effect. The superiority of using an indicator with a long half life (low dose phenobarbitone) over a marker with a short half life (low dose isoniazid) in detecting incomplete compliance has been shown.²

The development of suitable pharmacological markers has probably been adversely affected in the past by recommendations that such substances should have a short half life or be "non-cumulative."^{3,4} The drawbacks of this advice are now recognised. Though such techniques are currently primarily used in research, indicators with a long half life should be included in descriptions of methods of assessing compliance, particularly if markers with a short half life are mentioned.

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Diagnosing maxillary sinusitis

EDITOR,—N P van Duijn and colleagues' study very elegantly assesses the symptomatology of sinusitis in general practice.¹ A simple way of calculating the likelihood ratio for presence of sinusitis would be to use the B score (Bayesian analysis score) method of Dobbs and Fleming.² For the five symptoms and signs found to be independently associated with sinusitis identified by ultrasonography, the B scores for presence and absence of each item are shown in the table.

Bayesian analysis scores² for presence and absence of symptoms and signs in sinusitis

Item	Present	Absent
Beginning with common cold	0	-2
Purulent rhinorrhoea	2	-2
Pain at bending	1	-2
Unilateral maxillary pain	2	-1
Pain in teeth	2	-1

For each item the scores for presence or absence are added. A B score for incidence of sinusitis in this study population, 0 (212 positive out of 441), is then added.

The B score total corresponds to the odds for sinusitis being present for +2 (that is, 2:1, likelihood ratio 2) and +4 (that is, 4:1, likelihood ratio 4). A score of +3 is equivalent to 2.8:1, and the odds double for every increase of 2 in the score. Negative scores correspond to similar odds against sinusitis. A score of zero corresponds to an even chance of sinusitis.

The cut off level recommended by van Duijn and colleagues was a likelihood ratio <0.75 to exclude sinusitis. This would be equivalent to a B score total <-1. They suggested that the diagnosis was uncertain at a likelihood ratio of 0.75 to 1.25, which would correspond to a B score total of -1 to +1. A B score total of more than +1 would be equivalent to a likelihood ratio of more than 1.25, at which level the diagnosis was felt to be established.

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EDITOR,—N P van Duijn and colleagues state that four methods are available to diagnose maxillary sinusitis objectively,¹ but neglect to mention magnetic resonance imaging. Although expensive and not yet universally available, magnetic resonance imaging offers high sensitivity to sinus disease² and does not use ionising radiation. The extreme sensitivity of the technique for evaluating the paranasal sinuses is due to three main factors: its ability to scan in all three orthogonal planes; the almost universal high signal of virtually all sinus abnormalities on T2 weighted images; and the clear depiction of bone in the sinus wall and air within the lumen due to an absence of signal from these areas as a result of a low density of mobile protons. Human sinonasal secretions form a complex material, which in normal circumstances consists of about 95% water. This accounts for their high signal on T2 weighted images. In chronically obstructed sinuses, however, progressive dehydration of the secretions occurs, resulting in signal loss.³ Magnetic resonance imaging thus shows clear superiority over computed tomography in differentiating acute effusions from chronically inspissated sinonasal secretions. In addition, it allows easier discrimination of inflammatory tissues from tumour within the sinus.⁴

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Designing clinical information systems

EDITOR,—A P Smith has eloquently argued that information systems used by clinicians to support their clinical practice should be simple and easy to use, ideally without any change to existing practices or procedures.¹ This aspiration is laudable, but we feel that there are important issues that have not been addressed, and we would like to widen the debate.

Agreement on clinical and administrative terminology is fundamental. Clinical terminology is being considered in the clinical terms project, but there is also a need to define administrative terms. For example, what is the definition of an episode, contact, or spell, and how are diagnoses to be categorised? Is the primary diagnosis the most relevant to the specialty, the patient, or the episode, or is it the most resource intensive? Agreement on terms surrounding the definition of cases is essential to ensure comparability of national returns.

National, regional, district, or local data sets will dictate the minimum data that need to be collected, but a sophisticated clinical information system must allow the user to collect clinical data in the additional detail required to meet personal or specialty needs for clinical management, audit, or

research. For this to be possible the system must also allow for the complexities and uncertainties of clinical practice. Thus, the clinician needs to be able to plan care, set targets, and assign attributes to the data that are entered, such as certainty, severity, negativity, anatomical location, and attribution to the problems. This level of detail will be essential if measurement of outcome is to be realistic and valid. Debate on the definitions of the terms used in the "process of care" is now starting, led by the NHS Centre for Coding and Classification, and we believe clinicians will want to use them as their experience with information systems grows.

