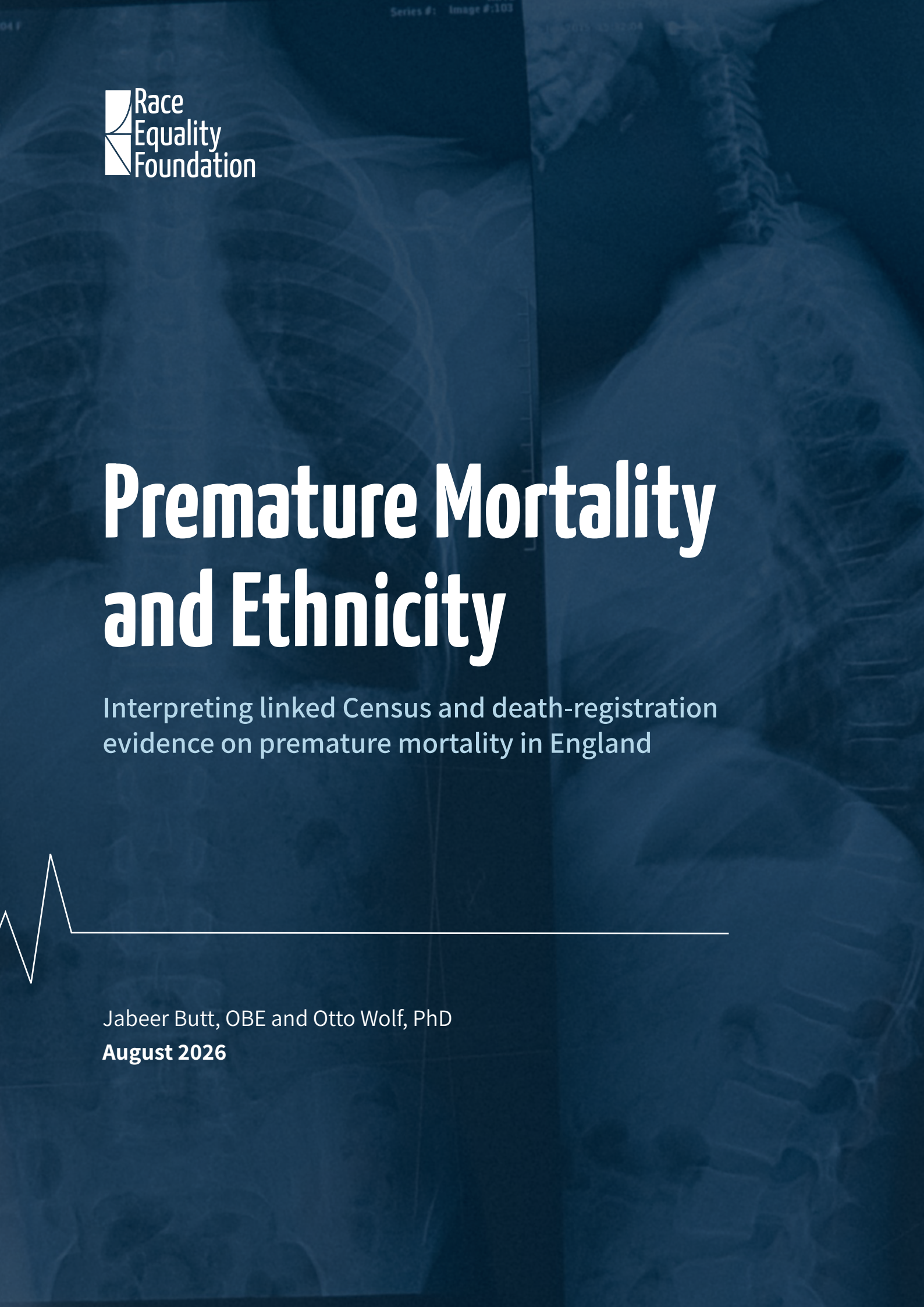


Race Equality Foundation

Premature Mortality and Ethnicity

Interpreting linked Census and death-registration evidence on premature mortality in England

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Key points

- The Office for National Statistics (ONS), funded by the Health Foundation, has linked self-reported ethnicity from the 2021 Census to death registrations. This is an important step forward in addressing longstanding gaps in mortality evidence by ethnicity, country of birth and socioeconomic circumstances.
- Premature mortality - death before age 75 - varies substantially by ethnic group and sex. Chinese women and men have the lowest observed rates; White British and Black Caribbean women have the highest female rates, and Black Caribbean men have the highest male rate.
- People born outside the UK generally have lower observed premature mortality rates than UK-born people of the same ethnicity, although the size and statistical significance of the difference vary. Among UK-born populations, some minoritised ethnic groups have higher rates than UK-born White British people. Country of birth does not identify migrant status or migration generation.
- Premature mortality rates are generally higher in more deprived areas, but the gradient varies by ethnic group. It is particularly steep among White British people and weaker and less precisely estimated among Bangladeshi and Black African populations.
- Substantial inequalities in premature mortality exist by education, occupation and area-level deprivation. After these and other measured factors are taken into account, most ethnic groups continue to have lower estimated rates than the White British group, but the comparisons move in different directions. Further analysis is needed to understand the interplay of socioeconomic circumstances and migration.
- Reducing premature mortality requires population-wide action on poverty, education, employment, housing and neighbourhood conditions, alongside action on the racialised barriers that shape access to these resources and effective healthcare. The higher observed rates among some UK-born minoritised populations, compared with people of the same ethnicity born outside the UK, also warrant preventive attention without being treated as evidence of generational decline.

"People born outside the UK generally have **lower observed premature mortality rates** than UK-born people of the same ethnicity."

