this regard that we find it difficult to understand how this study could have been subjected to the rigorous peer review expected of the *BMJ*, there being major design faults and virtually no objective data.

We would like to re-emphasise that all of the children studied were receiving intravenous morphine with or without additional sedation during the procedures described. Nonetheless there was no attempt to correlate the development of adverse responses with dose, blood concentration of the drug, or even a subjective assessment of baseline analgesia. Furthermore, grimacing and crying accounted for 95 of the 99 (95%) "adverse" responses recorded, but we are given no details of duration, associated blood pressure and heart rate response, and no control data. For example, how many normal babies grimace or cry during their routine care? What is the incidence of grimacing and crying in children undergoing non-invasive procedures (clinical examination, echocardiography, etc) on the intensive care unit? We are not suggesting that none of the children studied experienced short lived discomfort during some of these procedures, but we would argue that the abolition of all response is a naive goal. No doctor or nurse wishes to see any patient in pain or distress, but surely no one would suggest that the administration of analgesics and sedative drugs should be guided by anything other than the fundamental rule of therapeutics, that of the risk to benefit ratio of each drug given. This, of course, is the real dilemma that needs to be addressed in scientific studies. How can we minimise discomfort (both physical and emotional) and yet obtain the least haemodynamic and respiratory suppression in these often frail and compromised young children?

Many of these criticisms could have been avoided if a carefully designed and properly controlled study had been performed. We would have been more than happy to have helped the authors in this regard. Unfortunately we were given no such opportunities. We were therefore surprised to read the acknowledgement of our support of the published study in Southall's follow up letter the following week.²

Finally, we would like to express our concern regarding the *BMJ*'s inaccurate press release. It is clearly of utmost importance that the information contained within such releases be correct. The resulting newspaper reports incorrectly suggesting that 30% of invasive procedures performed in children in our hospital are performed without analgesia were untrue and extremely offensive and damaging to the reputation of the institution and its medical and nursing staff. The *BMJ*'s prompt apology is to be commended but this has done nothing to defuse the justifiable concern in the newspaper reading public and, perhaps more importantly, in the parents of our current and future patients.

In the increasingly competitive and "commercial" environment of our National Health Service it is more important than ever that authors and editors are aware of the possible implications of their actions.

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Most units have acceptable written protocols

EDITOR,—David Southall and colleagues report the findings of a study drawing attention to significant degrees of pain and stress experienced by a

group of children undergoing intensive care.¹ They emphasise the need to limit the number of invasive procedures and the importance of using appropriate analgesic and sedative agents to minimise discomfort and stress. These findings are not, however, typical of practice in the great majority of established paediatric intensive care units.

In my own unit there are written protocols and all infants and children being ventilated receive continuous infusions of morphine with supplementary sedation provided by midazolam; if intestinal absorption is occurring, supplementary sedation may be given nasogastrically with phenothiazines or benzodiazepines. Endotracheal intubation is almost always performed under a short general anaesthetic. Additional invasive procedures, including insertion of central venous or arterial cannulas, can be undertaken at the same time; routine blood sampling can then be performed directly and painlessly from these intravascular lines during the child's stay in the unit. When intravenous cannulas need resiting it is usual to apply lignocaine cream over an appropriate vein; other painful procedures such as chest drain insertions are rarely so urgent that there is no time to infiltrate local anaesthetic. In the ventilated child, manoeuvres such as chest physiotherapy may be preceded by an intravenous bolus of a short acting opioid analgesic such as fentanyl or alfentanil. Similar analgesic and sedative regimens have been used routinely in paediatric intensive care for many years, certainly more so than in neonatal intensive care units.^{2,3}

There is room for improvement. We need to refine and tailor the administration of analgesic and sedative agents to the individual requirements of each patient. Further information is required about the effects and the pharmacokinetics of these drugs when used over prolonged periods in critically ill children. Withholding the use of adequate doses of appropriate analgesics and sedatives from infants and children undergoing intensive care cannot be justified⁴; it is therefore reassuring that a recent survey of paediatric intensive care units in the United Kingdom confirms that there is widespread use of these agents, given usually by continuous infusion.⁵

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AIDS in Africa

EDITOR,—Neither the *Dispatches* television documentary "AIDS and Africa" nor Angus Nicoll's review¹ or the reaction to it in the *BMJ* did justice to the facts. People should make no mistake: there is a major epidemic of HIV-1 infection in sub-Saharan Africa. At a recent news conference Dr Michael H Merson, director of the World Health Organisation's global programme on AIDS, dismissed contentions that the spread of the disease in Africa was to some extent a myth. "This is a terrible epidemic, no myth."²

Merson's statement was based on WHO's statistics, the most recent of which were given in a press release dated 21 May 1993. Latest estimates indicate that an estimated 14 million people have been infected by HIV; the worst affected area is sub-Saharan Africa, where over eight million

people have been infected; and as HIV continues to spread the number of cases of AIDS in Africa is increasing. Already, an estimated 1.75 million men, women, and children in sub-Saharan Africa have developed AIDS—two thirds of the global figure.

Commenting on WHO's figures, Dr Benjamin Nkowane, chief of epidemiological research and forecasting for the global programme on AIDS, stated that these estimates had been reached using a database that had been compiled from both published and unpublished results of surveys (Royal Society of Medicine conference on emerging patterns of heterosexual HIV infection and transmission, London, March 1993). The impact of the epidemic on the health service is serious. "In Kinshasa, Zaire; Lusaka, Zambia; Kigali, Rwanda; and Bujumbura, Burundi, the percentage of beds occupied by AIDS patients ranged from 40 to 70%. Most places are therefore overwhelmed by the epidemic.... There has been an upsurge of tuberculosis, ... the commonest opportunistic infection among HIV infected individuals in Africa. The prevalence of HIV infection among tuberculosis patients... is as high as 60% in some places." The epidemic is "exactingly high social and economic costs. AIDS in Africa strikes the young and the middle aged adults, who are the mainstay of the family, the pillars of society and the very heart of the workforce."

Those with a stomach for more figures and calculations should read *AIDS in the World—A global report*, the most comprehensive and authoritative analysis of the confrontation between humans and this virus.⁴ Two forecasts about sub-Saharan Africa are that by 2000 there will have been 5-10 million cases of AIDS and that the seroprevalence of HIV in the 15-49 age group will be 10% in urban populations and 3% in rural areas. Even figures a fraction of that would constitute a major epidemic.

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Clozapine in the management of schizophrenia

All schizophrenic patients would benefit

EDITOR,—Steven R Hirsch and Basant K Puri give an excellent distillation of the status of clozapine.¹ They state that the schizophrenic patients most likely to benefit from clozapine are those who have not responded to other antipsychotic drugs. This implies that schizophrenia resistant to treatment is a variant form of the illness for which clozapine is peculiarly effective. Not so: clozapine is a superior antipsychotic drug for schizophrenia generally. This was so in early trials,² and since the drug's reintroduction to Britain greater rates of response (60-80%) have been achieved^{3,4} in patients who have had the disease for a shorter time than those in Kane *et al*'s trial of schizophrenia.⁵

It is really the Committee on Safety of Medicines' concern about agranulocytosis that has led to clozapine being restricted to more severe and resistant cases. Indeed, the patients with drug resistant disease in Kane *et al*'s study were probably also relatively more resistant to clozapine than the general population of patients with acute disease or with an acute relapse, who may expect dramatic