

EDITOR'S CHOICE

Bottom-lining the 'zero-sum' game

The Competition Commission's previous interventions in the private healthcare market may have had unintended consequences (arguably skewing the balance of power between dominant hospitals and medical aids, for example). However, the latest probe into unsustainable distortions in this sector deserves the support of all players – not least in their own self-interest. In *Izindaba*, Chris Bateman^[1] looks at the legal amendment that gives serious 'teeth' to the impending probe (expected to take 2 years from 2014) – making it a much less benign creation than the one that forced the banking sector to lower client charges in 2006. Reportedly, corporate health executives are taking seriously legal advice to check out their systems for collusive price hiking and/or cut-throat anti-competitive behaviour that leaves the patient out of pocket and headed for an already overloaded public sector. It's little wonder they're paying attention given how hostile such purely commercial behaviour will render legislators, who are hugely invested in accelerating National Health Insurance so that healthcare becomes more generally affordable and accessible. What's been a complex 'zero-sum' game with universal finger-pointing by key players could become a lot more transparent for the most important person of all – the patient.

Don't blame the products for poisoning – blame the end-users!

An editorial^[2] and two articles from the Tygerberg Poison Information Centre (TPIC) at Tygerberg Hospital,^[3,4] on which hospitals and practitioners depend for advice on poisoning, reveal the scope of the problem. **The good news** is that the majority of cases reflect accidental exposure. We may think that pesticides are responsible for most human incidents, but the TPIC studies show that agricultural use of pesticides is responsible for fewer than 1% of exposures. **The bad news** is that end-users of poisonous substances are highly irresponsible in their storage and use! Safe storage, as directed on their labels, does not exist in most households, with risk of exposure for children and domestic animals. The illegal sale of decanted pesticides in unmarked containers by street vendors further compounds the problem.

Healthcare professionals have insufficient knowledge about pesticides to be able to arrive at the correct diagnosis of toxicity and are frequently unable to accurately classify the agent(s) responsible for the patient's illness. This is where expert advice from a PIC can facilitate correct treatment. A major 'culprit' is the carbamate pesticide aldicarb, sold as 'rat poison' (variously named 'rat poison', 'rattex', 'two step', 'galephirime' or 'halethrin'). Aldicarb is sold legally in SA for restricted agricultural use only, as Temik, but is sold illegally

in unlabelled sachets. It is a cholinesterase inhibitor and *not* a long-acting anticoagulant.

In the TPIC's experience the most common exposures involve paracetamol and household pesticides such as anticoagulant rodenticides, pyrethroids, some cholinesterase inhibitors and irritant/corrosive cleaning agents, all of which are readily accessible on supermarket shelves. Begging the question: should these not be sold, as cigarettes and alcohol are, in restricted areas of the supermarkets to make the general public aware of their potential toxicity?

Vaccination against HPV for girls ... and boys?

At any given time, 20% of women harbour cervical human papillomavirus (HPV), and two-thirds of invasive cervical cancers are attributable to oncogenic types 16 or 18. It gets worse: individuals infected with HIV are at an increased risk for HPV-related cancers.

The World Health Organization recommends that routine HPV vaccination be included in national immunisation programmes. Two vaccines, Cervarix (GlaxoSmithKline) (against HPV types 16 and 18), and Gardasil (Merck & Co.) (against HPV types 6, 11, 16 and 18) represent a major breakthrough for the prevention of cervical cancer. Although licensed for use in both the public and private healthcare sectors in SA, they are currently only available in the latter sector.

A vaccination demonstration project in KZN^[5] has shown a high uptake, using school health teams to undertake the HPV vaccination of girls in schools. Its recommendations are relevant to a future national rollout of school-based HPV vaccination, as part of the integrated Department of Health primary healthcare and school health programmes.

Screening for HPV

High-risk human papillomavirus (hrHPV)-based screening tests offer the prospect of improving cervical cancer screening programmes. Women attending public sector primary healthcare clinics were invited to participate in Richter *et al.*^[6] cervical cancer screening study. The results were unsettling. The prevalences of HPV infection and abnormal cytology were much higher than previously reported, reflecting sexual behavioural patterns, the largely unscreened and therefore untreated status of the female population, and the high background HIV prevalence.

Hepatitis B guideline 2013

Many South Africans have chronic hepatitis B virus (HBV) infection, leading to illness ranging from a low viraemic immune control state to progressive chronic hepatitis, and the potential to develop

cirrhosis, liver failure and hepatocellular carcinoma. There have been significant therapeutic advances over the past decade, and the decision to treat and the choice of therapy depend on both the phase of chronic infection and on patient factors. These therapeutic complexities are addressed in our 2013 guideline.^[7]

Autism in Izindaba^[8]

The *SAMJ* hopes that in this especially vulnerable country rife with HIV/AIDS, TB and malnutrition, doctors and the public won't shy away from vaccinating our children. The link between autism and the measles, mumps, and rubella (MMR) vaccination has been thoroughly discredited:^[9] the research was fraudulent. Following a General Medical Council (GMC) investigation and findings that 'the three authors acted unethically and dishonestly in preparing the research into the MMR vaccine', the editors of the *Lancet* announced on 2 February 2010 that they 'fully retract this paper from the published record.'^[10] The case stands as one of the worst cases of fraudulent research in history! Our children (provided they aren't immune-compromised) deserve to receive whatever vaccines are available!

