Social and ethnic inequalities and COVID-19

Maria Melchior

Department of Social Epidemiology

IPLESP, UMRS_1136 INSERM Sorbonne Université

Institut Pierre Louis d'Épidémiologie et de Santé Publique
Pierre Louis Institute of Epidemiology and Public Health
Pierre Louis (French physician, 1787-1872) contributed to the development of epidemiology

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COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

Last Updated at (M/D/YYYY)
28/09/2021, 15:21

Total Cases	Total Deaths	Total Vaccine Doses Administered
232 428 536	4 758 529	6 143 891 362

28-Day Cases	28-Day Deaths	28-Day Vaccine Doses Administered
15 128 916	245 388	837 293 947

Cases | Deaths by Country/Region/Sovereignty

US
28-Day: 3 965 198 | 50 617
Totals: 43 124 884 | 690 641

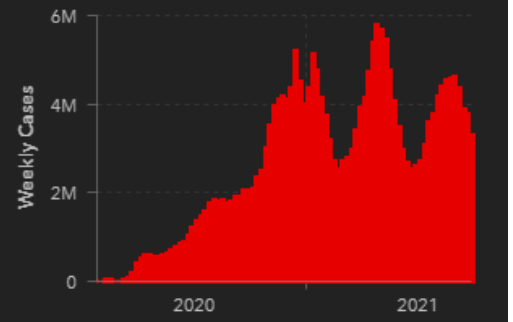
United Kingdom
28-Day: 948 752 | 3 761
Totals: 7 737 941 | 136 569

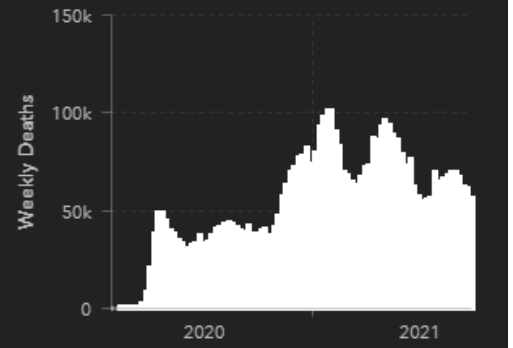
India
28-Day: 928 701 | 8 813
Totals: 33 697 581 | 447 373

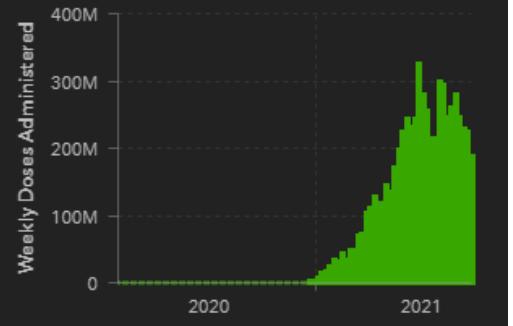
Turkey
28-Day: 700 250 | 6 914
Totals: 7 066 658 | 63 372

Brazil
28-Day: 614 114 | 15 079
Totals: 21 366 395 | 594 653

Iran
28-Day: 587 246 |

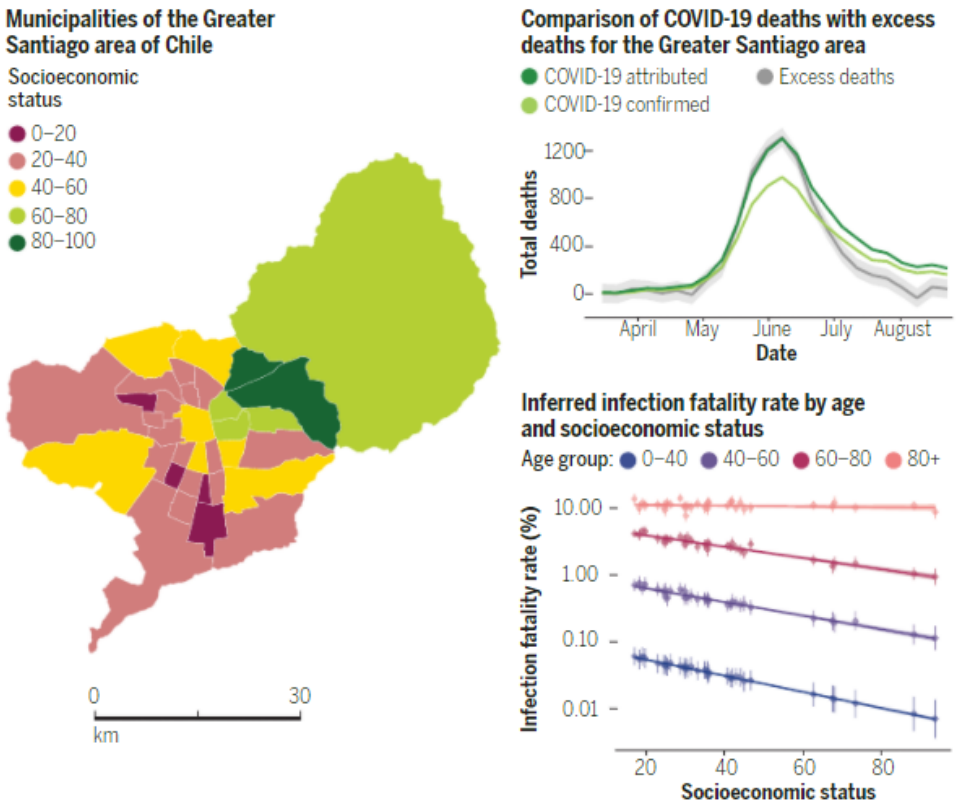






Admin0 | 28-Day | Weekly | Daily

Socioeconomic inequalities with regard to COVID-19



Effect of socioeconomic inequalities on COVID-19 outcomes. The map on the left shows the municipalities that were included in this study, colored by their socioeconomic status score. For the comparison between COVID-19 deaths and excess deaths (top right), COVID-19–confirmed deaths are shown in light green and COVID-19–attributed deaths in dark green. Excess deaths, shown in gray, correspond to the difference between observed and predicted deaths. Predicted deaths were estimated using a Gaussian process model. The shading indicates 95% credible intervals for the excess deaths. The infection fatality rates (bottom right) were inferred by implementing a hierarchical Bayesian model, with vertical lines representing credible intervals by age and socioeconomic status.

