To what extent are practices 'paperless' and what are the constraints to them becoming more so?

NICK WARING

SUMMARY

A questionnaire was sent to all practice managers in Wessex in June 1997 to assess to what extent practices had stopped relying on paper records in the consultation. Practices that solely used computer records in the consultation ('noteless') did not necessarily consider themselves 'paperless'. Following a recent declaration that all practices should be using an Electronic Health Record by March 2005, the obstacles to this move were investigated and some differences in the way the 'noteless' and 'paperless' groups used computers were identified.

Keywords: *computerisation; patient records; Electronic Health Record; general practice.*

Introduction

Most United Kingdom practices are now computerised,[1,2] with a number considering themselves to be 'paperless'. The perceived obstacles to becoming paperless are unclear. With the recent publication of *Information for Health*[3] and the declaration that all practices should be using an Electronic Health Record by March 2005, it is timely to look at this and the differences between those practices that have and have not taken this step.

Method

With the help of the Wessex Research Network (WReN), a short questionnaire was developed and posted during the third week of June 1997 to all 453 practice managers in Wessex, as identified from the lists held by the constituent health authorities. No reminder letters were sent. Practice managers, rather than general practitioners, were targeted to reduce the responder bias from individual enthusiasts among partners.

Results

Of the 453 questionnaires posted, 311 were returned, giving a response rate of 68.6%. Of the replies, 263 (84.6%) were from practice managers, 46 (14.9%) were from doctors, and two did not state who they were from. There was no statistical difference in the responses between these two groups. Clinical computer systems were used only in 306 (98.4%) of the practices, and it was this group that was analysed further.

To the question 'Do you consider your practice paperless?' there were 12 (3.9%) positive responses. However, to the question 'Are ONLY computer records used in the consultation?' there were 26 (8.5%) positive responses. The latter group was referred to as 'noteless'; subsequent results were analysed for this 'noteless' population and compared with the 280 (91.5%) computerised practices that were using paper notes. All 'paperless' practices were also 'noteless'.

Characteristics of 'noteless' practices and those using paper in the consultation were compared for size, fundholding status, and the number of premises, and showed no statistical difference. Of all the practices, 98 (31.5%) had at least one branch surgery.

Four clinical systems (EMIS, VAMP, AHA-Meditel, and M-Tec) accounted for 72% of the systems used. Of 105 EMIS users using paper notes in the consultation, 11 were 'noteless'; of 53 VAMP users there were three 'noteless practices, of 40 Meditel users there were six, and of 22 M-Tec users there were three. Microdoc, Genisyst, and Microtest were the only other systems represented in the 'noteless' group, with one practice each.

The main difference in the way computers were used between the noteless practices and those using notes was that the 'noteless' practices entered more data from outside the practice, with increased coding, scanning, and free text entry from hospital letters and an increased entry of test results and the use of 'path links'.[4] They also used portable computers more often for house visits (Table 1).

The major obstacle to further computerisation in general practice for all practices was cost (n = 203, 71% CI = 66–77). The legality of the paper record alone was also a major obstacle (n = 118, 47% CI = 41–53).[5] There was also concern about standardisation of data entry within the practice (n = 84, 32% CI = 27–38).

Discussion

As 26 (8.4%) of the practices were not using paper records at all in the consultation ('noteless') but only 12 (3.9%) considered themselves 'paperless', the two terms should not be regarded as synonymous.

As one-third of practices in the survey have multiple premises, the ability to adequately link these premises for data transfer is essential.

An Electronic Health Record is now the goal of the National Health Service Executive, and the paper, *Information for Health*,[1] addresses the concerns identified. The major step in achieving this is the move towards 'noteless' consultations and the increased entry of data from hospital letters and reports seems to be critical to this and needs to be facilitated. Delaying the development of 'noteless' consulting until electronic transfer of notes is possible, as suggested by the General Medical Services Committee,[6] is unnecessary.

References

1. NHS Executive. *Computerisation in general practice survey, 1996*. London: Department of Health, 1998.
2. Purves IN. The paperless general practice. [Editorial.] *BMJ* 1996; **312:** 1112-1113.
3. NHS Executive. *Information for Health*. [Executive summary.] Leeds: NHSE, September 1998.
4. NHS Executive Information Management Group. *HA/GP links* [Newsletter.] Leeds: NHSE, February 1997.
5. Lyle P. Paperless medical records — approval still awaited. [Letter.] *Br J Gen Pract* 1995; **45:** 54.
6. British Medical Association. *GMSC Annual report*. London: BMA, 1998.

Acknowledgements

I would like to thank the Wessex Research Network (WReN), especially Drs Helen Smith, Alastair McColl, and Paul Little, and also Joan

N Waring, FRCGP, general practitioner, Gillies Health Centre, Basingstoke.
Submitted: 26 May 1998; final acceptance: 30 April 1999.

Table 1. Statistically significant differences in computer use in general practices that function with or without paper notes in the consultation. Percentages are rounded to the nearest integer. (n = number of positive responses. Confidence intervals are at 95%.)

Computer use	With paper notes n (%; CI)	Without paper notes n (%; CI)	c^2 (P-value)
Do you use a computerised appointments system?	150 (54; 48–60)	19 (73; 52–88)	3.66 (0.0557)
Does the practice ever use portable computers on house visits?	20 (7; 4–11)	7 (27; 12–48)	11.57 (0.0393)
Do you code any information from hospital letters?	123 (44; 38–50)	19 (73; 52–88)	8.13 (0.0044)
Do you enter any information from hospital letters in free text?	131 (47; 41–43)	20 (80; 59–93)	10.13 (0.0015)
Do you scan letters electronically?	5 (2; 1–4)	4 (15; 4–35)	15.41 (0.0039)
Do you have pathology links?	56 (20; 16–25)	11 (42; 23–63)	6.92 (0.0085)
What percentage of test results are entered onto the computer?	Mean = 39%	Mean = 82%	37.33 (0.0536)

Dunleavy and Nigel Baker who gave me much help and support in the design and writing up of this study, and all the practice managers in Wessex who completed the questionnaire. This project was made possible by a bursary from WReN and funding from the Wessex Faculty of the RCGP and the North and Mid-Hampshire MAAG.

Address for correspondence

Dr Nick Waring, Gillies Health Centre, Sullivan Road, Brighton Hill, Basingstoke, Hants RG22 4EH. E-mail: nick@spinneyco.freeserve.co.uk