Introduction

The COVID-19 pandemic exposed the consequences of not having timely mortality data disaggregated by ethnicity. Black, Asian and minoritised ethnic communities raised concerns early (Butt, 2020), but the scale of unequal illness and death was recognised slowly because routine mortality records did not contain ethnicity. When linked analyses confirmed markedly higher COVID-19 mortality in many minoritised groups (Public Health England, 2020; Kenway and Butt, 2020; Office for National Statistics, 2020), the findings prompted a politically charged debate about exposure, underlying health conditions, access to care, and whether the policy response to COVID-19 was protecting everyone equitably (Oskrochi et al., 2023).

Those debates sit within wider evidence showing ethnic inequalities in health, healthcare and the conditions in which people live and work. Poverty (Marmot et al., 2020), insecure or poor-quality employment (Walcott and Nightingale, 2025), unsuitable housing (de Noronha, 2019), discrimination and unequal access to services are socially patterned, and structural racism shapes exposure to many of them (Kapadia et al., 2022; Stopforth et al., 2023).



> "Poverty, insecure or poor-quality employment, unsuitable housing, discrimination and unequal access to services are socially patterned, and structural racism shapes exposure to many of them."

To address these data gaps, ONS has increasingly linked Census self-reported ethnicity to death registrations (ONS, 2021 and 2023b). Funded by the Health Foundation, the present analysis uses linked 2021 Census data to examine how premature mortality varies by ethnicity, country of birth and socioeconomic circumstances. Its headline finding may initially appear counter-intuitive when set against wider evidence of poorer health and healthcare experiences among some minoritised ethnic populations, although patterns vary considerably by condition and outcome (Kapadia et al., 2022; Walcott and Nightingale, 2025). However, it is consistent with earlier mortality research: after differences in age profile are taken into account, most minoritised ethnic groups have lower premature mortality rates than the White British population. Similar life-expectancy findings have attracted caution because migration, missing follow-up and linkage assumptions can bias some estimates (Taylor et al., 2024, 2026). The shorter follow-up reduces the period over which unrecorded emigration can affect the findings, but it does not eliminate this concern.

Mortality is a distinctive population outcome. It reflects age, migration history, socioeconomic position, disease incidence, healthcare and cumulative exposure across the life course. Patterns of ethnic inequality in mortality need not match patterns in morbidity, self-reported health or healthcare experience, so these measures should be interpreted together. This report therefore asks how the ONS mortality findings should be understood, rather than treating them as a verdict on whether ethnic health inequalities exist.

The ONS analysis covers adults aged 18 to 74 living in England who completed the 2021 Census and follows deaths registered from March 2021 to December 2023. It reports sex-specific premature mortality rates using three models:

1. a first model describing differences in the risk of premature mortality across ethnic groups, adjusting for differences in age profile
2. a second model describing differences in the risk of premature mortality across ethnic groups by deprivation level or by place of birth (UK vs non-UK born), adjusting for differences in age profile
3. a third model describing the independent association of ethnic groups with premature mortality, adjusting for differences in age profile, place of birth, education level, occupation type, deprivation level and the Upper Tier Local Authority they live in.

The supporting reference tables were supplied by ONS for this project. The narrative focuses principally on statistically significant findings. Selected point estimates are discussed where they help explain the shape of a pattern or the uncertainty around it. This report is published alongside a Health Foundation analysis of the same data that focuses on socioeconomic inequalities in premature mortality.

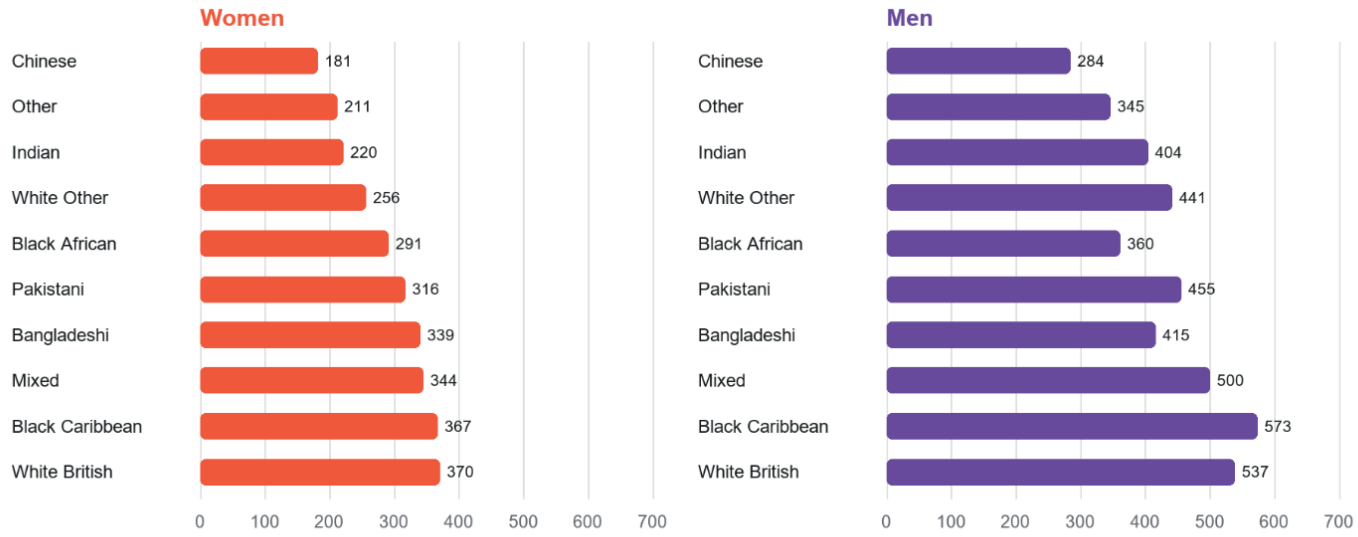
The analysis is observational and covers a period overlapping the later stages of the COVID-19 pandemic and its aftermath. It cannot identify the direct or indirect effects of the pandemic on the reported inequalities.



Premature mortality rates vary by ethnic group

Figure 1 presents the headline pattern that the rest of the report seeks to interpret. Men have higher rates than women in every ethnic group. Variation within each sex is substantial but does not follow a simple White British-versus-minoritised pattern.

