



UNIVERSITY OF
LEICESTER



Ethnicity, COVID-19 and Leicester: Understanding the data

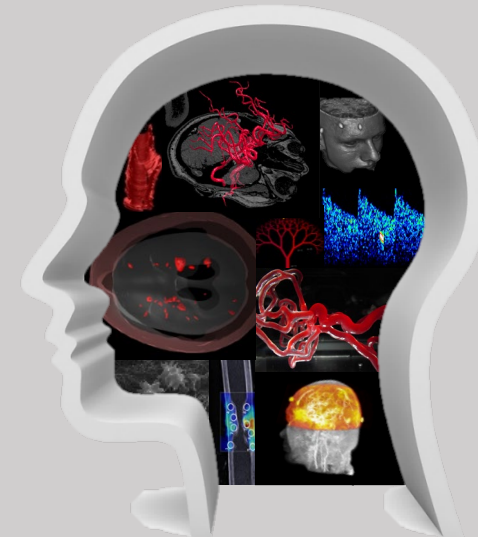
Dr Jatinder S. Minhas

NIHR Clinical Lecturer in Older People and Complex
Health Needs / ST6 Geriatric Medicine
Department of Cardiovascular Sciences

jm591@le.ac.uk



@DrJMinhas



Acknowledgements

Leicester Ethnicity & COVID-19 Rapid Response Team

Daniel Pan

Shirley Sze

Jatinder Minhas

Joshua Nazareth

Christopher Martin

David Jenkins

Laura Gray

Keith Abrams

Kamlesh Khunti

Pranab Haldar

Manish Pareek



UNIVERSITY OF
LEICESTER



University Hospitals of Leicester
NHS Trust

FUNDED BY

NIHR | National Institute
for Health Research

Outline

- Early 'signal'
- Relevance of ethnicity
- Systematic synthesis
- Landscape in Leicester
- 'Lockdown in Leicester'



[Ed Gray Art]

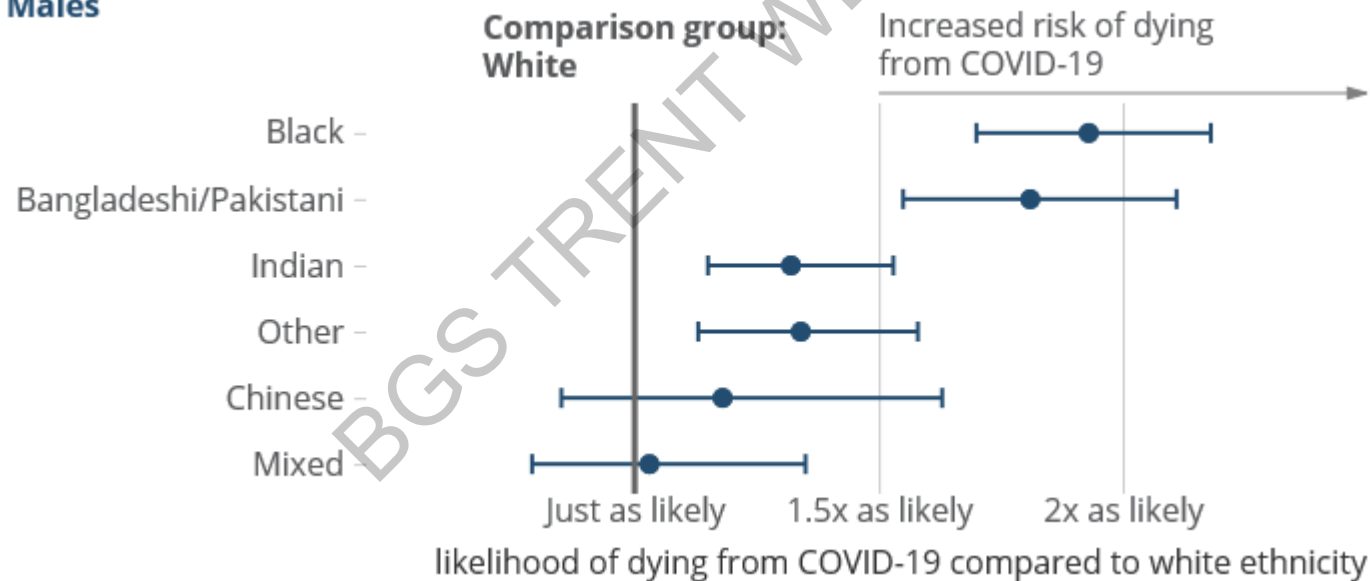


Early 'signal'



