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Intranets – 'safe surf'

The last 10 years has seen a phenomenal growth in the internet which is currently used by over 200 million people around the world, including 12.5 million in the UK (NUA, 2000). This rapid growth is set to continue and by the end of the year most of Britain's 24 million mobile phone users will be able to access the web through the latest generation of telephones (*Daily Telegraph*, 6 January 2000). This growth in popularity stems from the internet's ease of use and the huge amount of information from around the globe that can be accessed 24 hours a day. Success has, of course, brought problems and the internet has been criticised for being slow, for containing inaccurate and even dangerous material and for being a home to viruses waiting to attack unwary surfers.

As with any rapidly growing organism the internet has attempted to overcome these problems by reproducing. At present two forms of offspring have been identified, they have been called intranets and extranets. Both of these are now being put to use in the health service and are likely to become essential tools for the clinician.

Intranets

These are identical to the internet in all respects except that they are private and local. They live on the networks of large companies and institutions who have total control over the network and the information on it. By doing this intranets can maintain quality standards for information, ensure speedy transmission and security. Most intranets have an electronic 'one-way mirror' between them and the internet so that people within the organisation 'can see out' and browse the internet, but people on the outside cannot 'see in'.

Extranets

These are private networks that connect more than one institution. An example is the NHSnet which was launched two years ago and provides a channel for secure information exchange between NHS facilities in the UK.

A community health intranet

In 1997 an intranet called TrustNet (see Fig. 1) was set up within our trust. Its aims were to provide a system of communication between employees, to distribute information more efficiently and to provide everyone with internet access. This paper outlines the design, management and contents of this system.

TrustNet uses our existing computers and network, so very little financial outlay was required to set it up. The software to browse the material is free, as are the editor programs which are used to create new web pages. TrustNet is controlled by an editorial board, which is chaired by a clinician and has representatives from all interested departments.

Trust staff are encouraged to use and publish on the system and are given free access to the internet, banning only the downloading and the visiting of unacceptable areas. All staff sign a declaration on joining and are made aware that sites they visit on the internet are logged!

Two IT staff were assigned to maintain the system. Initially, they produced most of the pages for the site but this is increasingly carried out by individuals within departments. The main ongoing role of the IT staff is to ensure the network's integrity, provide telephone support, develop online databases, manage security and run tutorials and training programmes. At present the network can be accessed by over 600 computers.
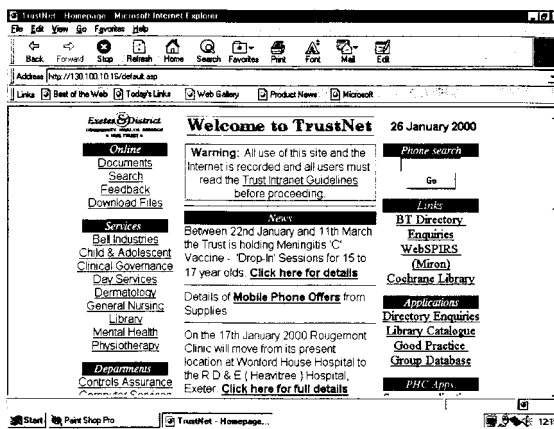

Fig. 1. The TrustNet homepage.

Over the past two years the following areas and resources have been developed:

(a) policy documents;
(b) a telephone directory with search facilities;
(c) a library catalogue with search facilities and a book ordering service;
(d) a database of audit projects;
(e) abstracts of talks and presentations;
(f) drug information leaflets;
(g) suggested links to useful internet sites;
(h) a database of educational events and courses.

A recent development is the inclusion of a copy of our junior doctor's handbook. The handbook is updated every six months before the next intake of junior medical staff and contains information about the service. It also provides practical advice on the management of psychiatric emergencies and other common situations which will be encountered during the job. The handbook includes locally agreed policies and procedures, information about postgraduate facilities and a comprehensive list of useful telephone numbers. A hard copy of the handbook can easily be printed from the network.

Further work is being undertaken to develop access to the patient information database using the intranet to enable staff to book out-patient clinics, write letters and complete care, plan forms and to produce reports collated from Health of the National Outcome Scales (HoNOS) data and other patient information. We also plan to post abstracts of our journal clubs and case conferences.

Advantages

The system is quick, easy to use and information is easily shared. The online policies and central telephone databases are easily updated so that users have access to the latest versions. Such a system should save significant staff time and reduce paper and distribution costs. Internet access has opened up a wealth of information to Trust staff. Initial feedback suggests that this is very much appreciated. We believe that this resource will aid continuing professional development and be good for staff morale.

Disadvantages

Setting up an intranet takes time and our IT department, like most of those in the health service, is already under pressure. It needs to be recognised that there will be a cost involved in providing both the hardware and the training for staff that are to use the system. Developing an intranet increases demand for computers and faster networks. It is also important to ensure that the right protection systems are in place. For the technically minded we have had to develop extra security measures to enable the system to be used for displaying patient information. This includes the development of a firewall, a 'cache killer' and timed log-outs. Our IT department would be pleased to supply more information on request.

Conclusion

The Government's Information for Health Strategy (Department of Health, 1998) hints that the internet will become the main source of information for health workers. By developing a local intranet trusts can ensure that their staff will be able to make full use of this resource.

To make matters easier the Government has said that they will be making an extra £1 billion available before the year 2005 to develop IT within the NHS. It will be interesting to see how much of this money will filter down to trusts.

References

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education & training

313