Figure 1. Age-adjusted premature mortality rates by ethnic group and sex



Note: Rates are adjusted to take account of differences in age profiles and are expressed as deaths per 100,000 population. The ONS source tables include 95% confidence intervals, which are omitted here for readability.

Chinese women and men have the lowest observed rates. White British and Black Caribbean women have similarly high rates, while Black Caribbean men have the highest male rate. Understanding these differences requires more than ranking ethnic groups: populations have different migration histories, socioeconomic circumstances and cumulative exposures to racism, which interact to shape mortality. As Bécares (2025) argues, ethnicity matters for health not because it is inherently harmful but because it can capture how identities are racialised and social inequalities become embodied. The findings reinforce the need for disaggregated ethnicity data interpreted through the social processes producing unequal risk. Detailed rates are presented in Appendix Table 1.

> "Populations have different migration histories, socioeconomic circumstances and cumulative exposures to racism, which interact to shape mortality."

Premature mortality rates differ by country of birth within ethnic groups

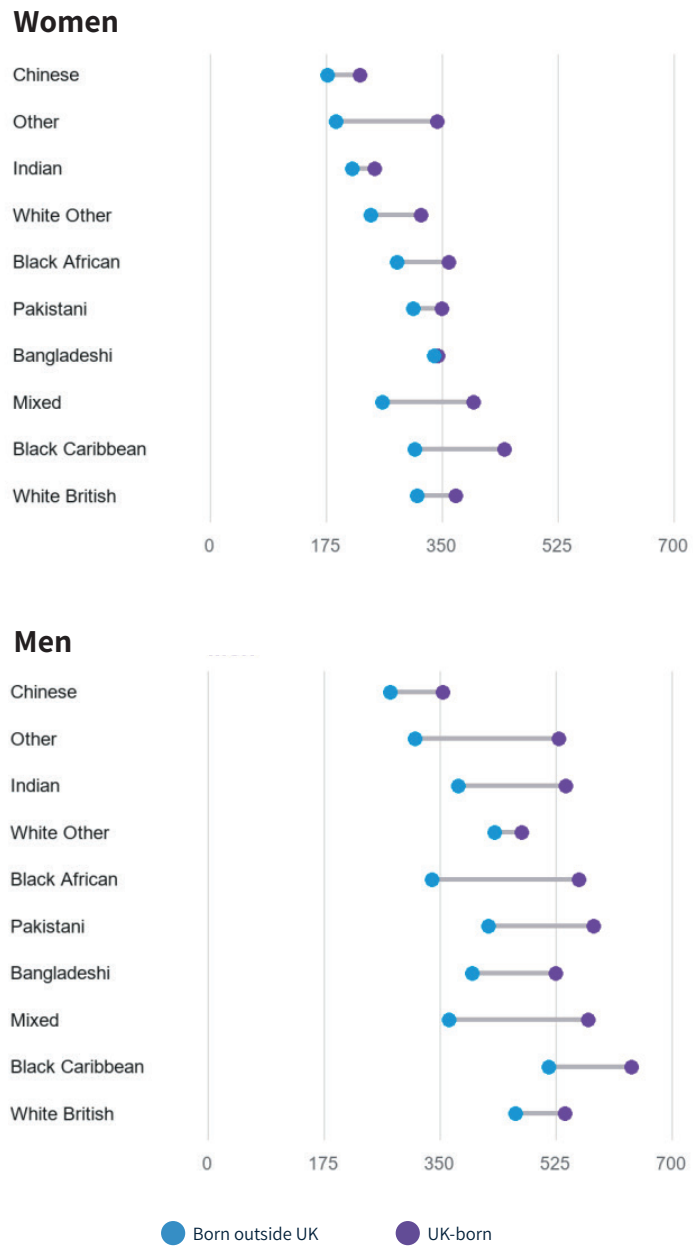
Country of birth changes how the overall ethnic pattern is understood. People born outside the UK generally have lower observed premature mortality rates than UK-born people of the same ethnicity, although the size and statistical significance of the difference vary.

Among men, the observed rate was significantly lower for those born outside the UK in every ethnic group except Chinese. Among women, the differences were smaller and were not statistically significant for Bangladeshi, Pakistani and Chinese groups; clearer differences were observed in the other groups. Among UK-born populations, some minoritised groups had higher point estimates than UK-born White British people. The comparison also reveals diversity within White populations: White Other people have lower rates than White British people overall, but both groups have lower rates among those born outside the UK. Detailed rates are provided in Appendix Table 2.

Country of birth is not the same as current migrant status. The variable identifies whether someone was born inside or outside the UK, but it does not show when or why they moved, their length of residence, citizenship or migration generation. UK-born people may be children or later descendants of migrants, but the tables do not distinguish those generations. Country of birth is therefore best treated as a broad indicator of migration and life-course history, not as a precise measure of migrant status.

> "People born outside the UK generally have lower observed premature mortality rates than UK-born people of the same ethnicity."

Figure 2. Premature mortality by ethnic group, sex and country of birth



Note: Ethnic groups follow the order used in Figure 1 in both panels to support comparison across figures and between women and men. Rates are deaths per 100,000 population. The ONS source tables include 95% confidence intervals, which are omitted here for readability.

Several mechanisms could contribute to the observed differences. People who move country may be positively selected for health and resources; early-life environments, health behaviours and social networks may differ; and UK-born populations may have had longer cumulative exposure to conditions in the UK, including disadvantage and racism. For minoritised ethnic populations, wider evidence shows how racism shapes unequal exposure to social conditions and healthcare (Bignall et al., 2019; Walcott and Nightingale, 2025). Asthma UK (2018) reported lower asthma incidence among Black, Asian and other minoritised ethnic people born outside the UK than among those born in the UK. Other UK studies have reported generational differences in smoking, alcohol consumption, diet and obesity, although their direction and statistical strength vary by behaviour and ethnic group (Smith et al., 2012; Wang and Li, 2019). These observational comparisons cannot establish that migration or cultural change caused the differences. Health behaviours are themselves shaped by socioeconomic circumstances, discrimination, neighbourhood environments and commercial influences. This wider evidence cannot explain the all-cause mortality results, but it reinforces the need to investigate country-of-birth patterns without treating them as proof of cultural assimilation or generational deterioration.