The support needed for the successful implementation of a clinical information system should not be underestimated. Clinical, clerical, coding, information technology, and managerial input may be required. Clinicians need to spend time to reach consensus on local terminology and data sets, and to devise procedures. Secretarial and clerical staff need to understand new procedures and the reasons why they are being implemented. Coding and information technology support will be required to maintain the quality of data, the running of the system, and its successful integration into the wider hospital context. The implementation of new methods and ideas needs education and training, at all levels. Furthermore, this education needs to be repeated continuously as staff change and new ideas are implemented.

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1 Smith AP. How to design a clinical information system. *BMJ* 1992;305:415-7. (15 August.)

Sexually transmitted diseases and anal papillomas

EDITOR,—In their review of colorectal sexually transmitted diseases and anal papillomas D J Jones and B P Goorney state that "about a quarter of homosexual men attending screening clinics have evidence of anorectal gonorrhoea." This figure may reflect the prevalence of anorectal gonorrhoea in homosexual men in the 1970s and earlier,² but such a high rate of infection is unlikely to have been found currently or in recent years owing to changes in sexual behaviour related at least partly to the epidemic of HIV and AIDS. To investigate this further we have studied the occurrence of anorectal gonococcal infection in homosexual and bisexual men attending the genitourinary medicine department at Charing Cross Hospital.

Case notes of all homosexual or bisexual men attending for the first time in the previous six months (8 April to 8 October this year) were studied retrospectively. The results of culture of anorectal swabs for gonorrhoea taken at the initial attendance for screening were evaluated. Swabs taken after treatment for gonococcal infection were excluded, and men who attended the clinic regularly were not studied to reduce possible bias resulting from counselling about safer sex by health advisers and doctors. Of the 193 men, 102 had rectal swabs taken for gonococcal culture at the initial attendance. Eight of these cultures were positive for *Neisseria gonorrhoeae*. This figure is considerably less than the 25% suggested by Jones and Goorney.

Ross *et al* detected rectal gonorrhoea in 91 cases out of 2578 attendances by homosexual men in Edinburgh between 1985 and 1990, giving an infection rate of 3.5%, although they did not report the proportion of men who had anorectal swabs

taken.¹ They also, however, noted a rise in the number of cases of homosexually acquired gonorrhoea in 1990, with a rate of rectal infection of 6-9%.

In the three genitourinary medicine clinics in Riverside Health Authority 59 episodes of confirmed anorectal gonococcal infection occurred in 57 homosexual or bisexual men attending between 30 March and 8 October this year. Of these 57 men, 17 were known to be HIV seropositive and 19 HIV seronegative and 21 were untested for HIV antibodies. Thus while the rate of detection of rectal gonorrhoea in homosexual and bisexual men attending genitourinary medicine departments in this area is much lower than in the era before AIDS, there are no grounds for complacency as these men, regardless of their HIV status, are presumably continuing to have unprotected anal sex or failure of barrier methods.

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EDITOR,—D J Jones and B P Goorney's article on sexually transmitted diseases and anal papillomas contains many inaccuracies.¹

The incidence of sexually transmitted diseases affecting the anorectal region is not increasing in Britain^{2,3} or the United States.⁴ The authors state that "about one quarter of homosexual men attending screening clinics have anorectal gonorrhoea." A recent countrywide survey by the British Co-operative Clinical Group found between 3-4% and 2-7% of homosexual men had gonorrhoea (site unspecified).⁵ Our own (unpublished) data suggest that just over one third of these infections will be rectal, giving a prevalence of anorectal gonorrhoea among gay men attending a sexually transmitted disease clinic of not 25% but 1%.

The inguinal adenopathy in both primary and secondary syphilis is painless. The first serological test to yield a positive result in syphilis is the fluorescent treponemal antibody absorption test⁶ and not, as implied, the Venereal Disease Research Laboratory test. Condylomata lata, as manifestations of secondary (systemic) syphilis, are independent of the site of the primary chancre and may therefore represent infection acquired heterosexually, a more common occurrence in Britain today.⁷ A foul discharge is not characteristic of condylomata lata.

The authors confuse the clinical manifestations of the oculogenital strains of *Chlamydia trachomatis* (serotypes D to K, and commonly found in non-gonococcal urethritis) and those of the tropical disease lymphogranuloma venereum (serotypes L1 to L3). Lymphadenopathy (which may be painful) is associated only with lymphogranuloma venereum. It is not true that many people who practise anoreceptive intercourse harbour sub-clinical infections. Non-lymphogranuloma venereum *C trachomatis* was isolated from the rectums of only six of 150 homosexual men in one study,⁸ none of whom had any symptoms referable to the disease. Rectal stricture is a late complication of lymphogranuloma venereum, found predominantly in women and homosexual men. It is extremely rare in Britain.

