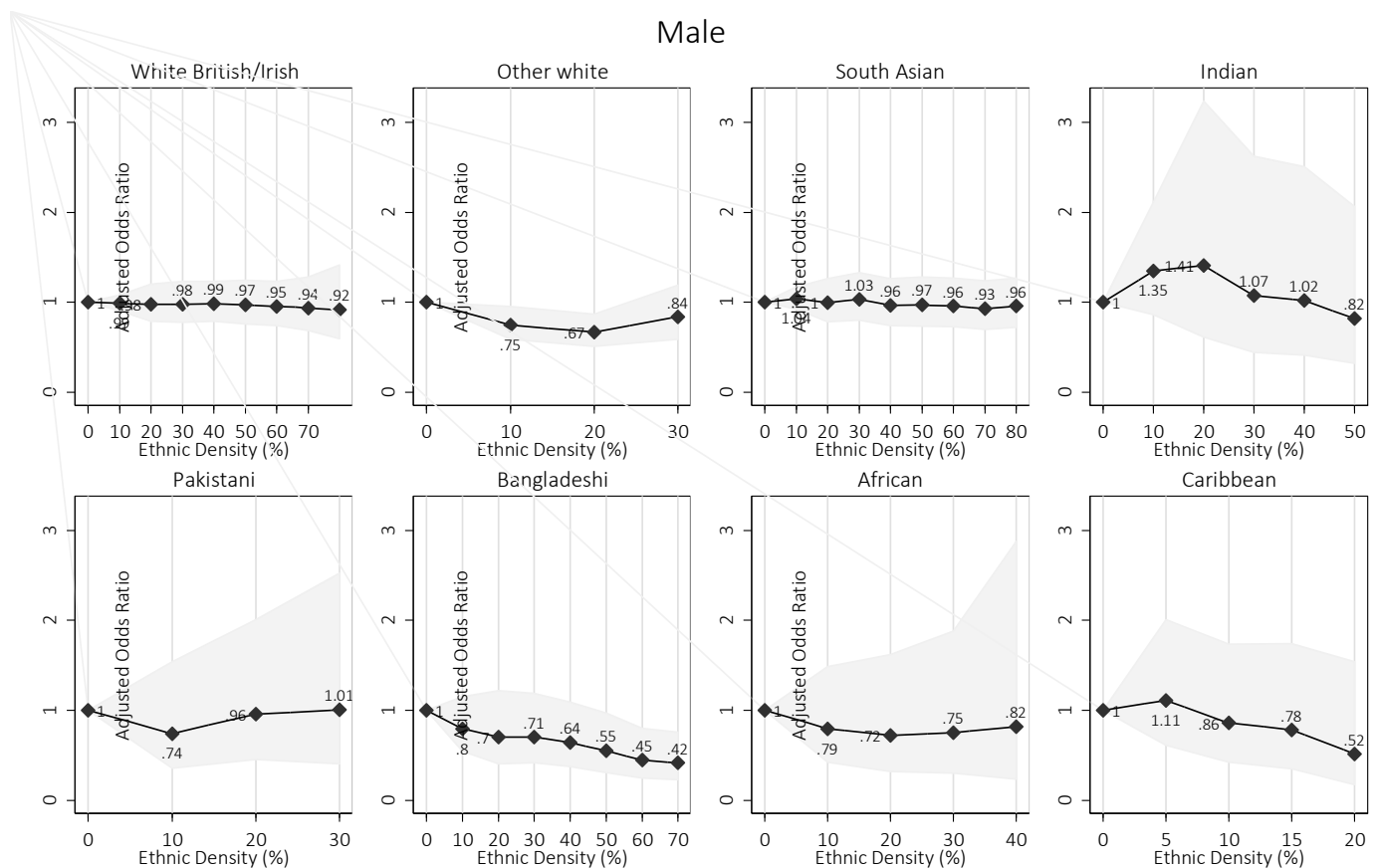
Supplementary files



Supplementary Figure S1: Population Flowchart

Supplementary Table S1. Effect of a 10% in area ethnic density on being a heavy smoker stratified by age group for men

Ethnic Group	Male <=35			Male >35		
	OR	95% CI	p. val	OR	95%	p. val
white British & Irish	1.01	(0.89-1.14)	0.100	1.00	(0.95-1.04)	0.889
other white	0.79	(0.92-1.01)	0.056	0.94	(0.82-1.08)	0.373
Indian	0.85	(0.57-1.26)	0.429	0.84	(0.68-1.03)	0.096
Pakistani	0.10	(0.65-1.53)	0.992	1.11	(0.82-1.51)	0.492
Bangladeshi	0.87	(0.78-0.96)	0.009	0.90	(0.52-0.98)	0.018
African	1.03	(0.44-2.40)	0.949	0.92	(0.65-1.31)	0.655
Caribbean	0.78	(0.22-2.80)	0.706	0.68	(0.40-1.16)	0.155



Supplementary Figure S2. Non-linear relationship between own-group ethnic density and the odds of being a high intensity smoker, by ethnic group for males only.