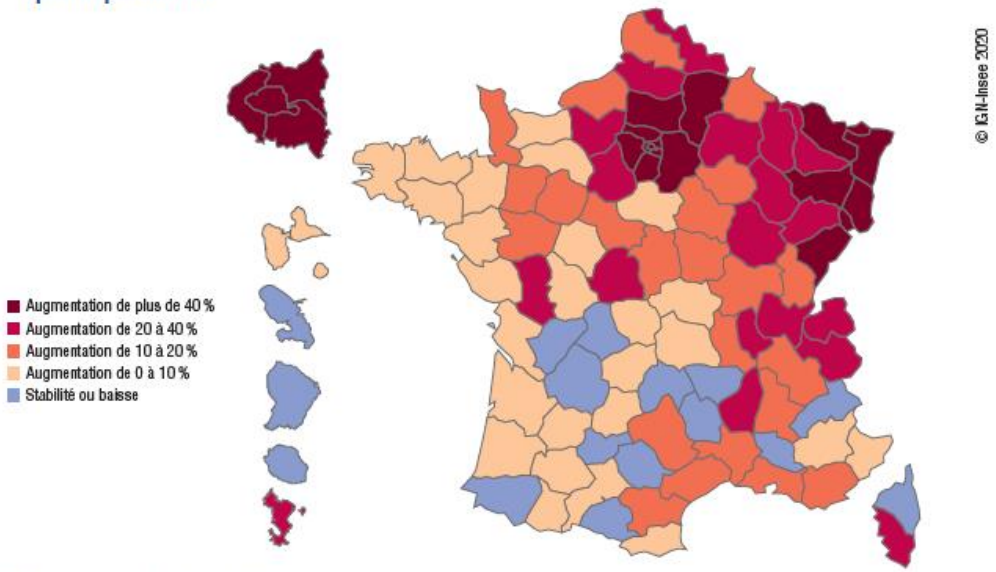
Mena et al, 2021

In low socioeconomic status municipalities:

- less COVID-19 testing
- much higher test positivity and testing delays
- higher level of mortality

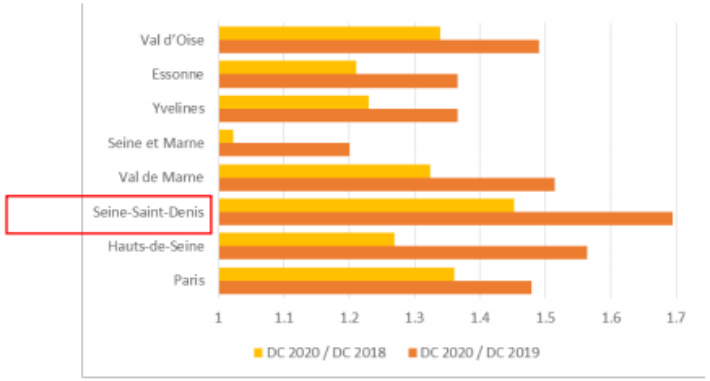
Socioeconomic inequalities with regard to COVID-19 in France

2. Évolution entre 2019 et 2020 des décès cumulés entre le 1er mars et le 30 avril par département



Note : le département est celui où le décès est survenu.
Lecture : en Seine-Maritime, le nombre total de décès entre le 1er mars et le 30 avril est en hausse de 15 % entre 2019 et 2020.
Champ : France.
Source : Insee, statistiques de l'état civil, fichier du 26 juin 2020.

Figure 3 – Rapport entre le nombre de décès domiciliés entre mars 2020 et mars 2019 et 2018



Source : Insee, Etat Civil, données provisoires

ORS - FOCUS SANTÉ EN ÎLE-DE-FRANCE - **7** – La surmortalité durant l'épidémie de Covid-19 dans les départements franciliens

Figure 2 Gradient of the income third decile (left) and COVID-19 hospitalised cases >3 per 1000 inhabitants (right) in Paris residential areas. Non-residential areas are not covered by a red colour gradient.

Ethno-racial disparities with regard to COVID-19

Electronic supplementary material:
The online version of this article contains supplementary material.

journal of global health

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Racial disparities in COVID-19 pandemic cases, hospitalisations, and deaths: A systematic review and meta-analysis

William Mude[1], Victor M Oguoma[2], Tafadzwa Nyanhanda[3], Lillian Mwanri[4], Carolyne Njue[5]

[1]School of Health, Medical and Applied Sciences, Central Queensland University, Cairns, Australia
[2]Health Research Institute, University of Canberra, Canberra, Australia
[3]School of Health, Medical and Applied Sciences, Central Queensland University, Melbourne, Australia
[4]College of Medicine and Public Health, Flinders University, Adelaide, Australia
[5]The Australian Centre for Public and Population Health Research (ACPPHR), University of Technology Sydney, Sydney, Australia

Background People from racial minority groups in western countries experience disproportionate socioeconomic and structural determinants of health disadvantages. These disadvantages have led to inequalities and inequities in health care access and poorer health outcomes. We report disproportionate disparities in prevalence, hospitalisation, and deaths from COVID-19 by racial minority populations.

Methods We conducted a systematic literature search of relevant databases to identify studies reporting on prevalence, hospitalisations, and deaths from COVID-19 by race groups between 01 January 2020 – 15 April 2021. We grouped race categories into Blacks, Hispanics, Whites and Others. Random effects model using the method of DerSimonian and Laird were fitted, and forest plot with respective ratio estimates and 95% confidence interval (CI) for each race category, and subgroup meta-regression analyses and the overall pooled ratio estimates for prevalence, hospitalisation and mortality rate were presented.

Results Blacks experienced significantly higher burden of COVID-19: prevalence ratio 1.79 (95% confidence interval (CI) = 1.59-1.99), hospitalisation ratio 1.87 (95% CI = 1.69-2.04), mortality ratio 1.68 (95% CI = 1.52-1.83), compared to Whites: prevalence ratio 0.70 (95% CI = 0.0.64-0.77), hospitalisation ratio 0.74 (95% CI = 0.65-0.82), mortality ratio 0.82 (95% CI = 0.78-0.87). Also, Hispanics experienced a higher burden: prevalence ratio 1.78 (95% CI = 1.63-1.94), hospitalisation ratio 1.32 (95% CI = 1.08-1.55), mortality ratio 0.94 (95% CI = 0.84-1.04) compared to Whites. A higher burden was also observed for Other race groups: prevalence ratio 1.43 (95% CI = 1.19-1.67), hospitalisation ratio 1.12 (95% CI = 0.89-1.35), mortality ratio 1.06 (95% CI = 0.89-1.23) compared to Whites. The disproportionate burden among Blacks and Hispanics remained following correction for publication bias.

Conclusions Blacks and Hispanics have been disproportionately affected by COVID-19. This is deeply concerning and highlights the systemically entrenched disadvantages (social, economic, and political) experienced by racial minorities in western countries; and this study underscores the need to address inequities in these communities to improve overall health outcomes.

