group. For example, there was no increase in prevalence of infection in children by age. The non-response rate in the survey was high because 29% of the listed visiting points and 37% of eligible respondents in the remaining households did not participate. The survey results are questionable in other ways; prevalence among children by race is the opposite of that shown by other surveillance and death registration data, and the HIV-1 pattern by provinces in the survey was also inconsistent with surveillance and previous research. The survey also provides no evidence that AIDS is nearly as important a cause of mortality among children and teenagers as the survey numbers would suggest.

When the Gisselquist group’s first set of papers came out, they were reported by the world’s media somewhat uncritically as evidence that unsafe sex was not the primary mode of transmission of HIV-1 transmission in sub-Saharan Africa. Already, the US Senate Committee on Health, Education, Labor and Pensions have held hearings to decide whether HIV/AIDS funds should be devoted to programmes that target unsafe injections rather than unsafe sex. The danger of taking Gisselquist’s research in an uncritical way is that it may lead to a reduction in the impact of the message that unsafe sex transmits HIV-1 — something for which the evidence is compelling if examined carefully and systematically. That is not to say that we should take no notice of the documented problems around the re-use of disposable syringes. But the emphasis should be placed purely on ensuring sterile technique, and scarce resources should not be devoted to research into the extent of nosocomial transmission of HIV-1.

reach our market. These four insulin ranges have been assigned international individual colour codes (identified by specific pantone colour numbers) now adhered to by all major manufacturers (Table I). It was also unanimously agreed that insulin manufacturers would not use the colour-coding initiative in their marketing activities, nor would any single company claim ownership of it.

All parties are still actively working together to produce a colour code for insulin analogues, particularly as new long-acting clear solutions — no longer cloudy suspensions — could easily be mistaken for fast- or short-acting similarly clear insulins.

The short-acting clear-looking regular/soluble range is coded yellow, shared by the products Actrapid and Humulin R. Their average time course of action is reasonably reproducible and predictable, with onset in 30 minutes, peak 2 - 5 hours and duration 5 - 8 hours.

The most used intermediate/long-acting cloudy-looking products belong to the NPH isophane range and are coded light green, shared by Protaphane and Humulin N. Their time action is fraught with large intra-individual variations in bioavailability due to inconsistent subcutaneous absorption. On average the onset of action is 1 - 3 hours, peak at 6 - 12 hours, and duration 16 - 24 hours, but these may vary substantially between patients, depending on the site and depth of injection and the ability of patients to accurately re-suspend the cloudy NPH insulin in syringes or pens before injection.

Also intermediate/long-acting and cloudy in appearance, insulin preparations in the lente range, now coded turquoise and comprising Monotard and Humulin L, are much less frequently used nowadays as they suffer even more significant pharmacokinetic limitations and inconsistent bio-availability. Patients would benefit from being switched over to NPH insulins instead, and for safety reasons these preparations should eventually be withdrawn from use.

Biphasic 30/70 mixtures are now all coded brown and the products available in this premixed range are Actraphane 30/70 and Humulin 30/70. These are cloudy fixed mixtures of regular and NPH insulins with an average time course of action, with onset in 30 minutes, peak at 2 - 12 hours and duration 16 - 24 hours. They share with NPH insulin a number of common disadvantages including inconsistent absorption and the need for adequate re-suspension before injection.

The large intra-individual and interpatient variations in bioavailability are one of the most difficult aspects of insulin treatment, making it difficult to plan dosing accurately. Adequate instructions regarding pre-injection re-suspension can make a difference of up to 50% in the effectiveness of cloudy prolonged-action insulins.

The present worldwide strategy of universal colour coding will facilitate product recognition, making it safer for health care professionals and patients alike. The minor pharmacokinetic differences between human insulins of different sources of manufacture (i.e. *Escherichia coli* and yeast), if any, are overshadowed by the large variability in absorption which is shared by all cloudy insulins and is inherent to their state of suspensions. Therapeutic product equivalence, although never absolute, is as close as it has ever been before.

Patients can now be moved safely from one insulin brand to another when circumstances of availability or price compel the prescriber or dispenser to do so, from pens to syringes and vials or *vice versa*, unit for unit, as long as the colour code identification is respected (and the concentration is standardised, which it is in South Africa). Patients for whom it is deemed preferable to use a pen device, viz. those on a multiple injection regimen, those with poor vision, arthritis, the young, the elderly, should not be summarily switched to syringes and vials without due consideration for their personal circumstances. This would be a major retrogressive step which could adversely influence their adherence to treatment and quality of life.

The act of dispensing insulin will thus be made safer and more educative, with opportunities for enhanced pharmacovigilance regarding colour-code recognition, proper re-suspension, recommendatations for storage, and emphasis on dialing or drawing-up and injection techniques with the specific delivery device prescribed.