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Because we receive many more letters than we have room to publish we may shorten those that we do publish to allow readers as wide a selection as possible. In particular, when we receive several letters on the same topic we reserve the right to abridge individual letters. Our usual policy is to reserve our correspondence columns for letters commenting on issues discussed recently (within six weeks) in the BMJ.

Letters critical of a paper may be sent to the authors of the paper so that their reply may appear in the same issue. We may also forward letters that we decide not to publish to the authors of the paper on which they comment.

Letters should not exceed 400 words and should be typed double spaced and signed by all authors, who should include their main degree.

Crime and psychopathology

SIR,—In the 1970s 34% of people in English prisons were found to have psychopathology severe enough to justify psychiatric treatment[1] and a similar figure was found in Scotland (R S Bluglass, personal communication). Last year Taylor and Gunn examined people on remand at Brixton prison on charges of violent offences and found an over-representation of sufferers from schizophrenia, exceeding epidemiological expectations by 22·5 times.[2] This novel situation had not been seen in earlier surveys: previously the ratio of schizophrenic patients charged with or convicted of violent crimes corresponded to the proportion of sufferers in the population—3 to 4 per 1000 at any particular time.[3]

These studies, conducted at particular points of time, do not portray the dynamics of the changing population in the prisons, but one can infer that the severity of psychopathology in prison is rising and therefore the proportion with important psychopathology is probably also rising.

The prison population continues to increase inexorably, with 14 new prisons planned. Meanwhile the numbers of long stay patients in psychiatric hospitals continue to fall, as efforts to discharge patients to community provisions succeed, and 30 psychiatric hospitals are planned to close in the near future. The first graph shows the decline in the number of patients in long stay psychiatric hospital beds since 1950, using figures supplied by the DHSS, which includes the peak in 1954. The same graph also shows the prison population, the figures being supplied by the Home Office.

The recent figures for the number of patients in hospital are not available, but one can convert the bed availability figure since, over four years when both bed availability and patient numbers were available, the bed occupancy rate was 91·4%. Using this conversion factor we have regressed the inpatient psychiatric population against the prison population and found a highly significant correlation ($r=0·94$; $p<0·001$) (fig 2). The most recent figure for the prison population is 47 600, showing a sharp increase over 1984, but the psychiatric inpatient population is not known, so the final point on the graph is indicated by a question mark (and excluded from the calculation of the correlation coefficient). The intercept of the linear regression suggests an ultimate prison population of 66 599.

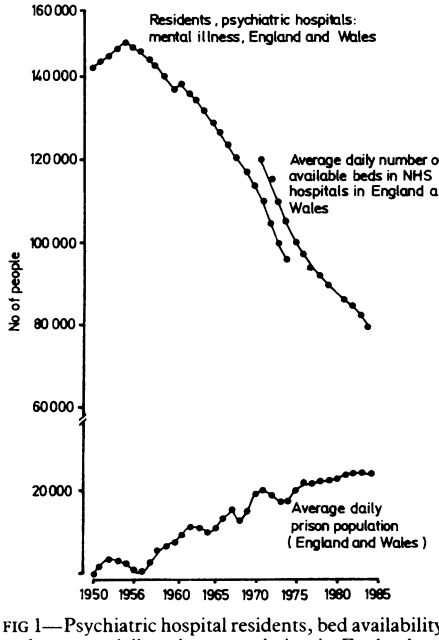

FIG 1—Psychiatric hospital residents, bed availability, and average daily prison population in England and Wales since 1950.