Correspondence to:
William Mude, PhD, MPH, GradDipPharm, BSc (Hon)
School of Health, Medical and Applied Sciences
Central Queensland University, Cairns City Campus
40-52 Abbott Street & Shields Street
Cairns QLD 4870
Australia
w.mude@cqu.edu.au

In December 2019, a new pneumonia-like infection with varying symptoms, ranging from mild to severe shortness of breath, emerged from Wuhan, China [1]. A World Health Organisation (WHO) investigation designated the infection as a 2019 novel coronavirus and was subsequently named COVID-19 [2]. The infection quickly spread throughout the world; at the time of writing, the source has not yet been determined. It was declared a public health emergency of international concern by WHO in January

Essay

OPEN ACCESS

Unequal impact of the COVID-19 crisis on minority ethnic groups: a framework for understanding and addressing inequalities

Srinivasa Vittal Katikireddi [1], Sham Lal [2], Enitan D Carrol,[3] Claire L Niedzwiedz [4], Kamlesh Khunti,[5] Ruth Dundas [1], Finn Diderichsen [6], Ben Barr[7]

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Commentary

Migrant status, ethnicity and COVID-19: more accurate European data are greatly needed

Maria Melchior [1, 2, *], Annabel Desgrées du Loû [2, 3], Anne Gosselin [2], Geetanjali D. Datta [4], Mabel Carabali [5], Joanna Merckx [5], Jay S. Kaufman [5]

[1] Sorbonne Université, INSERM, Institut Pierre Louis d'Épidémiologie et de Santé Publique, IPLESP, 75012, Paris, France
[2] French Collaborative Institute on Migration, CNRS, Aubervilliers, France
[3] Centre Population et Développement (Université de Paris, IRD, ERL Inserm SAGESUD), Paris, France
[4] Department of Medicine and Research Center for Health Equity, Cedars-Sinai Medical Center, Los Angeles, CA, USA
[5] Department of Epidemiology, Biostatistics and Occupational Health, McGill University, Montreal, Quebec, Canada

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wish to take the case of France, which has a substantial immigrant population and is to date among the European countries hardest hit by the COVID-19 epidemic.

In France, immigrants make up 10% of the population and descendants of immigrants 12% (https://www.insee.fr/fr/statistiques/4238373?sommaire=4238781#:~:text=En%202018%2C%207%2C5%20millions,le%20m%C3%AAme%20pays%20d'origine.), with recent immigrants most frequently originating from an African

Ethno-racial disparities and COVID-19

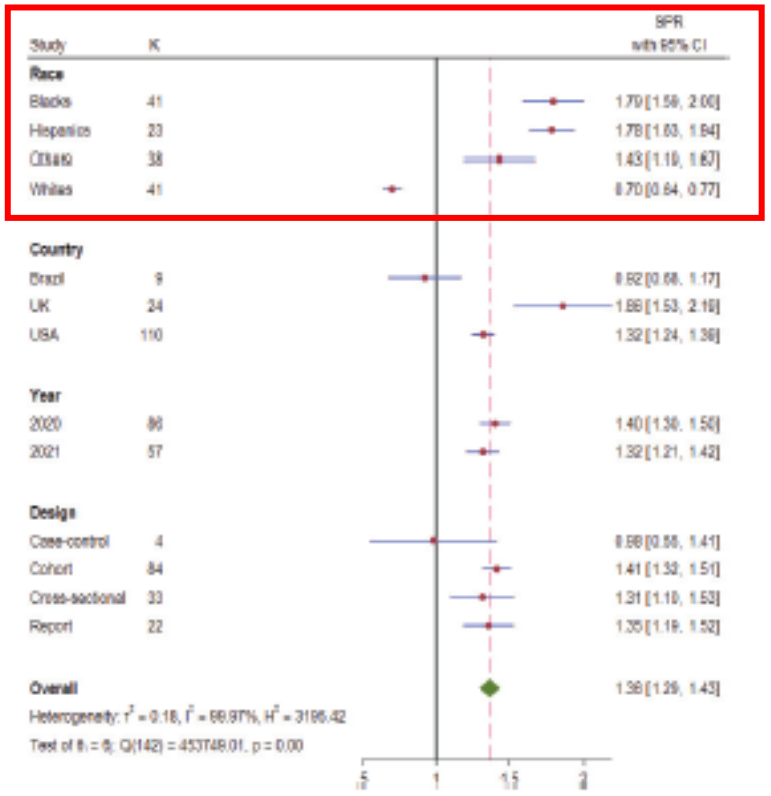


Figure 3. Standardised prevalence ratio (SPR) Forest plots of COVID-19 by race, country, year, and study design.

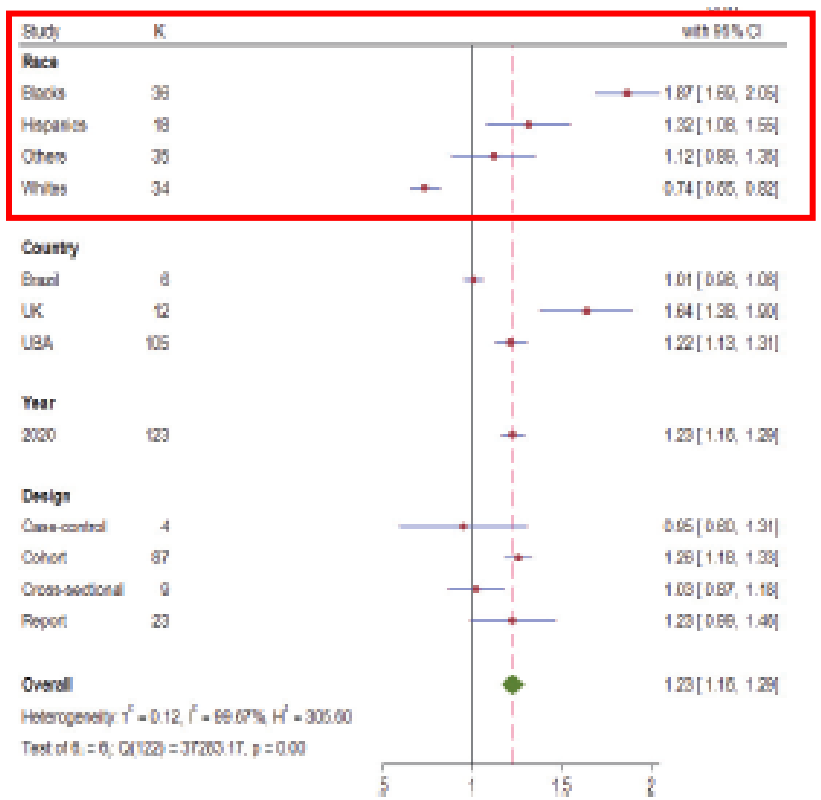


Figure 5. Standardised hospitalisation ratio (SHR) Forest plots of COVID-19 by race, country, year, and study design.

