patients to reduce their cigarette consumption and review smoking policies in psychiatric inpatient units.

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Competition continues in the NHS

EDITOR,-The NHS that Chris Ham describes1 bears no resemblance to the one in which I work. Far from "slipping away quietly in the night,' competition is a powerful factor in many clinical and managerial decisions. Here are a few examples of competition-not contestability-that I have come across recently. "Business opportunities" (the attempt to take work from colleagues) determine who is seen and how quickly; clinical practice shifts to emulate what "competitors" (colleagues) offer whether or not it is considered to be best or most cost effective practice; and even the drafting of a new disciplinary code is influenced by the desire to "protect" (hide) "commercially sensitive information" (the fact that a doctor is the subject of disciplinary action) from competitors.

Competition no doubt has positive as well as negative effects, but these will remain impossible to disentangle because the dispassionate systematic studies that inform changes in our clinical practice are never undertaken into changes in management practice. Ham's opinion seems to be based wholly on what politicians say or do not say. His references are to political speeches,² ³ and I wonder what corroborative evidence he has from purchasers, providers, or consumers. What Ham shows is not a "middle path for health care" but the massive disparity between the rhetoric of the reformers and the experience of clinicians, managers, and patients involved in the real work of the NHS.

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The Internet

Facilities on the Internet may be abused

EDITIOR,—Two recent articles have described the use of electronic mail and the worldwide web.¹² In his editorial on the Internet Enrico Coiera raises the problem of the disclosure of personal information'; we support what he wrote and offer the following additional comments, which are based on abuses of these facilities that we have witnessed that give rise to serious concerns.

• Patients may join discussion groups on, and seek information by using, the worldwide web. They obtain advice that sometimes seems to be given on the basis of little information or on questionable clinical grounds • Bogus professionals and worldwide web sites with information of unknown validity have inappropriately advised members of the public, who may believe that such advice has sound scientific and clinical substance to it

• In email groups people may give detailed personal and medical information about themselves, relatives, or friends or (in the case of medical professionals) about patients that clearly breaches confidentiality. This information allows people to recognise acquaintances or to seek patients out if they do not already know them. Parents have also openly discussed their child's psychiatric condition on lists such as the open but professional child and adolescent psychiatry list, described elsewhere⁴

• Advice may be inappropriate because the person giving the advice, or the worldwide web site, is in a different country and subject to different jurisdictions

• One mailing list specifically announces forthcoming clinical trials to people interested in participating as patients in clinical research. This potentially biases the designs used in these trials (for example, through failure to obtain representative samples)

• Virtual support groups exist on the Internet for discussion of specific symptoms or disabilities. Some are dedicated to the discussion of suicidal ideation, and one of these has a high frequency of expression of suicidal ideation and regular discussion of the most efficient techniques for completing a suicidal act. This has legal implications in Britain.

We are concerned about the possible abuse of this facility. We propose that the relevant regulatory bodies of countries on the Internet discuss this issue together to arrive at a universal set of guidelines that should safeguard all those concerned. The Internet is clearly a powerful tool, and thus extra care should be taken in its use.

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Editorial made extravagant claims

EDITOR,—The Internet is a truly marvellous way for computers to communicate with each other, and indirectly it allows people to communicate as well. As one who uses the Internet daily as part of my work, I am an enthusiast. I am surprised, however, by the extravagant claims made by Enrico Coiera.¹

Coiera states that, as a result of the Internet, the provision of information on health will no longer be the exclusive remit of health care professionals. This statement is obviously false: other well known providers of information on health include grandmothers, busybodies, sick people, magazines, and libraries—and all of them have been around for much longer than the Internet. Other features of the Internet that Coiera identifies—accessibility, uncontrollability, lack of confidentiality, and variability with regard to the quality of information provided—apply equally well to the sources I have listed. There is nothing new here.

The author suggests that the Internet will introduce a "free market in information" (the

implication is that, until the Internet came along, health professionals were able to monopolise the information). Since there is already a free market in health information, this hardly seems a possibility. Grandmothers, busybodies, and the other sources I mentioned, including libraries, participate in an existing free market in health information. What, if not a free market, is the vast global enterprise of medical publishing with which we are so familiar? It seems to me that if you make claims like "the changing nature of information delivery brings with it enormous implications" then you should be able to show that the nature of information delivery has changed. My view is that it has not changed: email is not different in principle from an ordinary letter; putting the BMJ on the Internet only provides another avenue for people who wish to read it. This may give the BMJ a wider readership, but it hardly constitutes a "challenge to health care provision."

The really big impact of computing on information delivery, which was never so widely heralded as the Internet, resulted from a much more important innovation than a mere communications system. This was the introduction by librarians of computerised indexes such as Medline, which provide access to information through the use of search tools based on multilevel thesauruses and boolean logic (neither of which can readily be used in a printed index). This occurred 30 years ago.

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Encryption algorithms are effective in maintaining security

EDITOR,—Many doctors know little about the Internet, and while David Sellu is right to be concerned about the security issues relating to the increasing use of the Internet by doctors and other health care workers, his short piece does not give a realistic picture of the situation.¹

The suggestion that "Pentagon computers can be infiltrated by hackers almost to the point of starting a nuclear war" owes more to Hollywood than to any documented event. His comment that "once you connect your computer to the Internet the files on your system can be retrieved by anyone with the right resources. If your computer is connected to a network—for instance, in a hospital —the entire information on that network is vulnerable" is couched in such general terms that it is at best misleading and in many circumstances untrue, akin to talking about orchidectomy as the cure for cancer.

Sellu raises concerns about the security of email messages and concludes by dismissing passwords "as one of the least innovative ways of protecting access to computer data." He seems to ignore the fact that the use of robust public key encryption software can prevent email messages from being read by anyone other than the intended recipient(s) and provide a digital signature, allowing verification that the message is truly from who it seems to be from, and verification that the contents of the message have not been changed.² Such software exists in the form of a programme called PGP (pretty good privacy). So effective are the encryption algorithms used by this program that the United States government forbids its export from the North American continent. Several "kludges' have been used to ensure that an international version is available to anyone. In the "cash strapped NHS" it will be reassuring for people to know that this program is available free from a variety of sources, including anonymous ftp (file transfer protocol) from ftp://ftp.ox.ac.uk/pub/crypto/pgp/