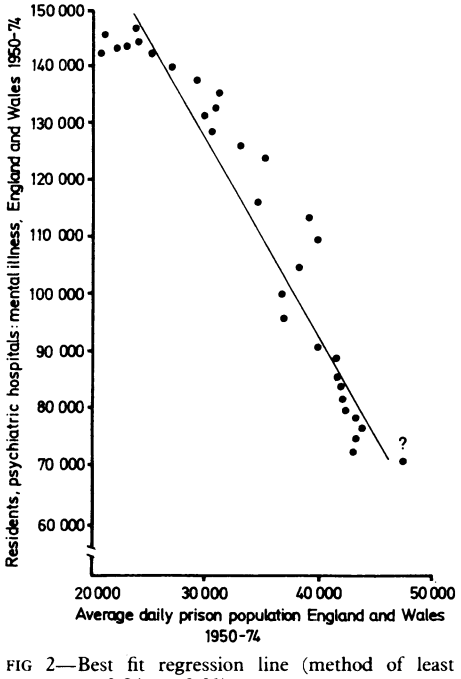

FIG 2—Best fit regression line (method of least squares; $r=0·94$; $p<0·01$).

In the 1930s Lionel Penrose found the same inverse correlation between numbers of psychiatric beds and the prison population of European countries, and Dr John Kilgour has mentioned his fears of a decrease in one leading to an increase in

the other (14 December, p 1699). Of course, a correlation is an association and not an indication of a causal relation, but the high rate of psychiatric morbidity in prisons makes this very high correlation, accounting for over 88% of the variance, a compelling reason to doubt the success of community policies, with a reluctance for psychiatrists to admit mentally abnormal offenders.[4,5]

Apart from the likelihood that discharged long stay patients will go to prison, the problems of destitution, disease, and death, from disease and suicide, are great,[6-9] the estimated incidence of suicide in schizophrenia being as high as 17%.[10] The likelihood of violent crime[11] and suicide[12] appears to be particularly high soon after discharge, and we believe there is a need to reconsider current policies.

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Gastrointestinal bleeding in Romford

SIR,—I was interested in the report by Drs J D O'Brien and W R Burnham (7 December, p 1609). I recently reviewed patients presenting with bleeding and perforated gastric and duodenal ulcers at the Royal Hampshire County Hospital, Winchester.

Over 20 months 50 patients (mean age 74 years) required emergency surgery; 31 (62%) were taking anti-inflammatory drugs (table). Five patients were taking piroxicam; two of these had perforated duodenal ulcers and three had bleeding duodenal ulcers. Ten were taking indomethacin, five were taking steroids, seven were taking aspirin, three were taking azapropazone, and one was taking buprenorphine. The mortality in this group of patients was 10%.

The incidence of peptic ulcer disease appears to be decreasing.[1] These findings, however, together with those of others[2,3] suggest that the use of anti-inflammatory drugs has become an important cause of bleeding and perforation of peptic ulcers in the elderly. An appreciable number of these patients will be symptomatic while taking their drugs and in these cases the drug should be withheld until the symptoms are investigated. More detailed studies are certainly justified, especially in relation to regional prescribing patterns.

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1 Coggon D, Lambert P, Langman MJS. 20 years of hospital admissions for peptic ulcer in England and Wales. *Lancet* 1981;i:1302-4.
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Reason for surgery in 50 patients according to drug history

	Perforated duodenal ulcer	Bleeding duodenal ulcer	Perforated gastric ulcer	Bleeding gastric ulcer
No of patients	27	14	3	6
No taking drugs	16	9	2	4
No with history of dyspepsia	10	4	2	1

SIR,—Though far less refined than the study of Drs J D O'Brien and W R Burnham (7 December, p 1609), we would like to offer a corollary to their important observations. During an investigation into formulary compliance, the broad outline of which has been reported,[1] 154 patients referred to a clinic with a wide variety of gastrointestinal symptoms had a detailed drug history taken by a pharmacist. Twenty nine (19%) were taking non-steroidal anti-inflammatory analgesics. Though adherence to hospital policy is usually measured in cost terms, the number of prescriptions for these compounds dispensed in 1985 breaks down as follows: ibuprofen 46%, naproxen 24%, indomethacin 12%, diclofenac 10%, piroxicam (non-formulary) 4%, and others 4%.

Of the patients interviewed, 9 were taking ibuprofen, 3 indomethacin, 2 naproxen, and 1 diclofenac. Though found on only 4% of prescriptions, 6 patients (21%) were taking piroxicam. Of the remainder, 4 further non-formulary preparations were being given to 2 patients each. There is no evidence at this stage that medication was a contributing factor in producing symptoms, but a more detailed analysis is underway.