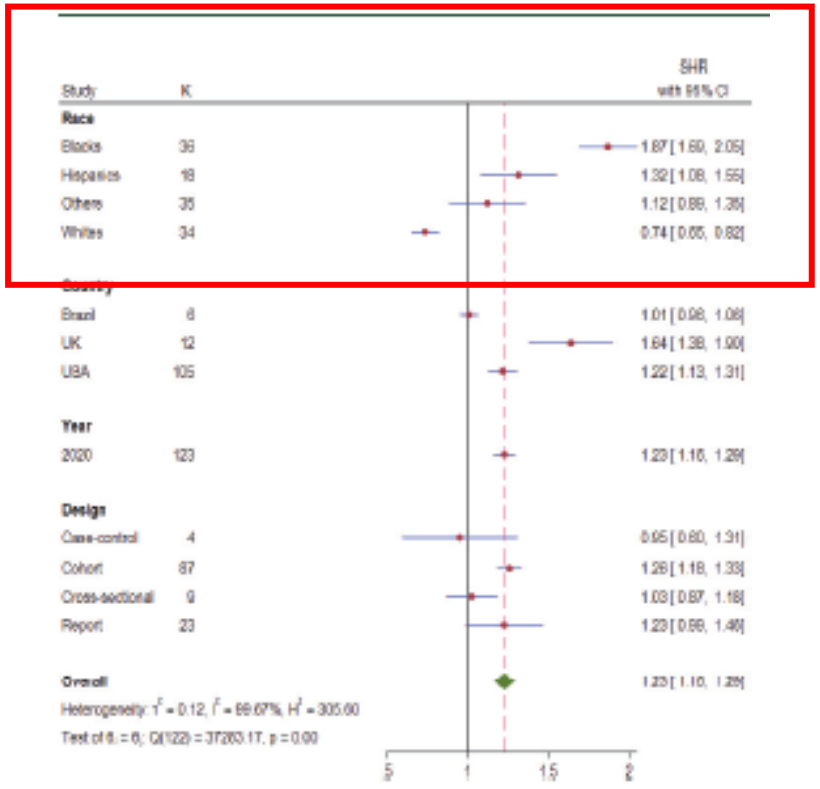
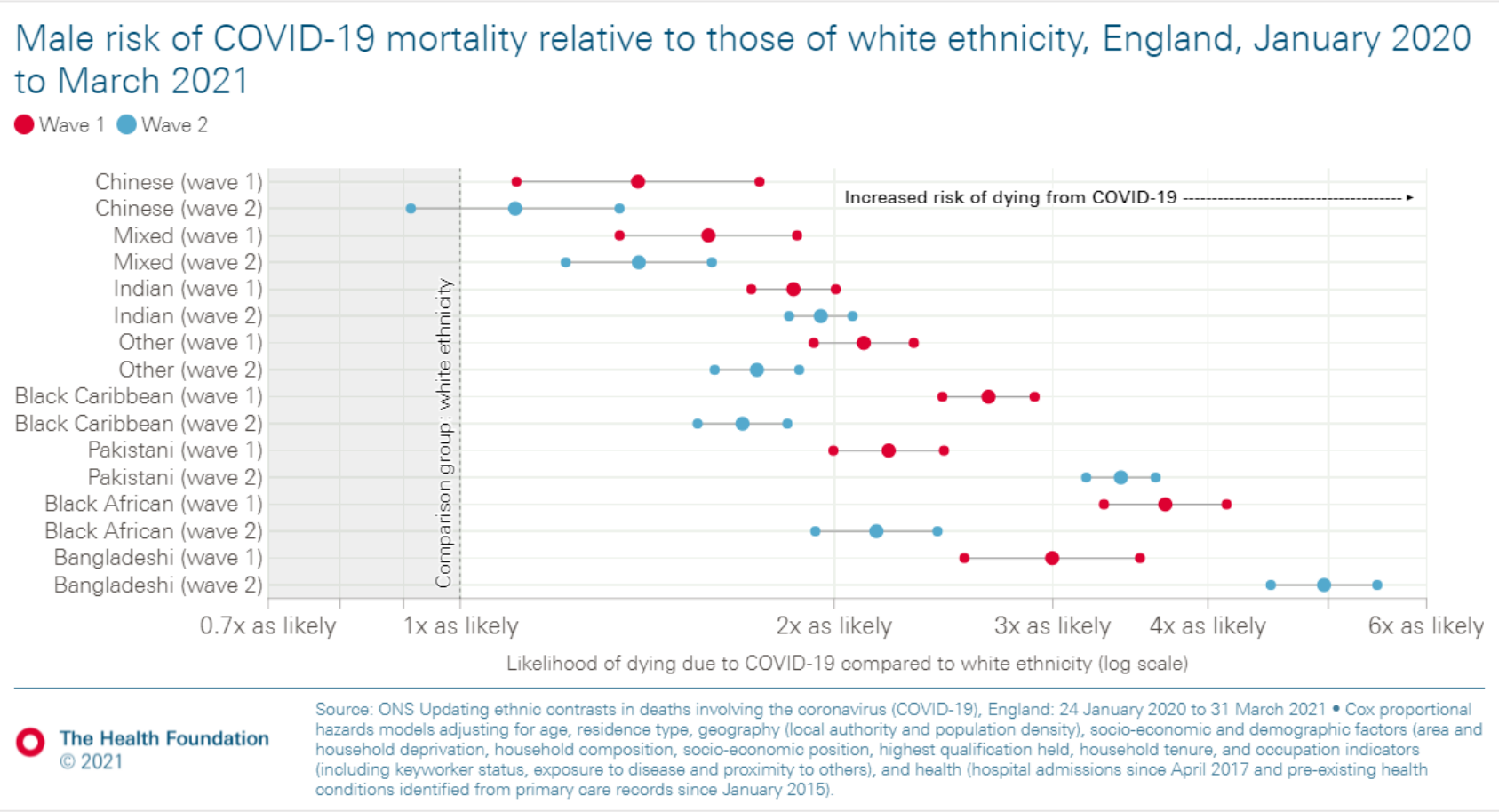


Figure 7. Standardised mortality ratio (SMR) Forest plots of COVID-19 by race, country, year, and study design.

