

## Control of hypertension in South Africa: Time for action

Hypertension is an important worldwide public health challenge because of its frequency and associated risk of cardiovascular and kidney disease. It has been identified as the leading causative risk factor of mortality, and is ranked third highest as a cause of Disability-Adjusted Life Years (DALYs).<sup>1</sup> Data from Sub-Saharan Africa have highlighted the increasing importance of non-communicable diseases in this region, and countries have taken steps to develop relevant policies and programmes.<sup>2</sup> Cardiovascular disease (CVD) in this region is particularly poorly detected and treated in the primary healthcare setting.<sup>3,4</sup>

In this issue, Maepe and Outhoff highlight an example of this pitfall, in a retrospective, descriptive one-year hypertension prevalence study, conducted at Gauteng Harmony Mine Operations.<sup>5</sup> Of 4 297 subjects, representing 100% of the mining population in the study period, 4 286 (99%) were black, and 90% were male, with a mean age of 44 years. Results showed that 39.5% of subjects had hypertension, only 42% of whom received antihypertensive pharmacological treatment. An adequate target BP of <140/90 mmHg was achieved in 31% of treated subjects (13% of the total hypertensive population). The authors concluded that hypertension remains an important health challenge for the mining industry in South Africa; the detection, treatment and adequate control of this condition should receive high priority from mining authorities. The article portrays just one example of the reality of hypertension control in the country. By 2020, the global burden of fatal and non-fatal CVD is anticipated to grow in importance in both relative and absolute terms. It is estimated that there will be 68 million deaths worldwide, of which approximately 25 million will be attributed to cardiovascular causes. Globally, ischaemic heart disease and stroke are anticipated to remain the first and second leading causes of death, respectively.

CVD will remain a major cause of DALYs – a measure of the total burden of disease caused by a combination of premature death and non-fatal events. Developing countries will face a far greater challenge of CVD burden in the 21st century: it has been estimated that there were already twice as many deaths and more than 3 times as many DALYs attributable to CVD in developing countries in 1990 (9.1 million deaths, and 101 million DALYs); compared with 5.2 million deaths and 33 million DALYs in developed countries in the same year. The difference in disease burden between developing and developed countries is anticipated to be wider by 2020. In developing countries, the projected increase will include a greater occurrence of CVD in urbanised younger age-groups.<sup>2</sup>

The essential goals of any CVD programme are to: (i) establish efficient systems for estimation of the CVD-related burden of disease and its secular trends; (ii) estimate the levels of CVD risk, e.g. smoking, elevated cholesterol or blood pressure, in representative population samples to identify risk factors that require immediate attention; (iii) evaluate emerging risk factors, e.g. diabetic, fibrinolytic and homocysteine status, that may be of relevance to the population studies; (iv) evaluate traditional and emerging risk factors in the context of each society; and (v) develop health policies that integrate population-based measures of CVD risk modification, and cost-effective case management strategies for individuals who have clinically manifested CVD (or are at high risk of developing it).<sup>6</sup>

Appropriate national health policies have not emerged in many developing countries, including South Africa, because of: (i)

competing priorities – infectious and nutritional disorders are still a major health challenge, and HIV/AIDS occupies a large portion of the health resources; (ii) technology-based interventions that are favoured by policy makers and the media – the proximity of respected clinical cardiologists who belong to the social class most affected by CVD often results in iniquitous resource allocation; (iii) inadequate epidemiological data – there is a paucity of reliable data on the burden of the disease and the distribution of risk factors; (iv) poor presentation of the message to policy makers and the media; (v) discordant messages – false claims are made that risk factors for CVD are not important; (vi) failure to recognise the importance of prevention and cost-effectiveness – many health professionals are unconcerned about preventive action because of the lack of epidemiological education, pressures of providing healthcare in crowded clinics, and the absence of concerns of cost-effectiveness; (vii) anonymity – health professionals receive no direct recognition for their beneficiaries as they do when providing healthcare; (viii) economic and social constraints – dietary advice, although scientifically sound, may be irrelevant or impractical for reasons relating to the availability, affordability and acceptability of foodstuffs; (ix) vested interests – tobacco, salt and dairy companies influence policy makers and the media; and (x) lack of community mobilisation – no concerted efforts have been made to educate the community about the risk factors and dangers of CVD.<sup>7</sup> Community caregivers could be used to educate and treat mild hypertension in rural areas if medical services are unavailable.

At an individual level, the following factors affect therapeutic compliance in developing countries: (i) cost of medicines: in many developing countries including China, India and Nigeria, patients have to pay approximately 80% of the cost of their medicines ('out of pocket expenditure'), whereas in Europe, the US and Canada, in the region of 80% is paid by the state or medical insurance;<sup>7</sup> it is prudent to use low-cost generic medicines in South Africa, as discussed in the guideline in this issue;<sup>8</sup> (ii) communication with the patient in his or her own language; (iii) socio-cultural factors; (iv) alternative medicine; (v) difficulty in obtaining leave to attend the clinic; (vi) access to healthcare providers; (vii) patient understanding of treatment goals; (viii) patient-physician interaction; (ix) inadequate monitoring of patient follow-up; and (x) medicine side-effects, including medicine interactions and effects on co-existing conditions.

In conclusion, while the control BP in the US is 50%,<sup>9</sup> and across Western Europe varies from 27 to 41%,<sup>10</sup> there has been a substantial reduction in morbidity and mortality related to stroke, coronary heart disease and renal failure. Not a single initiative exists on the African continent to implement BP control strategies systematically on a population-wide scale, even for those at very high risk of death or disability.<sup>4</sup> For many such individuals, the first relevant medical attention is admission to hospital following a stroke.

For most low- and middle-income countries, the major obstacle to the control of blood pressure-related diseases is the absence of appropriate primary healthcare services.<sup>4</sup> There is a need to develop cost-effective methods for diagnosis of CVD, and low-cost lifesaving measures for all associated risk factors. Although tertiary care is growing, the trend should include the optimisation of resources and avoidance of heavy investment in high-cost, low-yield technologies.

It is hoped that the guideline of the Southern African Hypertension Society published in this issue<sup>8</sup> achieves its primary aim: to educate the medical, nursing, pharmaceutical and pharmacy professions on the urgent need to control hypertension in South Africa.

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