Health risks in south Asian men: heightening awareness

M. JUSTIN S. ZAMAN AND KIRAN C.R. PATEL

Although south Asian men have higher rates of coronary heart disease and diabetes than the general population, there are some health benefits for this ethnic group.

Back in the 1950s, studies began to report differences in rates of coronary heart disease (CHD) between different ethnic groups. The stark statistic, demonstrated in populations from around the world, was that the south Asian group (predominantly people from India, Bangladesh, Pakistan and Sri Lanka) tended to have significantly higher rates of CHD than indigenous populations (Figure 1).1–4

ETHNIC DIFFERENCES IN CORONARY HEART DISEASE

Shaper and Jones in 1959 stated that ‘in the African population of Uganda, CHD is almost non-existent. In the Asian community, on the other hand, CHD is a major problem’.1 Adelstein in 1963 pointed out that among South Africans, ‘Asians’ (almost entirely of Indian descent) showed the most unfavourable mortality rates from cardiovascular disease and that these rates were among the highest of the national rates ever documented on record.3

Worryingly, Walker presented similar findings from South Africa 17 years later, as he examined the death certificates of members of different ethnic populations in Johannesburg who had died of ischaemic heart disease. The high mortality rate from CHD seen in white populations (especially among the Jewish sector) was matched and indeed exceeded by CHD rates in the Indians, while the rate among those deemed ‘coloured’ and ‘black’ was lower.5

Coronary heart disease in the UK

CHD remains the most common cause of premature death in the UK population as a whole, although mortality has been falling continuously since its peak in the early 1970s.6,7 We have much to be proud of in terms of the steady decline of CHD mortality over the past three decades, but the battle is by no means won, either at a population level or for different ethnic groups.
UK studies of mortality in the 1970s and 1980s highlighted differences in the cause of death between different immigrant groups. Balarajan presented data based on the 1981 census showing that mortality from ischaemic heart disease was highest in men born on the Indian subcontinent, with a standardised mortality ratio (SMR) of 136,6 adding value to the data he had presented seven years earlier showing higher proportional mortality due to ischaemic heart disease in immigrants to England and Wales from the Indian subcontinent.9

A study based on the 1991 census revealed higher SMRs for those born in south Asia.10 This study demonstrated that between 1971 and 1991, SMRs for ischaemic heart disease in the general UK population fell by 29 per cent for men, while south Asian immigrants experienced a shallower decline (20 per cent for men). Disparities in patterns of change were therefore beginning to be apparent more than 40 years ago. Latest data from the 2001 UK census noted that although coronary mortality fell among migrants, the rate ratios for coronary mortality remain higher for men from south Asia.11–13

The UK is not unique in that ethnic disparities in CHD mortality continue to be reported from around the globe. Sheth et al. reported on cardiovascular mortality among Canadians of European, south Asian and Chinese origin from 1979 to 1993.14 In their analysis of 1.2 million deaths, rates of death from ischaemic heart disease were highest among Canadians of south Asian origin, whereas those of Chinese origin had a substantially lower rate. In Palaniappan et al.’s (2004) study of CHD mortality for six ethnic groups in California between 1990 and 2000, proportional mortality rates were highest in Asian Indian men (161).15

**DIABETES IN SOUTH ASIAN MEN**

Why is this higher rate of CHD harboured in the south Asian man? It is well known that south Asians have substantially higher rates of diabetes, in some areas four- to six-fold higher than the general population, and this is often the most obvious CHD risk factor in this ethnic group (Table 1).16 Diabetes poses a disproportionately increased risk of morbidity and mortality from CHD. In a prospective cohort study of 828 south Asian and 27 962 non-south Asian patients in the UK with insulin-treated diabetes diagnosed at ages below 50 years, the SMR for south Asians (mainly of Indian or Pakistani descent) diagnosed with diabetes before 30 years of age was 3.9 (95 per cent CI 2.0–6.9) in men and 10.1 (5.6–16.6) in women, and in corresponding non-south Asian men and women, 2.7 (2.6–2.9) and 4.0 (3.6–4.3), respectively.17