> "UK-born populations may have had longer cumulative exposure to conditions in the UK, including disadvantage and racism."

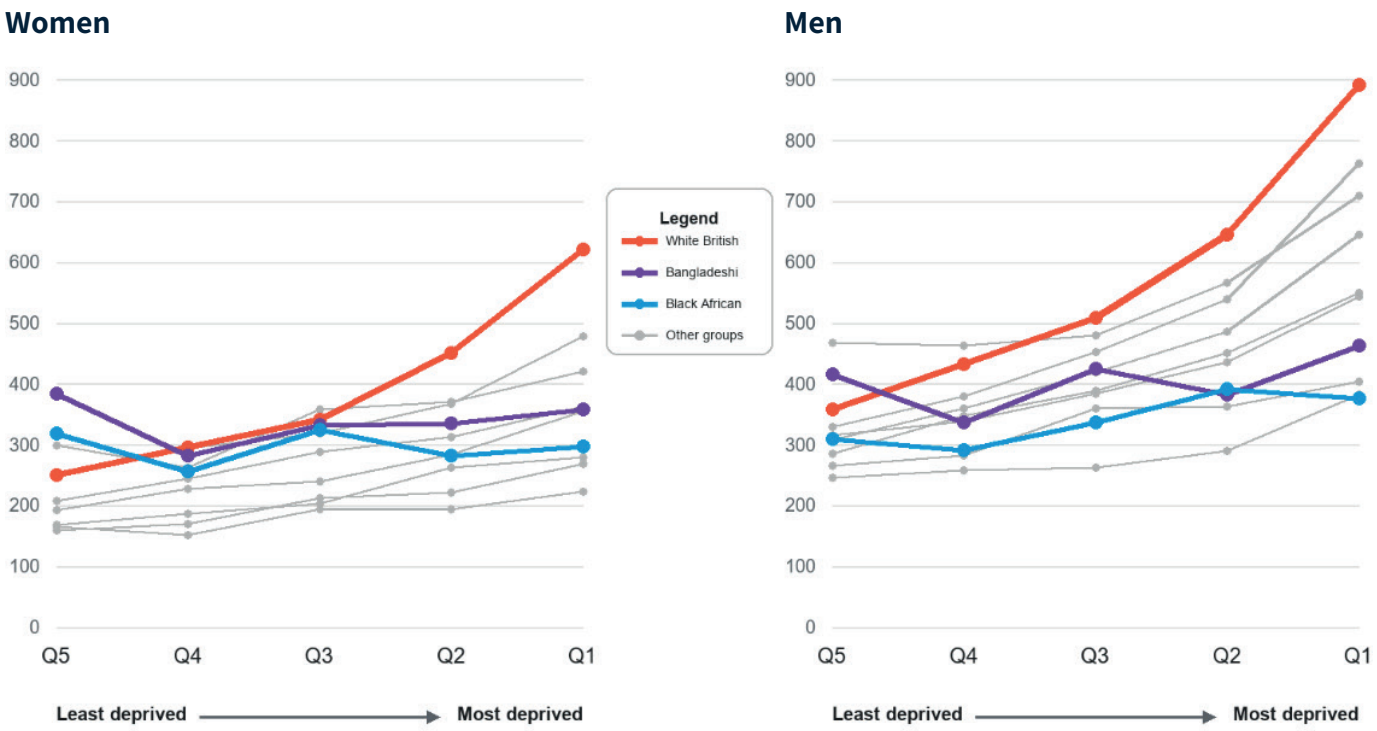


Deaths occurring after emigration will not appear in England and Wales death registrations. Selective return migration, including among migrants experiencing ill health or difficulties settling in the destination country, could therefore lower observed mortality among some people born outside the UK. However, Aldridge et al. (2018) found an overall mortality advantage among international migrants across most causes of death and concluded that selective return migration and continued inclusion of people who had left the destination country are likely to contribute to, but do not fully account for, this advantage. Taylor et al. (2024, 2026) nevertheless demonstrate that ethnicity-specific life-expectancy estimates can be highly sensitive to assumptions about emigration and deaths occurring abroad, particularly for populations with greater international mobility. The present analysis follows registered premature deaths over a shorter period, reducing but not eliminating the opportunity for migration-related bias. It cannot determine how far the observed differences reflect health selection, migration history, social conditions or unrecorded deaths abroad. The defensible conclusion is that mortality patterns differ substantially by country of birth, not that migration causes a uniform health advantage or that health necessarily deteriorates across generations.

Deprivation gradients differ between ethnic groups

Overall mortality rates can conceal substantial socioeconomic inequalities within ethnic groups. Figure 3 shows premature mortality across all five deprivation quintiles, enabling the shape and consistency of the gradient to be compared rather than inferred from the two endpoints alone.

Figure 3. Premature mortality across all deprivation quintiles, by ethnic group and sex



Note: Q1 is the most deprived quintile and Q5 the least deprived. White British is shown in orange, Bangladeshi in purple and Black African in blue; all other ethnic groups are shown in grey. Lines join the published estimates for all five quintiles. The ONS source tables include 95% confidence intervals, which are omitted here for readability.

"Bangladeshi and Black African women have higher point estimates than White British women."