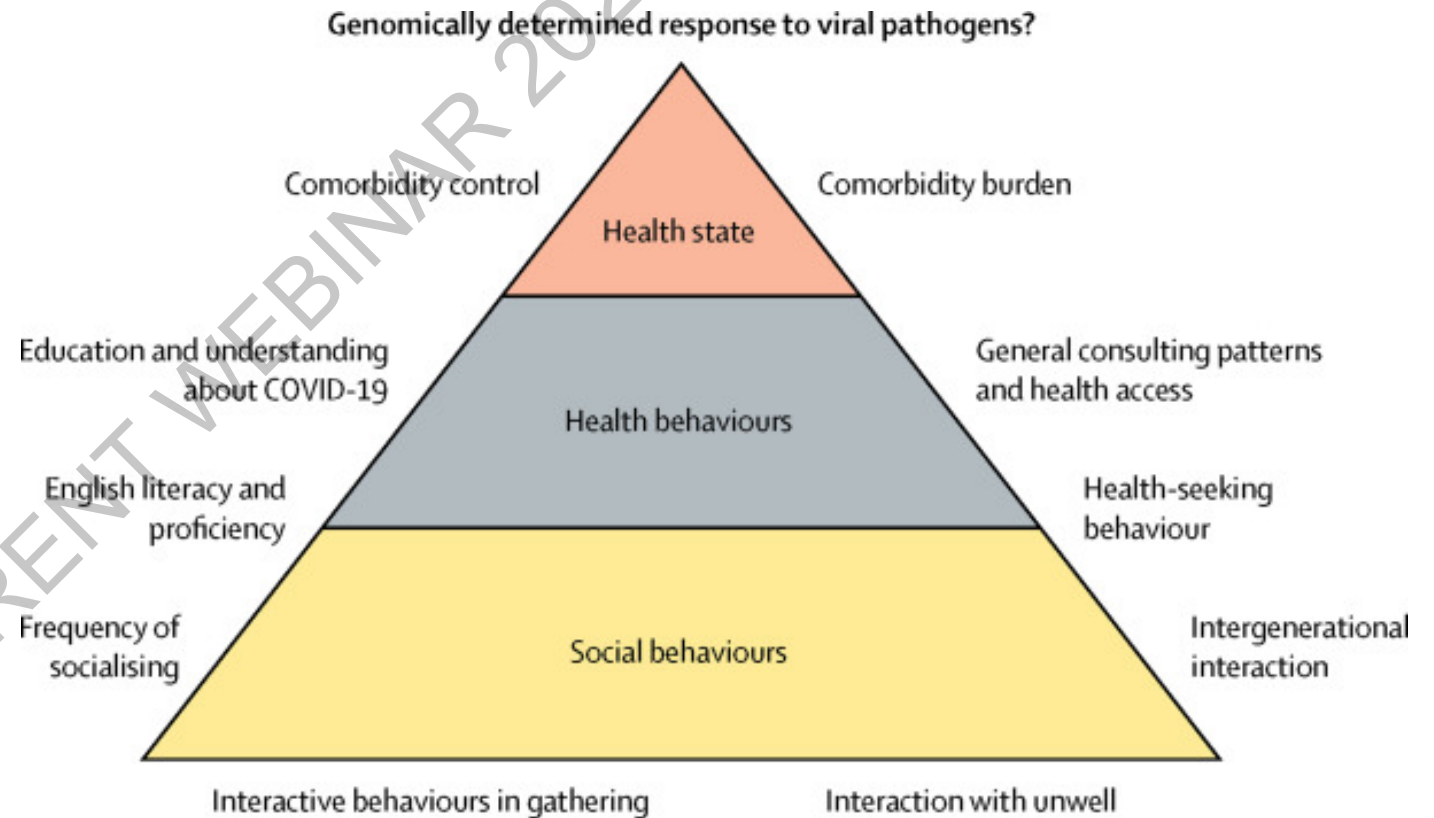
- ONS data 02 Mar 20 – 10 Apr 20
 - Adjusted for age and sex, black males 4.2x > risk death than white males
 - Less when further highly relevant sociodemographic adjustment applied

Males



Relevance of ethnicity

- Complex interaction ethnicity related factors
- Only 7% of 29 key publications by early May reported ethnicity disaggregated
- ICNARC – 1/3 of ITU admissions were of an ethnic minority