Table 1. Ethnic differences in health and disease between men of white European and south Asian descent

<table>
<thead>
<tr>
<th></th>
<th>South Asian</th>
<th>White</th>
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<tbody>
<tr>
<td>Coronary mortality rates</td>
<td>Higher</td>
<td>Lower</td>
</tr>
<tr>
<td>Incidence of diabetes</td>
<td>Higher</td>
<td>Lower</td>
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<tr>
<td>Age of onset of diabetes</td>
<td>Younger</td>
<td>Older</td>
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<tr>
<td>Age of onset of coronary disease</td>
<td>Lower</td>
<td>Older</td>
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<tr>
<td>Cancer mortality rates</td>
<td>Lower</td>
<td>Equivalent</td>
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<tr>
<td>Prevalence of smoking</td>
<td>High in Bangladesh only</td>
<td>Equivalent</td>
</tr>
<tr>
<td>Incidence of prostate cancer</td>
<td>Lower</td>
<td>Equivalent</td>
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<tr>
<td>Access to coronary intervention</td>
<td>Equivalent</td>
<td>Equivalent</td>
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<tr>
<td>Uptake of statin treatment</td>
<td>Higher</td>
<td>Lower</td>
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<tr>
<td>Prognosis of coronary disease</td>
<td>Equivalent</td>
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</table>

That diabetes mellitus may have a worse prognosis in south Asians for future adverse coronary outcomes and diabetes-related complications has been proposed by others,18 with the finding that not only do south Asian patients have poorer knowledge and understanding of diabetes,19 but that the disease process per se continues at an accelerated pace towards end-organ damage, for example, CHD, renal failure, retinopathy and erectile dysfunction. Aside from diabetes, the usual suspects of sedentary lifestyle, tobacco use (in some instances smokeless tobacco in south Asians), poor diet, dyslipidaemia and hypertension all contribute to cardiovascular risk in south Asians.16

The migrant studies eluded to thus far have shown clear disparities in CHD between ethnic groups. Does the south Asian man escape with a generational leap? It appears not, since studies demonstrate that British-born children of south Asian origin under the age of 10 have a tendency to insulin resistance20 and obesity.21 A persistence of lower birth weight in second-generation south Asian babies born in the UK has been observed by others,22 which may ultimately result long-term in higher than average rates of diabetes and heart disease. Consequently, risk calculators or algorithms proposed in NICE guidelines for estimating cardiovascular risk weight accordingly for being a south Asian man.

**CANCER INCIDENCE**

However, things are not all bad news for the south Asian man. Historically, there has been good news on the cancer front. South Asians have a lower incidence of cancer than the general population, with
standardised incidence ratios of all malignant neoplasms reported as 68 per cent lower in men, while SMRs for all cancers have been reported between 58 at their best in Indian men to 85 at their worst in Bangladeshi men, both still better than the general population average.

Beware, however, the dark clouds on the horizon. Economic development has resulted in an increased uptake of sedentary lifestyle, tobacco use and high-fat diets, leading to the epidemiological transition as originally described by Omran. Increasing adoption of the detrimental aspects of a developed world lifestyle is resulting in a shift of epidemiological patterns of cancer in south Asians living in both the developed and developing global economies.

Rates of cancer in south Asians in England are higher than those seen on the Indian subcontinent, and the incidence of breast cancer is increasing in south Asian women too. Lung cancer mortality is currently lower among south Asian populations than in the general population of England and Wales, but it should be remembered that it is still the commonest cancer among south Asian men and its incidence is on the increase, so one must not be blasé about the fight against tobacco.