Premature mortality rates rise with deprivation for most ethnic groups, but the gradients differ markedly. White British women and men show the clearest monotonic increase, with rates rising particularly sharply between the second-most and most deprived quintiles. Between the least and most deprived quintiles, the observed rate increased from 249 to 622 deaths per 100,000 among White British women and from 358 to 892 among White British men. For both sexes, the rate in the most deprived quintile was 2.49 times the rate in the least deprived quintile - around 149% higher. This very high rate in the most deprived White British population contributes to the comparatively high overall White British rate, although the published tables do not provide the population weights needed to quantify how much.



The comparison also changes at the least deprived end. In the least deprived quintile, Bangladeshi and Black African women have higher point estimates than White British women, while Black Caribbean men have a higher point estimate than White British men. Some of these estimates are imprecise, so they should not be treated as firm evidence of a different ordering. Their value is to show that the headline ethnic pattern is partly shaped by populations' different distributions across deprivation levels, rather than reflecting a fixed mortality hierarchy.

Bangladeshi and Black African populations show flatter and less consistent patterns across the deprivation quintiles, particularly among women. Some estimates in less deprived quintiles have wide confidence intervals and high coefficients of variation, reflecting smaller numbers. Small rises and falls between adjacent quintiles should not be interpreted as protective or harmful effects of particular deprivation levels. The defensible finding is that the published gradient is weaker and less precisely estimated for these groups. The five-quintile rates are presented in Appendix Table 3.

"Smoking, physical inactivity and obesity were all more common in more deprived areas."

Risk factors not included in the ONS analysis may contribute to differences in the observed deprivation gradients. The Health Survey for England 2024 found that smoking, physical inactivity and obesity were all more common in more deprived areas. For example, 17% of adults in the most deprived areas smoked compared with 7% in the least deprived, while 41% were physically inactive compared with 22% to 24% in the three least deprived quintiles. Overweight or obesity was also more prevalent in the most deprived areas (77%) than in the least deprived (65%) (NHS England, 2026).

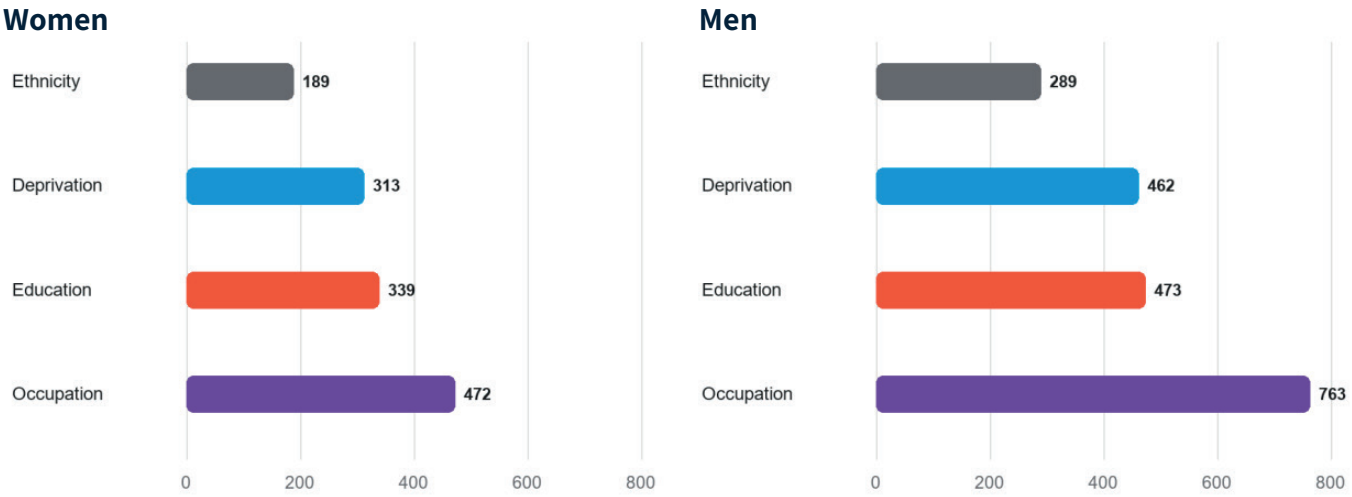
These risks are also patterned by ethnicity. The Health Foundation reports substantial differences in smoking prevalence between ethnic groups, ranging from 14.8% among people in Mixed and Other ethnic groups to 5.6% among Chinese people (Health Foundation, 2025). However, these sources examine differences by deprivation and ethnicity separately; they do not establish how deprivation gradients in risk-factor prevalence vary within each ethnic group or how far they explain the mortality gradients reported here. Agarwal et al. (2023) provide the wider interpretive context: inequalities in diabetes risk, complications and mortality arise through pathways in which structural racism shapes socioeconomic position, access to resources, healthcare and other social determinants. Risk factors should therefore not be treated solely as individual behaviours. Their distribution and health consequences are socially patterned, and analyses combining ethnicity, deprivation and individual risk factors are needed to understand why mortality gradients differ between groups. These ethnic-group prevalence estimates also combine people with different countries of birth and migration histories. They therefore cannot confirm or refute the generational patterns discussed in Section 3.

Area deprivation describes neighbourhood circumstances rather than individuals' resources or socioeconomic experiences across the life course. Differences in gradient steepness may reflect migration histories, residential patterns, socioeconomic composition and other unmeasured exposures; they should not be interpreted as evidence of biological differences in susceptibility to deprivation.

Wider socioeconomic gradients help explain why adjustment matters

The variables included in the adjusted models represent large mortality inequalities in their own right. Figure 4 compares the range of age-adjusted premature mortality rates across ethnicity, deprivation, education and occupational socioeconomic position.

Figure 4. Absolute premature mortality gradients across ethnicity and socioeconomic domains



Note: Bars show the absolute difference in deaths per 100,000 between the lowest and highest published category within each domain. These are marginal age-adjusted rates rather than mutually adjusted estimates. The ONS source tables include 95% confidence intervals, which are omitted here for readability.