Herpes simplex virus infection is an important complication, rather than manifestation, of HIV infection. Chronic mucocutaneous herpes simplex virus infection is not diagnostic of AIDS. Herpetic ulcers, with definitive identification of the virus,

persisting for at least one month in someone with a positive HIV antibody test result or evidence of immune deficiency (in the absence of any other cause) is an AIDS defining illness.⁹ The picture used shows herpes simplex virus infection of the buttock, not the anus. Diagnosing herpes simplex virus by cytological examination lacks sensitivity; culture of the virus is the usual method of diagnosis.¹⁰ The authors' description of an ulcerating proctitis is not characteristic of herpes simplex virus infection in immunocompetent patients, pronounced erythema being typical.

Cryptosporidiosis causes a profuse and watery (secretory) diarrhoea, which is not haemorrhagic.¹¹ Although oocytes may be found in rectal biopsy specimens, diagnosis is usually made by examination of the stool. Centers for Disease Control stage III refers to persistent generalised lymphadenopathy, patients being otherwise asymptomatic and well—we see no reason why they should be denied anorectal surgery.

Condylomata acuminata (viral warts) are caused by human papillomavirus. Proctoscopy may show lesions not only within the anal canal but also in the distal rectum. Polyps outside the anal canal may respond to application of podophyllin only if they are of viral aetiology. Cryotherapy and use of a laser, both useful methods of treatment, are not mentioned. Finally, it is surprising that there is no discussion of anal intraepithelial neoplasia and malignant change.

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AUTHOR'S REPLY,—Our article was intended to raise clinicians' awareness of the sexually transmitted diseases and anal papillomas that may present in the colorectal and anal region. We were unable to elaborate on such details as lymphogranuloma venereum causing rectal strictures as opposed to oculogenital strains of *Chlamydia trachomatis*. But several of the points raised by J Sherrard and colleagues deserve clarification.

Firstly, regarding the prevalence of rectal gonorrhoea in Britain, we meant to say that one quarter of homosexual men with gonorrhoea have rectal disease. We do not disagree with Sherrard and colleagues' data concerning gonorrhoea in homosexuals.

In the section on syphilis and the serological

tests used the Venereal Disease Research Laboratory test was discussed first in the context of patients presenting with a clinical lesion suggestive of early syphilis. We were not suggesting that it is the first test to show seroconversion after the acquisition of syphilis, which is the fluorescent treponemal antibody absorption test.

In the section on herpes the opening sentence mentions the infection in association with HIV infection; the assumption that we were referring to chronic mucocutaneous herpes simplex in an immunocompetent person is incorrect. Persistent or continuous mucocutaneous herpes with positive culture of the virus, particularly the aggressive and ulcerative variety, in a person with HIV infection (and in the absence of other cellular immunodeficiency) does indicate advanced HIV disease and, if of more than a month's duration, is an AIDS indicator diagnosis.¹

Although cryptosporidiosis and isosporiasis mainly cause a secretory diarrhoea, a haemorrhagic colitis has been described,² which responds promptly to cotrimoxazole.

We did not imply that otherwise well patients with Centers for Disease Control stage III disease, persistent generalised lymphadenopathy, should be denied anorectal surgery. The presence of important constitutional symptoms such as fever and weight loss also needs to be considered. As with any operation, the final decision to operate has to be based on the person's disease and condition.

Finally, with regard to anal warts and pre-malignant change, I would refer Sherrard and colleagues to the article on anal cancer in the ABC series.

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- 1 Wexner SD. Sexually transmitted disease of the colon, rectum and anus. *Dis Colon Rectum* 1990;33:1048-62.

Health checks for people over 75

EDITOR,—Like Andrew Barker and colleagues¹ I am disappointed that so many general practitioners fail to take the opportunity that the annual health check for people over 75 provides to assess dementia. In March 1990 the Alzheimer's Disease Society circulated all 35 000 general practitioners in the United Kingdom with an information pack containing a copy of the abbreviated mental test score.² The society would be pleased to supply, free of charge, a copy of the test to any general practitioner who did not receive one or has mislaid it. The society will also make available its publication on managing dementia.³

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EDITOR,—Few people doubt the utility of mental test scores when used as clinical instruments or research tools. Andrew Harris¹ and Andrew Barker and colleagues² suggest that community screening for cognitive impairment in older people with these scores may be useful; this seems optimistic in the light of problems with interpreting the results.³ The Folstein mini-mental state examination was recently selected as one of two questionnaires with the most robust scientific background.⁴ Its positive predictive value for organic brain disease in community screening was, however, only 55% at the