All-cancer mortality in south Asian migrants has been found to increase with duration of residence in England and Wales, even after adjusting for socioeconomic position. Prostate cancer in south Asian men in England remains at a lower incidence level in comparison with their white counterparts. Whether this will increase in the future to match white populations is hard to predict in the absence of a less clear causal pathway compared to cancers such as lung and colorectal cancers, which are more clearly driven by lifestyle factors, but surveillance of statistics is essential.

PREVALENCE OF SMOKING
Clearly there are inequalities in healthcare for many populations, but from a health needs assessment perspective, south Asian populations are often found wanting in most public health analyses. Such inequalities arise as a result of a complex interplay of awareness, appropriateness, access and acquisition of services. For example, 43 per cent of Bangladeshi men smoke compared to the national average of 27 per cent, yet in spite of high levels of motivation to quit, Bangladeshis tend to rely on willpower rather than on health service interventions, resulting in poor quit rates. Ethnic minority patients are significantly less likely to receive advice on smoking cessation. Like the white European population, studies find that

<table>
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<th>Solution for the healthcare practitioner</th>
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<td>Focus on prevention – treat coronary risk factors earlier in south Asians</td>
</tr>
<tr>
<td>Incidence of diabetes higher in south Asians</td>
<td>Focus on prevention – treat coronary risk factors earlier in south Asians, with lifestyle interventions from childhood (especially in avoiding central obesity from diet and physical inactivity)</td>
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<tr>
<td>Age of onset of diabetes younger in south Asians</td>
<td>Avoid complacency by ensuring uptake of risk factors does not increase, and ensure continuing awareness and equitable access to screening services in minority ethnic groups</td>
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<td>Incidence of cancer lower in south Asians</td>
<td>Maintain the status quo</td>
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<td>Maintain the status quo if appropriate</td>
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Table 2. Key interventions recommended to reduce the inequality in health between men of white European and south Asian descent
those in higher south Asian social classes have higher quit rates too.\textsuperscript{33}

Differential uptake rates for screening programmes by ethnic group have also been reported, with one pilot study on the uptake of colorectal screening for ethnic groups reporting significantly lower rates among south Asians.\textsuperscript{34}

**ACCESS TO CORONARY INTERVENTION AND UPTAKE OF STATINS**

Is there any good news for the south Asian man aside from the rising prowess of the Indian Premier League of cricket? Some good news might be appearing in the CHD world. It has long been recognised that access to coronary revascularisation services may, paradoxically, be increased in deprived areas in the UK (where south Asian communities tend to reside), probably as a result of their proximity to specialist cardiac centres such as teaching hospitals.\textsuperscript{35}

The introduction of pay-for-performance incentives in UK primary care has been shown to be associated with better and more equitable management of CHD across ethnic groups,\textsuperscript{36} and general practices with a higher proportion of south Asian patients have been reported as having higher rates of coronary angiography.\textsuperscript{37} In populations already selected for coronary angiography, south Asians were also not inequitably managed in terms of prescription medication,\textsuperscript{38} while the prognosis of coronary disease is equitable when comparing south Asians and white patients who have presented with angina.\textsuperscript{39}

Furthermore, more recent studies using data from the 2001 census and Quality and Outcomes Framework suggest that medical therapy such as statins, which play an important role in improving prognosis,\textsuperscript{40} is relatively more highly prescribed in south Asians and more deprived communities, suggesting that the needs of this high-risk group are being addressed in the NHS.\textsuperscript{41}

Overall, the well-known predisposition of the south Asian man to CHD necessitates an ever-greater vigilance in terms of preventing the emergence of risk factors and/or addressing them aggressively once present (Table 2). In the absence of symptoms, a man is a man when it comes to differentiating on the basis of ethnicity, but when it comes to awareness, not possessing a heightened awareness to these risk factors could blight the future of the south Asian man.

**Declaration of interests**

Justin Zaman and Kiran Patel are, respectively, Deputy Chair and Chair of the Board of Trustees of the South Asian Health Foundation, a UK charity.

**REFERENCES**