TB diagnosis in children

SA has one of the highest TB burdens in the world, after India and China, and one of the health targets set in the 2010 Millennium Development Goals is to halt and reverse the incidence of TB by 2015. Diagnosing (disseminated) TB in children is difficult: often sputum can't be obtained, necessitating gastric aspirates. Even then, identification of acid-fast bacilli is possible in less than 15% of samples and only 30 - 40% prove positive on culture. A positive tuberculin skin test, while reactive in most children within 3 - 6 weeks after initial infection, may be delayed for up to 3 months. False-negative TSTs occur in up to 10% of children who are TB culture-positive, particularly in the context of severe TB illness, malnutrition, immunosuppression and the presence of other severe infections.

A paper from Red Cross Hospital^[11] suggests a low threshold for undertaking bone marrow aspirate and trephine biopsy, especially in HIV-positive children in whom cytopenias, organomegaly and fever arouse suspicion of disseminated TB.

Validation of the revised South African Triage Scale (SATS) for children

A survey of 2 000 children, presenting to 6 emergency units, has confirmed that the revised paediatric SATS is a robust and safe triage tool for children.^[12] With a 91% sensitivity and a 95% negative predictive value, it has excellent ability to identify potentially seriously ill children.

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1. Bateman C. Whistle blast on private healthcare's 'zero sum game'. *S Afr Med J* 2013;103(5):278-279. [<http://dx.doi.org/10.7196/SAMJ.6916>]
2. Verdoorn GH. Toxicovigilance: Experience of the Tygerberg Poison Information Centre in context. *S Afr Med J* 2013;103(5):288-289. [<http://dx.doi.org/10.7196/SAMJ.6840>]
3. Veale DJH, Wium CA, Müller GJ. Toxicovigilance I: A survey of acute poisonings in South Africa based on Tygerberg Poison Information Centre data. *S Afr Med J* 2013;103(5):293-297. [<http://dx.doi.org/10.7196/SAMJ.6647>]
4. Veale DJH, Wium CA, Müller GJ. Toxicovigilance II: A survey of the spectrum of acute poisoning and current practices in the initial management of poisoning cases admitted to South African hospitals. *S Afr Med J* 2013;103(5):298-303. [<http://dx.doi.org/10.7196/SAMJ.6648>]
5. Moodley I, Tathiah N, Mubaiwa V, Denny L. High uptake of Gardasil vaccine among 9 - 12-year-old schoolgirls participating in an HPV vaccination demonstration project in KwaZulu-Natal Province. *S Afr Med J* 2013;103(5):318-321. [<http://dx.doi.org/10.7196/SAMJ.6414>]
6. Richter K, Becker P, Horton A, Dreyer G. Age-specific prevalence of cervical human papillomavirus infection and cytological abnormalities in women in Gauteng Province. *S Afr Med J* 2013;103(5):313-317. [<http://dx.doi.org/10.7196/SAMJ.6514>]
7. Spearman CWN, Sonderup MW, Botha JF et al. South African guidelines for the management of chronic hepatitis B: 2013. *S Afr Med J* 2013;103(5):335-349. [<http://dx.doi.org/10.7196/SAMJ.6452>]
8. Bateman, C. Autism - mitigating a global epidemic. *S Afr Med J* 2013;103(5):276-277. [<http://dx.doi.org/10.7196/SAMJ.6915>]
9. http://en.wikipedia.org/wiki/MMR_vaccine_controversy (accessed 4 April 2013).
10. Editors of the *Lancet*. Retraction - Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children. *Lancet* 2010;375(9713):445. [[http://dx.doi.org/10.1016/S0140-6736\(10\)60175-4](http://dx.doi.org/10.1016/S0140-6736(10)60175-4)] [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(2810%2960175-4/fulltext#](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(2810%2960175-4/fulltext#) (accessed 4 April 2013).
11. Grewal R, Abayomi EA. Bone marrow morphological features and diagnostic value in paediatric disseminated tuberculosis in the setting of increased HIV prevalence. *S Afr Med J* 2013;103(5):326-329. [<http://dx.doi.org/10.7196/SAMJ.6384>]
12. Twomey M, Cheema B, Buys H, et al. Vital signs for children at triage: A multicentre validation of the revised South African Triage Scale (SATS) for children. *S Afr Med J* 2013;103(5):304-308. [<http://dx.doi.org/10.7196/SAMJ.6877>]



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^{*}Veale DJH, Wium CA, Müller GJ. Toxicovigilance I: A survey of acute poisonings in South Africa based on Tygerberg Poison Information Centre data. *S Afr Med J* 2013;103(5):293-297. [<http://dx.doi.org/10.7196/SAMJ.6647>]

[†]Veale DJH, Wium CA, Müller GJ. Toxicovigilance II: A survey of the spectrum of acute poisoning and current practices in the initial management of poisoning cases admitted to South African hospitals. *S Afr Med J* 2013;103(5):298-303. [<http://dx.doi.org/10.7196/SAMJ.6648>]



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[‡]Verdoorn GH. Toxicovigilance: Experience of the Tygerberg Poison Information Centre in context. *S Afr Med J* 2013;103(5):288-289. [<http://dx.doi.org/10.7196/SAMJ.6840>]