



# Computer use in general practice consultations

**Derrick Bui, MBBS, MPH**, is a former academic registrar, Department of General Practice, University of Melbourne, Victoria. [dbui@tpg.com.au](mailto:dbui@tpg.com.au)

**Chris Pearce, MBBS, FRACGP, FACRRM, MFM**, is a PhD student, Department of General Practice, University of Melbourne, and Honorary Senior Lecturer, Monash University, Victoria.

**Elizabeth Deveny, BTD, MMed**, is Research Fellow, Department of Rural Health, University of Melbourne, Victoria.

**Teng Liaw, MBBS, PhD**, is Professor, Department of Rural Health, University of Melbourne, Victoria.

In 1998 the Australian government sought to enhance the quality of patient care by providing general practices with financial incentive to computerise. The scheme was evaluated in 1998<sup>1,2</sup> and 2001<sup>3</sup> finding that general practitioners were reluctant to use a computer in their routine work because of potential time constraints, and interference with patient-doctor interaction. The evaluations also found the available functions in clinical software were generally underutilised. The surveys employed questionnaires, telephone interviews, and focus group meetings to document the state of information technology in Australian primary care, on a scale larger than had been done before. Such indirect methods may not be valid.

We therefore sought to employ a more direct method of observing GPs' use of computers in patient care. We chose video observation rather than a sit in observer, as it is less costly, less intrusive, and enables repeated viewings. The camera angle can be carefully chosen to focus entirely on the computer screen to avoid capturing the participants and compromising their privacy. Editing techniques can be used to mask the patients face or name should they inadvertently be recorded.

## Method

We timed the sequence of actions during several consultations and coded them. Consultations were taped continuously for

approximately 3–4 hours, pausing recording only when a patient refused to participate.

As the main markers of activity on the screen are mouse and cursor movements, and keystrokes, we analysed the visual content as well as the audio to aid orientation to events taking place off screen. A drawback of our method was that 'computer use' was not coded for instances where the doctor may have read the computer screen in silence. Another potential miscoding occurred for computer use of less than 5 seconds (eg. simply clicking with the mouse), which we deemed insignificant.

## Results

In 2002, our design was pilot tested with six volunteer GPs who used the same clinical software, and whose computer skills ranged from basic to advanced. Sixty-five out of 68 patients participated. Many of the consultations required only one viewing during analysis. The mean consultation length was 14 minutes, of which the doctor spent 11% of that time interacting with the patient while using the computer, and 5% of that time solely with the computer.

The GPs used on average four out of nine clinical computer functions (eg. prescribing, recall, test ordering). Prescribing, nonclinical use (eg. appointments, billing), and requesting tests ranked first to third respectively; both in duration and frequency of use. Letter writing ranked first in terms of average duration per use.

## Discussion

These results may not be generalised because of the small and select sample. However, we believe our methods were feasible and acceptable, with the potential to be applied to a larger, better designed trial.

### Implications of this study for general practice

- Further research is needed to understand doctors' underutilisation of computers.
- Videoing is a feasible tool for researching computer use in the consulting room.

Conflict of interest: none.

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AFP

## Correspondence

Email: [afp@racgp.org.au](mailto:afp@racgp.org.au)