Systematic synthesis

Parameter	Country	Race/BAME group	Literature search	Major journals	Grey literature	Surveillance	Preprints
Risk of infection with SARS-COV-2	US	Black	-	-	-	-	↑
		Hispanic	-	-	-	-	↑
		Asian	-	-	-	-	↑
		Mixed/Other	-	-	-	-	-
	UK	Black	-	↑	-	-	↑
		Asian	-	-	-	-	↑
		Mixed/Other	-	-	-	-	↑
Risk of hospitalisation/ITU	US	Black	↔	↔	-	-	↑
		Hispanic	-	-	-	-	↑
		Asian	-	-	-	-	↑
		Mixed/Other	-	-	-	-	-
	UK	Black	-	-	↑	-	↑
		Asian	-	-	↑	-	↑
		Mixed/Other	-	-	-	-	-
Risk of mortality	US	Black	↔	↔	↑	↑	↑
		Hispanic	↔	↔	-	-	↑
		Asian	↔	↔	-	-	-
		Mixed/Other	-	↔	-	-	-
	UK	Black	-	-	↑	↑	↑
		Asian	-	-	↑	-	↑
		Mixed/Other	-	-	↑	-	↑

Legend

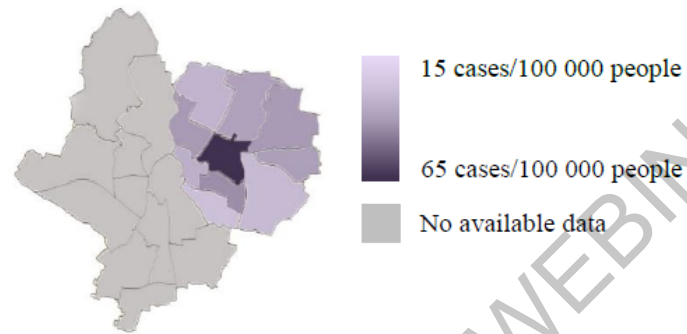
- ↑ = overall increase risk compared to White patients
- ↔ = no association between ethnicity and parameter studied
- = no data



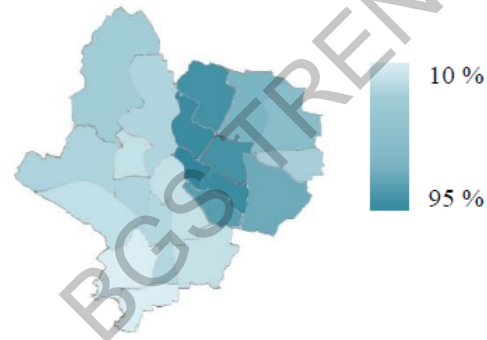
COVID-19 Landscape in Leicester

1b. COVID-19 cases by ward June 1st - June 15th 2020

1a.



1c. Percentage of population from BAME backgrounds by ward



- 25% of UK cases between June 1 and June 15 were in Leicester
- 72.5% of these wards are from ethnic minority backgrounds (mostly SE Asian)
- Is further lockdown alone the answer?

Figure 1a. City of Leicester marked in red in relation to England (6) 1b. Cases of COVID-19 per 100,000 people by ward in the City of Leicester for June 1st – June 15th 2020 (7) 1c. Percentage of population from BAME backgrounds in each ward of the City of Leicester (3)



'Lockdown in Leicester'

ORIGINAL RESEARCH | ONLINE FIRST, 100466



PDF [611 KB]

