Reform of the Public Health Act

We agree with Richard Coker1 that the vast majority of non-compliant cases of tuberculosis can be dealt with by a mixture of directly observed therapy (DOT) and inducements. However, when DOT fails in a few cases each year, despite intensive team effort and carrots such as housing or food vouchers, the Public Health Act may have to be invoked. We have had recourse to this measure four times in the past six months but, though in a variable breathing space, it is extremely costly and proved ineffectual as a solution each time.

Once the patient is admitted there are still potential problems. Treatment cannot be enforced and patients can abscond. There have also been instances of patients assaulting staff, physically and sexually, issuing death threats, breaking hospital property, and terrorising other patients, even interfering with and destroying medical equipment. Dealing with such patients puts hospital staff and patients under unacceptable pressure and requires extra staffing for secure purposes. NHS hospitals were not designed for, nor are they staffed adequately for, custodial purposes.

There is an urgent need to review the Public Health Act and make provisions for small specialist units staffed by nurses with training in and an aptitude for interpersonal skills. Admission to the unit would usually only be required for short periods of time until precipitating circumstances were resolved and alternative arrangements made. The threat of compulsory admission, or a short period thereof, may induce a behavioural change in the patient, allowing DOT to be successful after failing previously. In addition, a centrally based mobile unit of trained staff could be available to help guide teams over emergencies and could reduce the need for the specialist unit, enabling more non-adherent patients to be managed in the community.

We call upon the Department of Health to examine and implement these proposals.


AUTHORS’ REPLY Dr Jasani misquotes us when he says we suggested that the positive findings are probably a consequence of PCR contamination; we listed laboratory contamination of samples as one of several possible explanations for differing results. Dr Jasani suggests that our failure to identify SV40 may be due to inadequate sensitivity and he states that the sensitivity of our assay, which we reported at one copy of SV40 per cell, is below the threshold for detecting SV40 in human mesotheliomas. All the authors reject the possibility that he may be correct, but he does not identify any evidence to support his assertion. The studies which have identified SV40 in mesotheliomas from Finland and Sweden, on which he refers, including one of which he was a co-author, did not report sensitivity of more than one copy per cell.

The multi-institutional study to which Dr Jasani refers examined only 12 cases of mesothelioma from one hospital in New York, but the samples were analysed in four laboratories including one in Finland which had previously reported negative results for SV40 in local mesotheliomas. All the authors therefore rejected the possibility that this was because SV40 contaminated vaccines had not been used in Finland. This evidence points to demographic differences rather than lack of sensitivity as a more likely explanation for differing results from different series.

It appears from the collective results of various studies that the prevalence of SV40 in mesothelioma may be greater in the USA than in Europe, possibly as a consequence of
more widespread use of contaminated polio vaccine in the USA. However, epidemiological evidence indicates that the incidence of mesothelioma in the USA has peaked, whereas a continuing increase in incidence over the next 20 years is expected in Europe. The latter may explain the apparent high mortality of CFRD patients as reported by the Cystic Fibrosis Foundation. In the management of patients with CFRD, every effort should continue to be made to improve the clinical and nutritional status of patients so that the impact of the development of CFRD is kept to a minimum.

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Methacholine challenge and sputum induction

Spenevolo and colleagues claim that a methacholine inhalation challenge carried out one hour before sputum induction in patients with stable asthma does not significantly alter the cellular, eosinophil cationic protein (ECP), or albumin constituents of sputum. These results, if correct, are important for both clinical practice and clinical trials where information regarding airway hyperresponsiveness and inflammation is needed. Being able to perform a methacholine challenge and sputum induction on the same day would be one consequence.

Sixteen subjects with asthma were studied on two days within a week. Sputum induction was performed alone on one day and one hour after a methacholine challenge on the other. Cell counts and the biochemical characteristics of the two sputum samples were compared using the Wilcoxon signed rank test and a value of p<0.05 was considered statistically significant.

The small sample size, variability in the data, and p values near significance for neutrophils (p = 0.06) and macrophages (p = 0.08) led us to determine the power of the study. The results of a power analysis for paired continuous data showed that the study only had a 36%, 29%, 10%, 6.6%, and 19.5% chance of detecting a difference of macrophage, neutrophil, eosinophil, lymphocyte and epithelial cell counts, respectively, and 6.0% and 15.3% for ECP and albumin. Hence, while methacholine may not influence sputum cell counts, this study is too underpowered to reach this conclusion.

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rhDNase in cystic fibrosis

Cystic fibrosis is a disease that is relatively rare but expensive for patients, families, and carers. The introduction of rhDNase has been associated with controversy as to its benefits and costs. Milla describes the experience in a centre that prescribed this drug to patients, 60% of whom had an FEV1 of more than 80% predicted at the time of prescription. Overall, the group had an accelerated decline in lung function following its introduction. This study illustrates the importance of patient selection and follow up in the prescription of rhDNase. Paediatricians and chest physicians from the South & West Region of the UK have audited their use of DNase as part of their contribution to the South & West Cystic Fibrosis database. In 1995 78 (12%) of the 664 patients receiving care within the region had been prescribed DNase. This had risen to 143 (22%) in 1996. We subsequently defined criteria for its use: patients over five years of age, FEV1 <70% predicted, and more than one course of intravenous antibiotics during the previous year. In 1995 12 (17%) of patients receiving DNase did not appear to meet these clinical criteria. A further 36 patients who were eligible under these criteria were not receiving the drug.

Innes' rightly emphasises the responsibility of carers to target this treatment effectively—it is also important that treatment is seen to be equitable and not dependent on postcode. Our experience illustrates that a regional cystic fibrosis database can be a clinically relevant and cost effective device for targeting appropriate treatment. The annual cost of DNase for two patients would be sufficient to fund a regional audit to monitor and influence this and other expensive treatments in patients with cystic fibrosis.

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