Mude et al, 2021

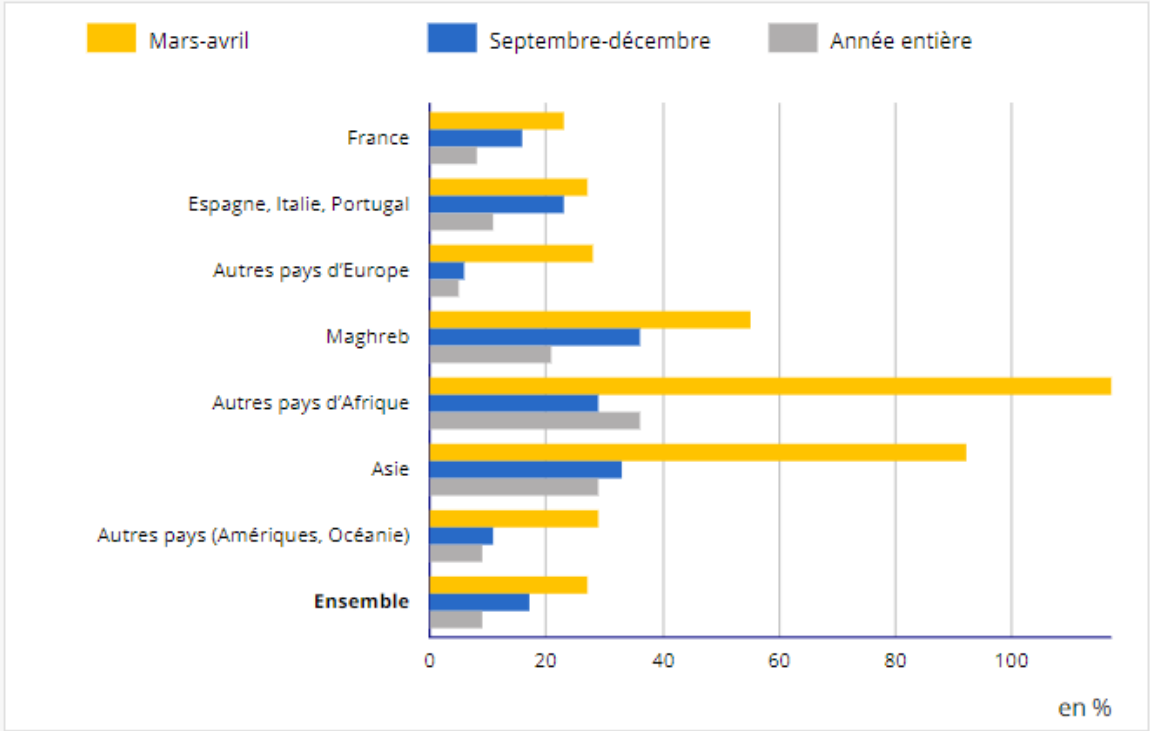
Ethno-racial minority status and COVID-19 mortality (UK)



- Males from ethnic minority communities had an increased risk of COVID-19 mortality in wave one and two.
- The risk was higher in the second wave for those from Pakistani and Bangladeshi backgrounds but lower for other ethnic minority communities.
- Rates are adjusted for demography, socio-economic factors and health conditions.

Immigrant status and COVID-19 mortality in France

Figure 1a - Évolution du nombre de décès enregistrés en France entre 2019 et 2020, selon le pays de naissance des personnes décédées et la période



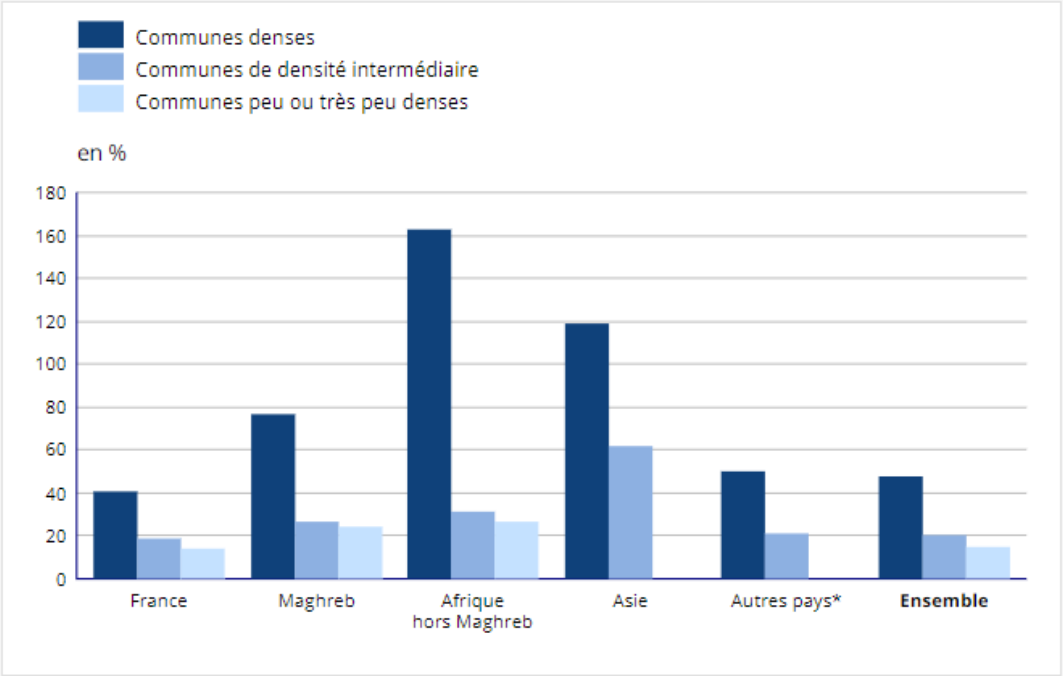
Note : données provisoires.

Lecture : toutes causes confondues, le nombre de décès enregistrés en France entre le 1er mars et le 30 avril 2020 a augmenté de 27 % par rapport à la même période en 2019. Dans le même temps, le nombre de décès en France de personnes nées en Afrique hors Maghreb a plus que doublé (+ 117 %).

Champ : décès enregistrés en France.

Source : Insee, statistiques de l'état civil, fichier du 20 février 2021.

Figure 3a - Évolution du nombre de décès entre mars-avril 2019 et mars-avril 2020, par pays de naissance selon la densité de la commune de résidence des personnes décédées



* Europe hors France, Amériques, Océanie.

Note : données provisoires. Les nombres de décès sont faibles dans les communes peu ou très peu denses pour certains pays de naissance ; ces évolutions n'apparaissent pas ici.

Lecture : toutes causes confondues, le nombre de décès enregistrés en France pour des personnes nées en France et résidant dans des communes densément peuplées a augmenté de 41 % entre mars-avril 2019 et mars-avril 2020.

Champ : décès enregistrés en France.

Source : Insee, statistiques de l'état civil, fichier du 20 février 2021.

