5.10-P3
Time trend in absolute BP levels, prevalent hypertension and determinants in Mixed Ancestry South Africans

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Background:
Evidence is needed of the changing risk profile of African populations for non-communicable diseases. We investigate changes in blood pressure (BP) profile from 2008 to 2014 in the mixed-ancestry population of Bellville South, in Cape Town, South Africa.

Methods:
Overall, 928 (2008) and 1969 (2014) participants aged >20 years were included. BP was measured using similar protocols. Known hypertension was based on ongoing treatment. Multivariable logistic regression was used to investigate the association between hypertension and risk factors, including age, body mass index (BMI), educational level, alcohol use and tobacco use.

Results:
There was a rightward shift in the absolute systolic (SBP) (absolute mean difference 14.6 mmHg) and diastolic (DBP) BP (9.4 mmHg, both p-value<0.001) between 2008 and 2014 in the overall sample, and after exclusion of participants with known hypertension (14.6 mmHg for SBP and 9.1 mmHg for DBP, both p-value<0.001). Prevalent hypertension increased from 48.4% in 2008 to 59.1% in 2014 for crude rates, and from 30.7% to 45.0% for age-standardised rates of any hypertension; and from 11.6% to 24.8 (crude rates) and 8.3% to 22.9% (age-standardised rates) for screen-detected hypertension. Increase in hypertension rates with time was significant after adjustment for potential confounders (odds ratio 2014 vs. 2008 2.55 [95%CI: 2.11-3.09]). Furthermore age, overweight/obesity, low education and alcohol drinking were associated with prevalent hypertension.

Conclusions:
There was a rapid deterioration in BP profile in this population over time, reflecting a combination of factors that deserve further investigation to inform successful prevention and control efforts.

Main messages:
Prevalence of hypertension in the South African mixed ancestry population showed highly significant increases over the six year period investigated. Known risk factors such as age, obesity, education level and alcohol drinking were associated with hypertension prevalence. Interventions to manage this condition are urgently needed.