costs to the state sector will be R1 368. According to the Gaziano risk chart the patient must remain untreated for 10 years even if his BP remains persistently elevated at levels just below 180/110 mmHg, and this approach takes no cognisance of the patient's high lifetime risk for a CVS event.

With regard to the second case, Gaziano states that according to the SAH Guideline the patient will not be treated as he is at low risk. This is simply not true. The Guideline explicitly states that this patient must undergo lifestyle changes (cessation of smoking, dietary change and exercise), which will dramatically lower his risk. More importantly, however, Gaziano exploits a weakness in any risk table by creating an artificial patient with major risk factors just below the dichotomised thresholds. If we merely change the patient's age to 55 years and 1 month, he has 3 major risk factors and therefore is at high CVS risk. This type of anomaly can be just as easily exploited in the risk chart created by Gaziano because of dichotomisation of age. For instance, a 54-year-old man with a total cholesterol 6.9 mmol/l and BP 179/109 mmHg with no other risk factors, and a 53-year-old diabetic with total cholesterol 4.9 mmol/l and BP 169/109 mmHg, have the same CVS risk as a 35-year-old male with BP 130/80 mmHg and total cholesterol 4.1 mmol/l, namely less than 20%, and both patients require no drug treatment. However, it must be explicitly stated that these arguments are not directed at belittling the global risk chart created by Gaziano, but the use of his chart in the South African context needs to be debated. It must always be emphasised that every guideline or risk chart (table) has its potential weaknesses or anomalies that can be exploited by creating imaginary patients. These risk charts are guidelines only and must be used in conjunction with good clinical judgement, assessment of target organ damage and recognition of associated conditions.

Finally, we would like to state categorically that the SAH Guideline in no way intends to diminish the need for lifestyle intervention as implied by Gaziano. It is quite clear from the whole tone of the guideline that lifestyle intervention is critically important and is the first step in the treatment algorithm regardless of CVS risk.

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Salmonella typhi central nervous system infection

To the Editor: This report aims to document *Salmonella typhi* as a cause of central nervous system infection.

Typhoid fever is caused by the facultative intracellular organisms *S. enterica* serotype Typhi (*S. typhi*) and *S. paratyphi*.[1] Infection is mainly associated with ingestion of contaminated water and food.[1] One to five per cent of people become chronic carriers despite antibiotic treatment,[1] while co-infection with *Schistosoma* spp. may contribute to this condition.[2] With an incubation period ranging from 5 to 21 days,[1] characteristic symptoms may include headache, fever, gastrointestinal disturbances, relative bradycardia, splenomegaly and leucopenia.[1] Extra-intestinal infectious complications involving various systems may occur.[1]

A 47-year-old man presented with generalised weakness and paralysis, including a spell of general seizures. Clinical examination revealed a Glasgow Coma Scale of 5/15, rigidity, increased tone, papilloedema and neck stiffness. Lateralising signs were present.

A cerebrospinal fluid (CSF) sample was collected and processed. CSF microscopic analysis revealed 35 polymorphonuclear cells/µl, 7 lymphocytes/µl and 188 erythrocytes/µl. Gram-negative bacteria were observed on Gram stain, while capsular antigen detection was negative. Serum C-reactive protein level was 194.5 mg/l and full blood count revealed a leukocyte count of 6.20 x 10^9 cells/l. Computed tomography (CT) revealed communicating hydrocephalus.

Non-lactose fermenting colonies were observed on MacConkey agar within 24 hours (Oxoid, England). Biochemical identification (API 20E, Biomerieux SA, Marcy-l'Etoile, France) revealed *S. typhi*. Trace amounts of hydrogen sulphide, positive Vi antigen agglutination (Wellcolex, Remmel) and the general biochemical inert nature, confirmed the identification.[3] The isolate tested sensitive to all antibiotics analysed (enterobacteriaceae panel, Clinical Laboratory Standards Institute).[4-6]

Intravenous cefotaxime (2 g q4h) was commenced at admission. However, the patient died 2 days later.

Central nervous system (CNS) infection with *S. typhi* occurs in 3 - 35% of patients. A wide range of CNS manifestations include encephalopathy, meningitis, transient parkinsonism, motor neuron disorders, ataxia, cerebral abscesses, cerebral oedema, seizures, and Guillain-Barré syndrome.[1] Patients present with fever, headache, vomiting, seizures, altered state of consciousness, papilloedema and focal neurological deficits.[1] Neuro-imaging may be helpful when a lumbar puncture is contraindicated.[1] In this case microbiological examination of the CSF established the diagnosis of *S. typhi* infection. Parenteral ceftriaxone for 14 - 28 days is the

recommended therapy.[1] Corticosteroids are recommended as adjunctive therapy for children with *S. typhi* meningitis, although this is still controversial in adults.[1] A review from 1884 to 1984 documented eight cases of focal intracranial lesions caused by *S. typhi*.[1,7] Bacteraemia with *S. typhi* may involve multiple systems; however serious extra-intestinal infectious complications are relatively uncommon.

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SAMA URGES DOCTORS TO IMPROVE SKILLS FOR EFFECTIVE MANAGEMENT OF TUBERCULOSIS

The growing incidence of extreme drug-resistant tuberculosis in South Africa highlights the urgent need for more doctors to diagnose, prevent, detect and manage TB effectively. Currently South Africa ranks seventh in reported TB cases in the world, and is among the 22 high-burden countries targeted as part of the World Health Organization's Stop TB initiative. In 2002, the incidence rate in South Africa was just under 300/100 000 population.

The South African Medical Association (SAMA) recognises the threat that TB poses to the South African population. SAMA, in conjunction with the Foundation for Professional Development (FPD), has embarked on a project that offers doctors countrywide the opportunity to enrol for a course in the management of tuberculosis. The training course is specifically targeted at doctors in the private sector with a view to complementing the efforts and activities around TB in the public health sector.

'We must pool our skills and resources to deal with the burden of TB and the effect the disease has on the quality of life and the productivity of our population. SAMA encourages every doctor to enrol for this course,' said Dr Aquina Thulare, Secretary-General of SAMA.

A considerable international grant from PEPFAR has made it possible for the FPD to offer this training programme at only R228 per person. Without sponsorship, this course would have cost approximately R2 200.

The course is aimed at providing doctors with the appropriate skills to:

- Diagnose, prevent, detect and manage TB
- Treat tuberculosis
- Prevent long-term complications with the reduction of premature morbidity and mortality
- Promote education and self-care
- Control associated disorders
- Promote therapy compliance
- Improve quality of life and productivity
- Reduce the economic burden on the individual, family and community.

The training course, which comprises self-study modules and a 2-day interactive workshop, will be accredited according to the CPD guidelines of the Health Professions Council of South Africa published in November 2006.

Dates and venues of workshops for the Management of Tuberculosis

Venue	Date
Midrand	March 10 and 11
Cape Town	March 17 and 18
Kimberley	April 14 and 15
Port Elizabeth	April 21 and 22
Durban	May 5 and 6
Polokwane	May 19 and 20
Nelspruit	May 26 and 27
Bloemfontein	June 2 and 3
Klerksdorp	June 9 and 10

The first workshop is scheduled for March 10 and 11 in Midrand. For more information and registration, contact Pepe Mchiza or Zandi Pule on 012 481-2089/2101 or enquire at pepem@foundation.co.za / zandip@foundation.co.za