Ethno-racial minority status and COVID-19 prognosis (UK)

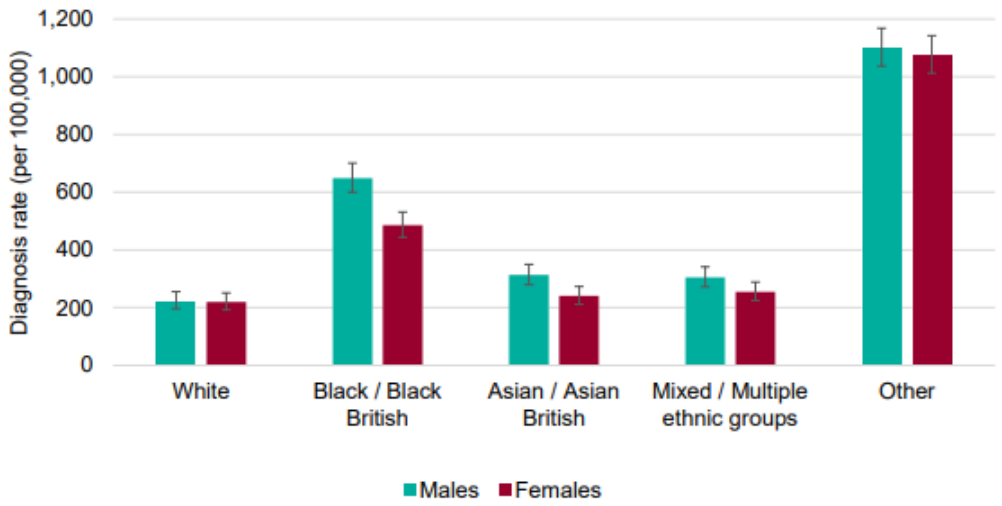


Figure 4.2. Age standardised diagnosis rates by ethnicity and sex, as of 13 May 2020, England. Source: Public Health England Second Generation Surveillance System.

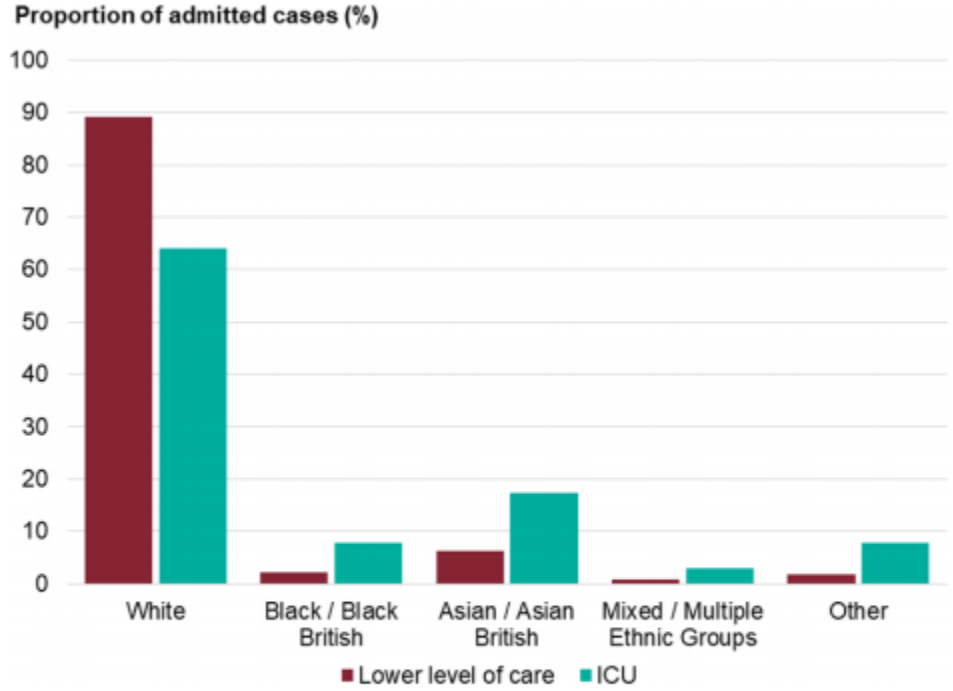
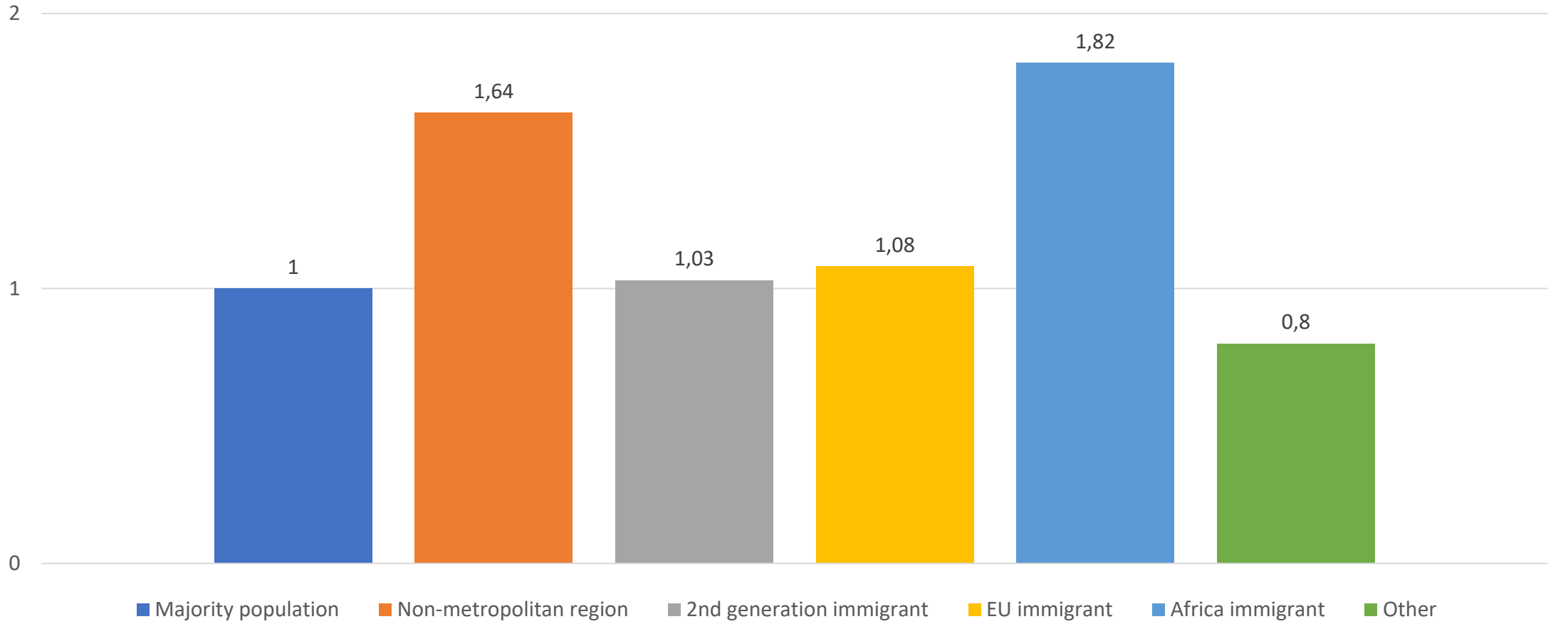


Figure 4.3. Laboratory confirmed admissions for COVID-19 to acute trusts, by level of care and ethnicity, England, as of 19 May 2020. Source: Public Health England COVID-19 Hospitalisations in England surveillance system (CHESS).