Supplementary Table S2. Read codes for smoking status

Read clinical term	Category	Read clinical code
Exposed to tobacco smoke at home	Unknown	137I0
Total time smoked	Unknown	137n
Refusal to give smoking status	Unknown	137k
Tobacco consumption unknown	Unknown	137E
Current non-smoker	Unknown	137L
Passive smoker	Unknown	137I
Cigarette pack-years	Unknown	137g
Not a passive smoker	Unknown	137U
Admitted tobacco cons untrue?	Unknown	137D
Ex-tobacco chewer	Unknown	137i
Waterpipe tobacco consumption	Unknown	137o
Chews tobacco	Unknown	137W
Very heavy smoker - 40+cigs/d	Current Smoker	1376
Thinking about stop smoking	Current Smoker	137c
Tobacco consumption	Current Smoker	137
Smoking started	Current Smoker	137Q
Rolls own cigarettes	Current Smoker	137M
Smoking reduced	Current Smoker	137V
Cigar consumption	Current Smoker	137Y
Reason for restarting smoking	Current Smoker	137f
Cigarette smoker	Current Smoker	137P
Cigar smoker	Current Smoker	137J
Tobacco consumption NOS	Current Smoker	137Z
Trying to give up smoking	Current Smoker	137G
Light smoker - 1-9 cigs/day	Current Smoker	1373
Heavy smoker - 20-39 cigs/day	Current Smoker	1375
Min from wake to 1st tobac con	Current Smoker	137h
Smoking restarted	Current Smoker	137e
Not interested in stop smoking	Current Smoker	137d
Pipe tobacco consumption	Current Smoker	137a
Current smoker	Current Smoker	137R
Ready to stop smoking	Current Smoker	137b
Pipe smoker	Current Smoker	137H
Trivial smoker - < 1 cig/day	Current Smoker	1372
Failed attempt to stop smoking	Current Smoker	137m
Keeps trying to stop smoking	Current Smoker	137C
Cigarette consumption	Current Smoker	137X
Moderate smoker - 10-19 cigs/d	Current Smoker	1374
Ex-heavy smoker (20-39/day)	Ex-smoker	137A
Date ceased smoking	Ex-smoker	137T
Ex-smoker	Ex-smoker	137S
Stopped smoking	Ex-smoker	137K
Ex cigar smoker	Ex-smoker	137O

Ex-trivial smoker (<1/day)	Ex-smoker	1377
Ex-smoker - amount unknown	Ex-smoker	137F
Ex-moderate smoker (10-19/day)	Ex-smoker	1379
Ex-very heavy smoker (40+/day)	Ex-smoker	137B
Ex roll-up cigarette smoker	Ex-smoker	137I
Recently stopped smoking	Ex-smoker	137K0
Ex-light smoker (1-9/day)	Ex-smoker	1378
Ex pipe smoker	Ex-smoker	137N
Ex-cigarette smoker	Ex-smoker	137j
Never smoked tobacco	Never Smoked	1371

Supplementary Table S3. Read codes for COPD and lung cancer

Read clinical term	Read clinical code
COPD	
Chronic obstr.airway dis.NOS	H3z..
Other emphysema NOS	H32yz
Other chronic bronchitis	H31y.
Giant bullous emphysema	H3202
Emphysematous bronchitis	H3121
Chronic obstr.airway dis.OS	H3y..
Chronic asthmatic bronchitis	H3120
Mild chron obstr pulm disease	H36..
Emphysema NOS	H32z.
Chronic bronchitis	H31..
Centrilobular emphysema	H322.
MacLeod's unilateral emphysema	H32y2
Obstructive chr.bronchitis NOS	H312z
Obstructive chronic bronchitis	H312.
Chronic catarrhal bronchitis	H3100
Segmental bullous emphysema	H3200
Chronic bullous emphysema NOS	H320z
Chr obs pulm dis+ac exac,unspc	H3y1.
Emphysema	H32..
Zonal bullous emphysema	H3201
Mucopurulent chr.bronchitis	H311.
Chronic bronchitis NOS	H31z.
Bullous emphysema + collapse	H3203
Very severe COPD	H39..
Chronic bullous emphysema	H320.
Sev chron obstr pulm disease	H38..
Simple chronic bronchitis	H310.
Other emphysema	H32y.
Chr obs pulm dis+ac I resp inf	H3y0.
Mod chron obstr pulm disease	H37..
Chronic obstructive pulm.dis.	H3...
Lung cancer	
Mesothelioma of pleura	B232.
2-malig neop lung	B570.
Malig neop upper lobe of lung	B2221
Malig neop main bronchus	B221.
Malig neop upp lobe bronc/lung	B222.
Malig neop overlap resp/thc org	B26..
Malig neop low lobe bronc/lung	B224.
Malig neop low lobe bronc/lung	B224z
Malig neop trachea/bronch/lung	B22..
Malig neop bronchus/lung NOS	B22z.

Malig neop upper lobe bronchus	B2220
Malig neop lower lobe of lung	B2241
Mesothelioma	B226.