Occupation has the largest observed absolute gradient for both sexes. Among men, the premature mortality rate was 1,069 deaths per 100,000 for those who had never worked or were long-term unemployed, compared with 306 among those in higher managerial, administrative and professional occupations. This represents an absolute difference of 763 deaths per 100,000, with the former rate 250% higher than the latter. Large gradients were also evident for education and deprivation. Among women, the rate for those with no qualifications was 564 deaths per 100,000, compared with 225 among those with a degree or higher - an absolute difference of 339 and a rate 151% higher. Among men, the rate in the most deprived areas was 815, compared with 353 in the least deprived - an absolute difference of 462 and a rate 131% higher. These absolute gradients are all larger than the observed range between ethnic groups. Appendix Table 4 provides the corresponding endpoints, absolute differences and ratios for both sexes.

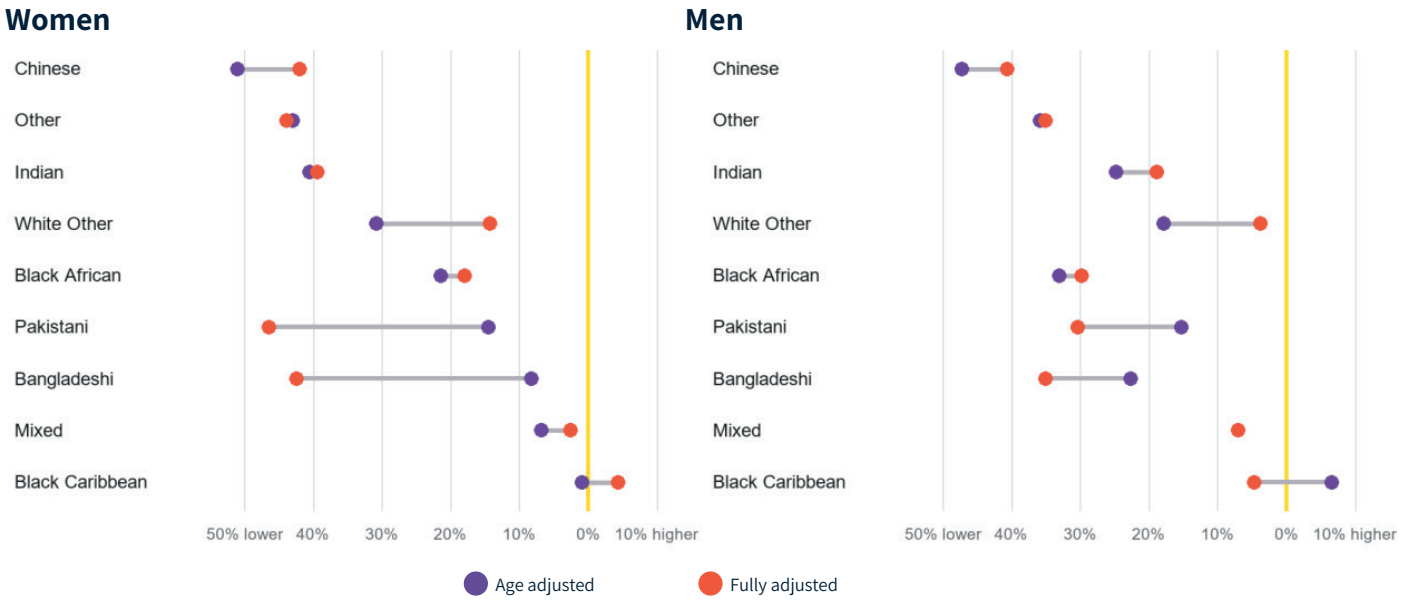
These are descriptive comparisons, not estimates of causal importance. The domains use different categories, the rates are not mutually adjusted, and poor health may itself contribute to long-term unemployment. The analysis cannot show that occupation causes a larger share of premature mortality than ethnicity or apportion an ethnic difference among pathways.

Its value is interpretive. Adjustment accounts for social and economic circumstances that are strongly associated with premature death. Those circumstances are not distributed randomly: access to education, secure and good-quality work, adequate income and less deprived neighbourhoods is shaped by institutions, public policy and discrimination. Ethnicity and socioeconomic disadvantage should therefore not be treated as competing explanations. The comparison helps explain why adjustment can materially reshape ethnic differences and why action on racial inequality must include the wider determinants of health.

How ethnic comparisons change after adjustment

Figure 5 compares age-adjusted estimates with estimates from models additionally adjusted for country of birth, qualifications, occupational socioeconomic position, area deprivation and local authority. These factors enter the model simultaneously. The figure expresses each estimate as the percentage by which the rate is higher or lower than the White British reference rate. The movements show how comparisons change after adjustment; they do not identify which factor produced the change or establish causal effects.

Figure 5. Percentage difference in premature mortality rates compared with White British, before and after adjustment



Note: Ethnic groups follow the order used in Figure 1; White British is represented by the zero-reference line. Negative values are lower and positive values higher than the reference. Incidence rate ratios have been converted to percentage differences for accessibility. Where estimates are almost identical, the markers overlap. The ONS source tables include 95% confidence intervals, which are omitted here for readability.

After adjustment, most ethnic groups continue to have lower estimated premature mortality rates than White British people, but the comparisons move in different directions. The largest narrowing occurs among White Other people: the estimated difference falls from 31% to 14% lower among women and from 18% to 4% lower among men. By contrast, the differences widen among Pakistani and Bangladeshi people, particularly women. The estimated rate for Pakistani women changes from 15% to 46% lower than the White British rate, while that for Bangladeshi women changes from 8% to 42% lower. Black Caribbean estimates remain close to the White British rate. The complete estimates, including results for men and information about statistical significance, are provided in Appendix Table 5.

> "Adjustment reshapes comparisons differently because social, economic, migration and geographic circumstances differ between groups."

Interpreting these changes and the differences remaining after adjustment is challenging because many factors are at play, including some that have not been captured in the analysis. The models do not directly measure racism, while some included variables may themselves be shaped by discrimination and structural racism. Neither the change following adjustment nor the remaining difference can therefore be labelled the 'effect of racism'. The robust conclusion is that adjustment reshapes comparisons because the social, economic, migration and geographic profiles of the populations differ.