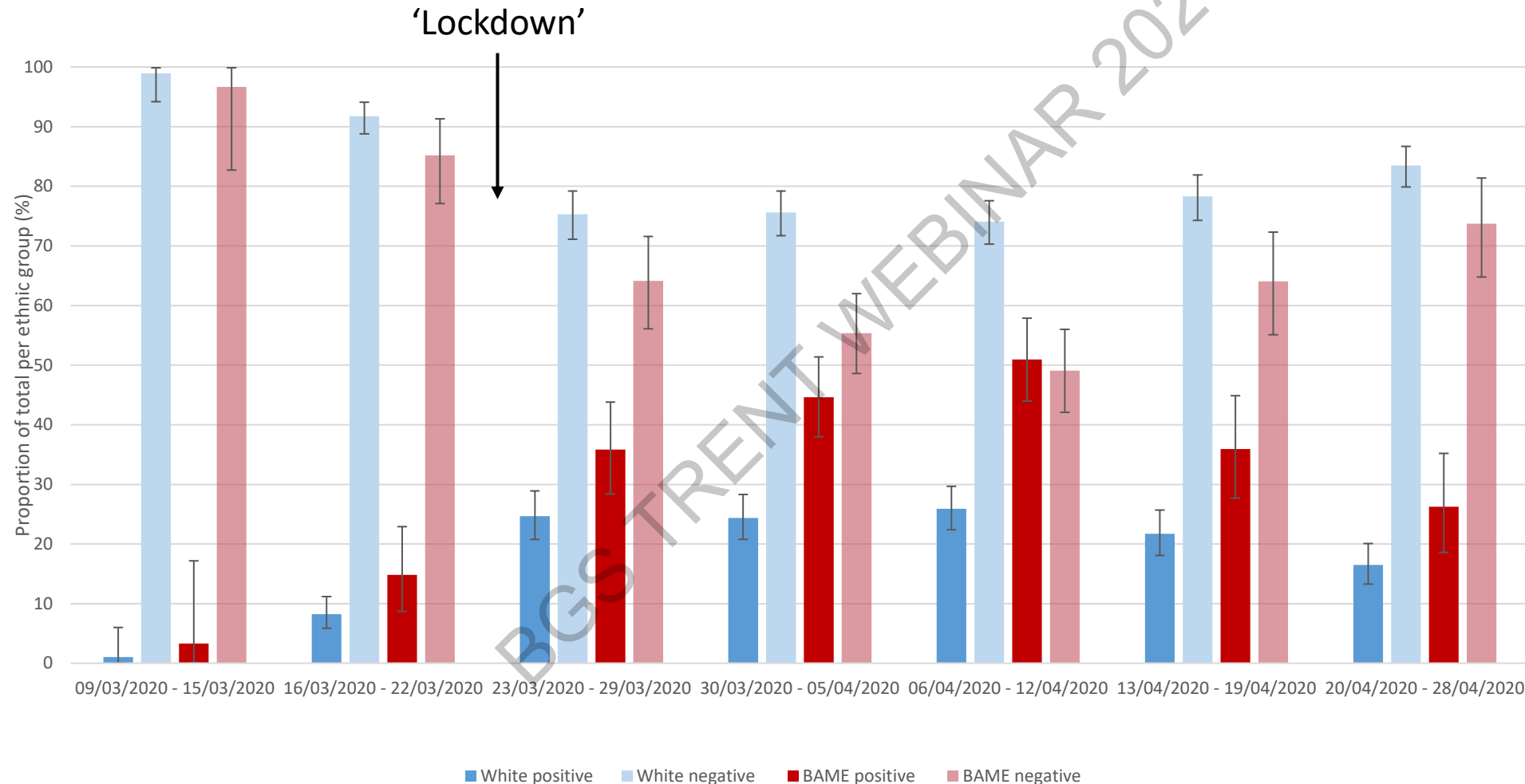
Socio-demographic heterogeneity in the prevalence of COVID-19 during lockdown is associated with ethnicity and household size: Results from an observational cohort study

- Observational cohort study
- Impact of ethnicity and household size on acquiring SARS-CoV-2 infection
- 971/4051 (24.0%) patients with suspected COVID-19 were found to be PCR positive
- Compared to White ethnicity, South Asian (aOR 2.44 95%CI 2.01, 2.97), Black (aOR 2.56 95%CI 1.71, 3.84) and Other (aOR 2.53 95%CI 1.74, 3.70) ethnicities were more likely to test positive
- Larger estimated household size (aOR 1.06 95%CI 1.02, 1.11)
- Estimated household size was associated with PCR positivity after, but not before, lockdown (aOR 1.10 95%CI 1.03, 1.16)



'Lockdown in Leicester'

"Pandemic control measures may have more rapid impact on slowing viral transmission amongst those of White ethnicity compared to BAME groups."



Summary

- Ethnicity associated with risk of infection and hospitalisation/ITU
- ONS data suggests greater mortality in ethnic minorities
- Larger household size, particularly relevant post lockdown initiation
- Did lockdown work in Leicester? Is the '2nd wave' reflecting failure to achieve adequate suppression initially?



UNIVERSITY OF
LEICESTER

BGS TRENT WORKSHOP 2020