In our experience detailed drug histories are very difficult to get. The average time taken was 12·5 minutes per patient interview—far in excess of the emphasis that could be given by a doctor in a busy clinic. Retrospective comparisons of our data with the notes revealed that the hospital physician was told of the non-steroidal agent taken in 12 out of the 29 cases and the general practitioner mentioned it in only six of the referral letters. We agree with the Romford group that national data on prescribing frequency should be made available and far greater emphasis placed on non-steroidal agents when histories are taken in particular groups of patients.

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1 Swallow RD, Remington HStC, Standing VF. Ward pharmacy: a positive contribution to cost control. *Pharmaceutical Journal* 1985;30 Nov:722-3.

SIR,—We read with interest of the difficulty that Drs J D O'Brien and W R Burnham had in locating data on prescribing frequency of individual non-steroidal anti-inflammatory drugs (7 December, p 1609). We could not obtain this information because of an agreement between the pharmaceutical industry and the DHSS to maintain secrecy for commercial reasons.[1]

We have found a similar incidence of ingestion of piroxicam in patients presenting with perforated peptic ulcers. Piroxicam was introduced in 1980, and from January 1980 to December 1982, 89 patients were admitted with perforated peptic ulcers to Ipswich Hospital. Of these, 41 patients were taking non-steroidal anti-inflammatory drugs and nine of these were taking piroxicam—10% of all patients and 22% of those patients taking non-steroidal agents. Of 89 controls matched for age, sex, and month of admission, none were taking piroxicam and seven were taking non-steroidal agents other than piroxicam.

It would be of interest to know the age-sex distribution of the authors' patients because the elderly, particularly women, appear to be particularly susceptible to perforated peptic ulceration associated with non-steroidal anti-inflammatory drugs.[2,3] We found a significant correlation ($p<0·0001$) between the annual number of patients aged over 65 with perforated peptic ulcers taking these drugs and the annual number of prescriptions issued for non-steroidal agents in the region. No such correlation was found for those aged under 65.[3]

We agree that less secrecy concerning prescribing figures would aid investigation of drug associated disease.

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1 Collier DStJ, Pain JA. Drug therapy and perforated peptic ulcer. *Gut* 1985;**26**:981-2.
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SIR,—Drs J D O'Brien and W R Burnham (7 December, p 1609) reported that 204 out of 460 patients (44%) who were admitted with gastrointestinal bleeding had peptic ulcers and that 53 of the 204 (26%) had a history of recent use of non-steroidal anti-inflammatory drugs. Unfortunately they did not report on the use of these drugs among patients who did not have an ulcer or on the diagnoses for which these drugs were indicated, nor were they able to comment on the duration of treatment. The choice of a non-steroidal anti-inflammatory drug, its duration of use, and the frequency of haemorrhage are all highly correlated with diagnosis, and comparisons that do not take account of this are of little value. Patients with rheumatoid arthritis, for example, are much more likely to suffer haemorrhages and to have been on long term treatment.

The authors make the rather surprising statement that piroxicam and ketoprofen are thought to be "rarely associated with upper gastrointestinal haemorrhage" and suggest that this might lead to their use in patients with peptic ulceration. Reference to the datasheets will show that this is unfair.

Doctors are unlikely to prescribe non-steroidal anti-inflammatory drugs for patients with an active peptic ulcer or a recent history of ulceration, since these are contraindications in the datasheets. What is certain, however, is that whenever a new drug is thought to be less irritant than older products it will be used selectively in patients with a history of dyspepsia and gastritis. Patients receiving long term treatment with older products such as naproxen or indomethacin are the "survivors" of gastrointestinal toxicity who experience fewer gastrointestinal disturbances than those who are treated with the more recently introduced drugs. The latter, because of their novelty, attract more attention from the media, and more reports of alleged side effects are consequently sent to the regulatory authorities.

During the past three years we have witnessed a