Discussion

What the analysis shows

The headline finding is that almost all minoritised ethnic groups have lower age-adjusted premature mortality than the White British population. Black Caribbean people are the exception to this general pattern: women have a similar observed rate to White British women, while men have a higher rate than White British men. This is not a single 'mortality paradox' requiring one universal explanation. It is the aggregate result of different country-of-birth profiles, socioeconomic circumstances and patterns of mortality within ethnic groups. Disaggregating the results reveals much of the complexity concealed by overall averages.

People born outside the UK generally have lower observed premature mortality rates than UK-born people of the same ethnicity, although the magnitude and statistical significance of the difference vary. These cross-sectional comparisons may reflect health selection, early-life circumstances, social and cultural factors, cumulative exposure to conditions in the UK and unrecorded deaths abroad. They do not show that health deteriorates from one generation to the next. Country of birth therefore contributes to understanding the headline result but does not identify a single or necessarily causal 'healthy migrant effect'.

Socioeconomic circumstances provide a second part of the explanation. Premature mortality rises with deprivation in most ethnic groups, but the strength of this relationship differs. The particularly steep gradient among White British people and their very high mortality in the most deprived areas contribute to the comparatively high overall White British rate. Education and occupational position are also associated with large mortality differences. These findings show that ethnic-group averages conceal substantial socioeconomic variation within groups.

The adjusted models bring these dimensions together. Some ethnic comparisons narrow after the measured factors are taken into account, while others widen. Most minoritised ethnic groups continue to have lower estimated rates than the White British group. This pattern shows that ethnic-group averages are composed of populations with different country-of-birth, deprivation, education, occupational and geographic profiles. Differences remaining after adjustment may reflect other factors not included in the analysis and limitations in how included variables capture complex social and economic circumstances.



Understanding ethnicity, racialisation and mortality

Ethnicity remains necessary for identifying population differences, but it should not be treated as an intrinsic risk factor or as the explanation for those differences. As Bécares (2025) argues, ethnicity can capture how identities are racialised and how social inequalities become embodied. Different ethnic groups have distinct histories and experiences of migration, discrimination, socioeconomic disadvantage and access to resources. These processes can produce different mortality profiles even among populations grouped together under broad labels such as “ethnic minority” or “White”.

The findings therefore support the continued collection and analysis of disaggregated ethnicity data but also demonstrate the limits of ethnic categories used without social context. Broad aggregation would conceal the low observed mortality of some groups, the comparatively high mortality of Black Caribbean people, the contrasting profiles of White British and White Other populations, and important differences by sex and country of birth. Conversely, presenting a ranking of disaggregated groups without examining the processes behind it risks treating ethnicity itself as the cause.

Racism can affect health directly through discrimination and its psychological and physiological consequences. It can also operate indirectly by shaping access to education, employment, income, housing, safer neighbourhoods and effective healthcare. The large mortality gradients associated with these conditions help explain why they are central to interpreting ethnic differences. Adjustment for socioeconomic circumstances should not therefore be understood as removing racism from the analysis: some of the variables being adjusted for may represent pathways through which racial inequality is produced.

> The large mortality gradients associated with these conditions help explain why they are central to interpreting ethnic differences.”

All-cause premature mortality nevertheless captures only one dimension of population health. Persistent ethnic inequalities have been documented across physical and mental health, healthcare, employment, income, housing and neighbourhood conditions (Bignall et al., 2019; Walcott and Nightingale, 2025).. It shows that mortality, morbidity and experiences of healthcare may follow different population patterns and should not be treated as interchangeable measures of equity. Existing ONS cause-specific analyses should therefore be read alongside these results, because a comparatively low all-cause rate can coexist with elevated risk from particular conditions (Office for National Statistics, 2021, 2023b).

Strengths, limitations and evidence priorities

The COVID-19 pandemic exposed the consequences of not having timely, reliable mortality data disaggregated by ethnicity. Linking self-reported Census ethnicity to death registrations is therefore an important step forward, providing broad population coverage and enabling premature mortality to be examined alongside country of birth and socioeconomic circumstances. Since September 2024, ethnicity has also been added to the medical certificate of cause of death in England and Wales (Office for National Statistics, 2025). This could improve the timeliness of future evidence, although the completeness and consistency of the new field will need to be assessed. The short follow-up in the present analysis reduces the likelihood of unrecorded emigration affecting the findings, although it does not completely remove this concern.



Important uncertainties remain. The analysis is observational and covers deaths registered during a particular period which overlaps with the later stages of the COVID-19 pandemic. Area deprivation cannot capture household resources, individual experiences or socioeconomic circumstances accumulated across the life course. Country of birth does not identify migration generation, reason for migration or length of residence. Linkage quality may vary by ethnicity, and the small size of some population groups means their mortality rates are imprecise estimates. These limitations may influence the observed differences but do not provide sufficient grounds for dismissing them.

The published ONS outputs also include regional estimates, but these are not analysed here because small population and death counts result in wide confidence intervals for many ethnicity-by-region combinations. This does not imply that place is unimportant; it means that detailed regional comparisons cannot be interpreted reliably from the published estimates.

Future analysis should first strengthen confidence in the underlying estimates by reporting linkage quality by age, sex, ethnicity and socioeconomic status. Better information on parents' countries of birth, age at migration and length of residence would make country-of-birth patterns more interpretable.

Further extensions of this modelling should focus on clarifying the processes represented by adjustment. Analytical approaches that examine how migration histories and socioeconomic circumstances jointly shape premature mortality would improve understanding of differences between ethnic groups. Where statistical precision permits, analyses combining ethnicity, country of birth and deprivation would reveal intersections concealed by separate comparisons.