Public Health England, 2020

Immigrant status and employment in an essential occupation in France (adjusted ORs)



Gosselin et al, 2021

Immigrant status and health behaviors in France

Table 2. Risk ratios and male-to-female ratios for regular alcohol use, current smoking, obesity and less-than-good self-reported health (Adjusted on age, age^2 and relative educational level (Ridit), Baromètre Santé 2017 survey, ages 18–70 years).

Country/Region of Birth	Regular Alcohol Use	Current Smoking	Obesity	Less-Than-Good Self-Reported Health
		MEN		
France (native-born)	1	1	1	1
Overseas *départements*	0.64 (0.38–1.08)	1.03 (0.76–1.39)	1.14 (0.66–1.96)	1.15 (0.78–1.69)
Southern Europe	1.14 (0.89–1.46)	0.98 (0.76–1.27)	0.75 (0.47–1.18)	1.03 (0.77–1.38)
sub-Saharan Africa	**0.42** (0.29–0.61)	**0.64** (0.49–0.84)	0.76 (0.49–1.16)	1.15 (0.89–1.48)
Maghreb	**0.30** (0.16–0.54)	**1.21** (1.01–1.46)	**0.61** (**0.39–0.95**)	1.04 (0.79–1.36)
		WOMEN		
France (native-born)	1	1	1	1
Overseas *départements*	**0.38** (0.17–0.85)	0.68 (0.46–1.01)	**1.79** (1.25–2.56)	1.24 (0.94–1.64)
Southern Europe	1.00 (0.60–1.65)	**0.68** (0.47–0.97)	1.18 (0.80–1.75)	1.00 (0.78–1.28)
sub-Saharan Africa	0.88 (0.53–1.47)	**0.23** (0.14–0.38)	**1.67** (1.25–2.23)	**1.42** (1.15–1.75)
Maghreb	**0.18** (0.06–0.57)	**0.42** (0.29–0.61)	1.16 (0.82–1.64)	**1.55** (1.30–1.84)
		MALE-TO-FEMALE RATIO		
France (native-born)	**3.18** (2.93–3.45)	**1.13** (1.07–1.20)	1.07 (0.98–1.16)	**0.86** (0.81–0.91)
Overseas *départements*	**5.78** (2.31–14.42)	**1.68** (1.04–2.71)	0.67 (0.35–1.25)	0.78 (0.49–1.22)
Southern Europe	**4.05** (2.32–7.09)	**1.60** (1.06–2.42)	0.63 [a] (0.35–1.14)	0.89 (0.62–1.29)
sub-Saharan Africa	1.64 (0.89–3.03)	**2.87** [b] (1.61–5.09)	**0.41** [b] (0.25–0.67)	**0.65** (0.47–0.90)
Maghreb	**6.20** (1.66–22.88)	**3.10** [b] (2.06–4.65)	**0.51** [a] (0.29–0.89)	**0.56** [b] (0.41–0.76)

Significance test of comparison of group-specific male-to-female risk ratio with reference population risk ratio: [a]: $p < 0.05$; [b]: $p < 0.01$; estimates in bold are significantly different from unity