The wider evidence priority is to develop a system capable of identifying and explaining inequalities more rapidly than occurred during COVID-19. This requires timely linkage, transparent reporting of data quality and analyses designed around the social processes producing unequal outcomes, not merely the inclusion of ethnicity as another individual characteristic.

Conclusion and policy implications

The ONS analysis challenges any simple account of ethnicity and premature mortality. Most minoritised ethnic groups have lower age-adjusted rates than the White British group. Black Caribbean people are the exception to this general pattern: women have a similar observed rate and men a higher rate than their White British counterparts. The overall pattern nevertheless conceals important differences by sex, country of birth and socioeconomic circumstances, as well as substantial variation within White populations.

The findings are most informative when these dimensions are considered together. Country-of-birth patterns, uneven deprivation gradients and differently distributed socioeconomic circumstances all contribute to the comparisons between ethnic groups. These findings do not make racism irrelevant, nor do the models measure a direct effect of structural racism. They show that ethnic inequalities in mortality are connected to migration histories and to social and economic conditions that are themselves shaped by institutions, policy and discrimination.

Reducing premature mortality therefore requires population-wide action on poverty, educational opportunity, secure and good-quality employment, income, housing and neighbourhood conditions. Tackling these wider socioeconomic determinants could reduce inequalities in premature mortality rates, including the particularly high premature mortality in highly deprived White British communities. Universal policies will not necessarily reduce ethnic inequalities if racialised barriers continue to shape who benefits. Action on the wider determinants must be accompanied by measures addressing discrimination in education, labour markets, housing, public services and healthcare, with monitoring of whether policies reach different populations and produce equitable outcomes.

Policy should not treat Black, Asian and minoritised ethnic people as a single target population. The variation by ethnic group, sex and country of birth requires disaggregated evidence and attention to the conditions facing different populations. Higher observed mortality among some UK-born minoritised populations warrants preventive attention, but cross-sectional country-of-birth differences should not be presented as evidence of generational decline.

Better linkage, migration and cause-specific evidence remain priorities, but the present findings already support a public-health response that treats ethnicity, country of birth and the wider determinants of health as interrelated rather than competing explanations.

Appendix A. Detailed tables

Table 1. Age-adjusted premature mortality rates by ethnic group and sex

Ethnic Group	Women	Men
Bangladeshi	339	415
Black African	291	360
Black Caribbean	367	573
Chinese	181	284
Indian	220	404
Mixed	344	500
Other	211	345
Pakistani	316	455
White British	370	537
White Other	256	441

Source: ONS linked 2021 Census and death-registration analysis; calculations shown are derived from published estimates.

Table 2. Premature mortality by ethnic group, sex and country of birth

Ethnic Group	Women UK-born	Women born outside UK	Men UK-born	Men born outside UK
Bangladeshi	345	339	525	399
Black African	360	283	560	338
Black Caribbean	445	309	640	515
Chinese	227	178	356	276
Indian	249	215	540	379
Mixed	399	261	574	364
Other	343	191	530	313
Pakistani	350	307	583	424
White British	372	313	539	465
White Other	319	243	475	433

Source: ONS linked 2021 Census and death-registration analysis; calculations shown are derived from published estimates.

Table 3. Premature mortality across deprivation quintiles, with endpoint ratios

Ethnic Group	Sex	Q5 least	Q4	Q3	Q2	Q1 most	Q1/Q5
Bangladeshi	Women	384	282	333	336	358	0.93
Bangladeshi	Men	416	337	425	383	463	1.11
Black African	Women	318	257	324	282	298	0.94
Black African	Men	309	292	337	392	376	1.22
Black Caribbean	Women	298	263	358	370	421	1.41
Black Caribbean	Men	467	463	479	567	709	1.52
Chinese	Women	164	150	194	194	223	1.36
Chinese	Men	246	257	263	290	383	1.56
Indian	Women	168	186	203	262	280	1.67
Indian	Men	285	348	389	451	550	1.93
Mixed	Women	248	294	318	366	477	1.93
Mixed	Men	329	379	452	540	763	2.32
Other	Women	158	169	212	221	268	1.69
Other	Men	266	281	359	363	404	1.52
Pakistani	Women	207	244	288	312	363	1.75
Pakistani	Men	315	339	384	435	544	1.73
White British	Women	249	296	342	451	622	2.49
White British	Men	358	432	508	646	892	2.49
White Other	Women	192	228	239	284	355	1.85
White Other	Men	307	360	419	486	644	2.10

Source: ONS linked 2021 Census and death-registration analysis; calculations shown are derived from published estimates.

Table 4. Age-adjusted premature mortality gradients across ethnicity and socioeconomic domains

Domain	Women low	Women high	Women gap	Women ratio	Men low	Men high	Men gap	Men ratio
Ethnicity	181	370	189	2.04	284	573	289	2.02
Deprivation	243	556	312	2.28	353	815	462	2.31
Education	225	564	339	2.51	345	818	473	2.37
Occupation	205	677	472	3.31	306	1069	763	3.50

Source: Derived from ONS published age-adjusted premature mortality rates. Endpoints are the lowest and highest published category within each domain.

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Source: Derived from ONS published age-adjusted premature mortality rates. Endpoints are the lowest and highest published category within each domain.

Table 5. Age-adjusted and fully adjusted incidence rate ratios

Ethnic Group	Women age-adjusted	Women fully adjusted	Men age-adjusted	Men fully adjusted
Bangladeshi	0.92	0.58	0.77	0.65
Black African	0.79	0.82	0.67	0.70
Black Caribbean	0.99	1.04	1.07	0.95
Chinese	0.49	0.58	0.53	0.59
Indian	0.60	0.61	0.75	0.81
Mixed	0.93	0.97	0.93	0.93
Other	0.57	0.56	0.64	0.65
Pakistani	0.85	0.54	0.85	0.70
White Other	0.69	0.86	0.82	0.96

Source: ONS linked 2021 Census and death-registration analysis. White British is the reference group (1.00).

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