Khlat et al, 2020

Social and ethnic disparities with regard to COVID-19 vaccine

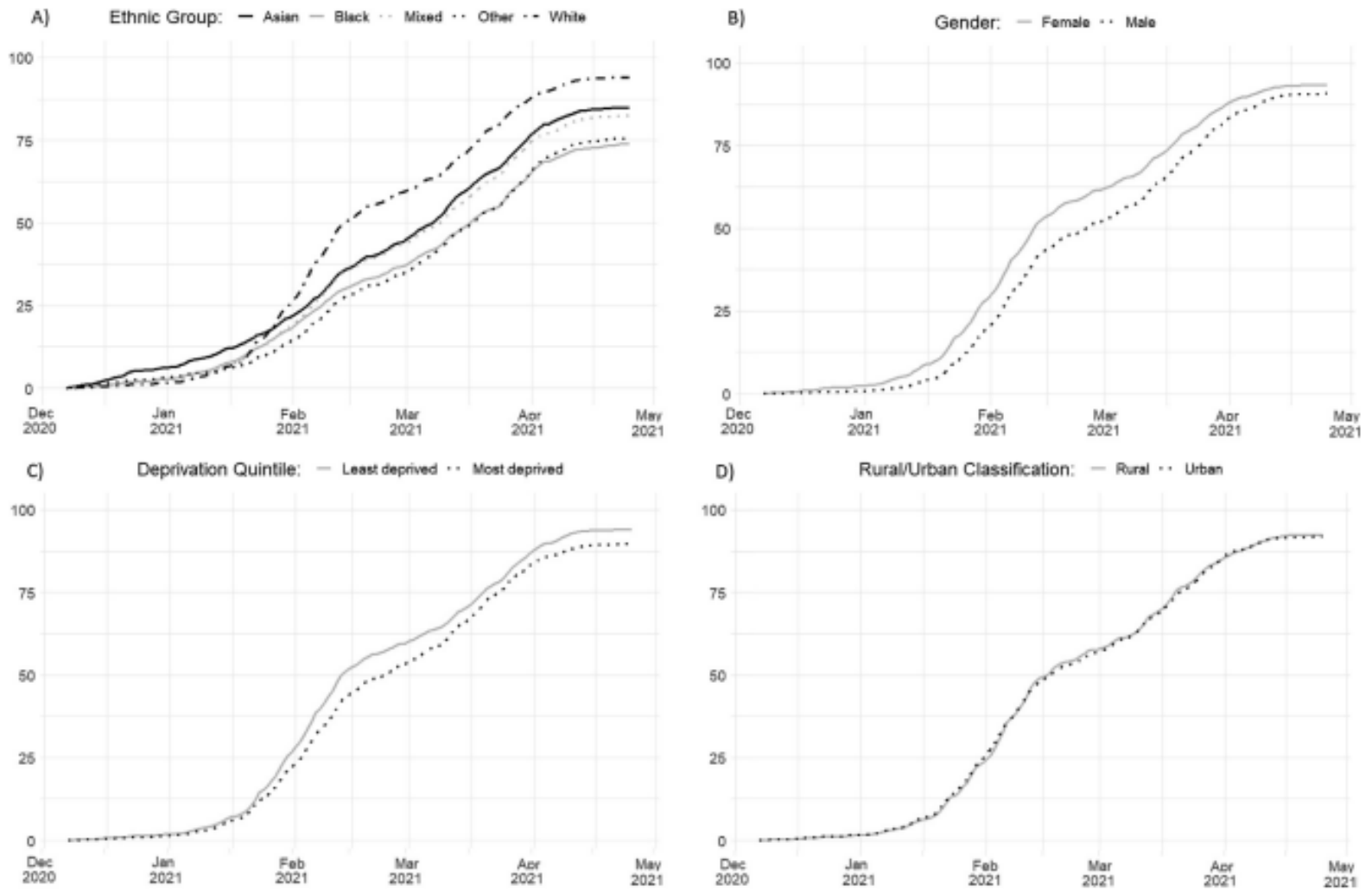
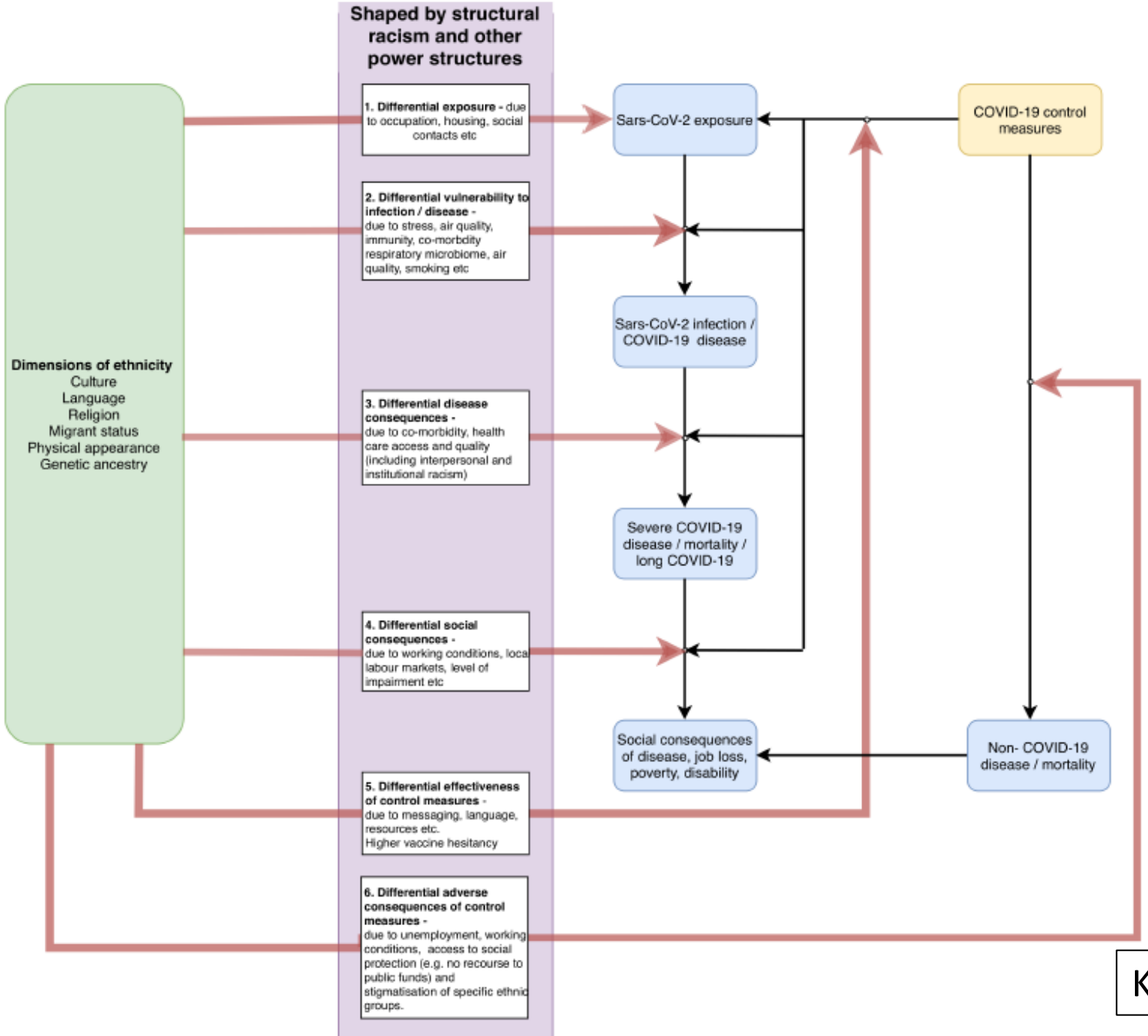
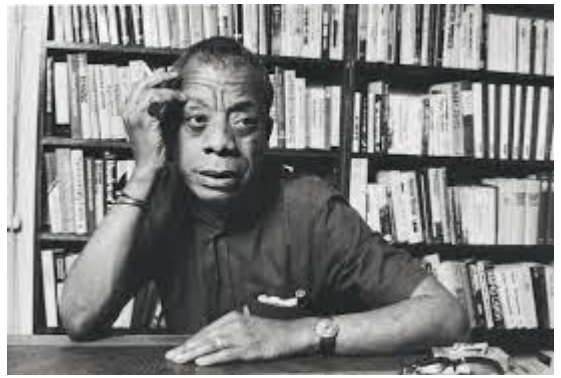


Fig. 1. Cumulative uptake of one dose of COVID-19 vaccine (any type) by ethnic group, sex, urban/rural residence classification and social quintile of deprivation Wales 2020–21 [a,b]. [a] Data sourced from the all Wales Immunisation System (WIS) in SAIL within the COVID Vaccination Data (CVVD) as at 25th April 2021. [b] To define the most and least deprived areas of Wales small area geography Lower-layer Super Output Area (LSOA) of residence were ranked by Welsh Index of Multiple Deprivation (WIMD) score and the populations divided in to quintiles.

Perry et al, 2021



Katikireddi et al, 2021



“Not everything that is faced can be changed, but nothing can be changed until it is faced.” – James Baldwin

Meditation XVII (John Donne, 1624)

No man is an island,
Entire of itself,
Every man is a piece of the continent,
A part of the main.
If a clod be washed away by the sea,
Europe is the less.
As well as if a promontory were.
As well as if a manor of thy friend's
Or of thine own were:
Any man's death diminishes me,
Because I am involved in mankind,
And therefore never send to know for whom the bell tolls;
It tolls for thee.