

What is already known on this topic

For most primary care consultations in Britain and elsewhere in the developed world, computers are available

When a computer is used during a consultation it can increase both the medical content and length of that consultation

What this study adds

Despite the rapidly changing nature of this technology and its capabilities, research has concentrated on preventive care and prescribing, with few studies evaluating patient outcomes

Research has centred on general practitioners, and little has been published on the impact of computers on other members of the primary care team

The main concerns of practitioners and patients about primary care computing are confidentiality, impact on the doctor-patient relationship, cost, time, and training

Most of the outcome studies we examined used a rigorous methodology and rated highly for sample formation, adjusting for differences between the groups, and the objectivity of the outcomes being measured. However, they rarely considered the full implications of using the patient as the unit of analysis rather than randomising work units (such as practices). This may reflect the difficulties of researching a technology with which we are striving to keep up. Allocation by practice reduces the confounding effect of participating in research on those researched. However, computerisation in primary care is so widespread that finding practices which do not have the specific system feature to be evaluated as well as adequate controls is virtually impossible. Randomising practices to receive particular systems is also problematic. Not only is this expensive, but it often seems inconsequential; no sooner has the system been evaluated than it has been modified or updated and requires further evaluation.

The most fruitful areas of current research are preventive care, prescribing support, chronic disease monitoring, test ordering, and hospital referral. Few studies have dealt with nursing research in general practice, and little has been published on the impact of computer systems on other members of the primary care team.

Conclusions

It is over three decades since information technology was first introduced to primary care. In the 1960s its use centred on collating patient data; in the '70s the possibility of electronically linking primary and secondary care emerged; in the '80s computers were introduced to the consulting room; and in the '90s the internet provided the potential to obtain and review useful information during the consultation. After 30 years of analysing the "potential" benefits of computers, perhaps we should allow information technology in primary care to mature. In the 21st century we should accept that the computer is a useful tool. Rather than continually describing its capabilities, research must move forward to evaluate key outcomes for patients, practices, and the health service as a whole.¹²

The results of this systematic review are also available in a MS Access database, which can be obtained on disk from E Mitchell.

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Contributors: EM conducted the Delphi study, designed the review protocol and search strategy, conducted the literature retrieval, reviewed all abstracts identified, read all potentially relevant articles, scored all articles included in the review, and wrote the initial draft of the paper. FS reviewed all abstracts identified, read all potentially relevant articles, scored all articles included in the review, and contributed to and edited the paper.

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Corrections and clarifications

ABC of diseases of liver, pancreas, and biliary system: Investigation of liver and biliary disease

In this article by IJ Beckingham and S D Ryder (6 January, pp 33-6) the flow diagram illustrating the investigation and referral of patients with jaundice in primary care unfortunately offered two management plans (instead of one) for patients with bilirubin concentrations >100 µmol/l. The box below the first downward arrow should read "bilirubin ≤100 µmol/l."

Randomised controlled trial of homoeopathy versus placebo in perennial allergic rhinitis with overview of four trial series

A keyboard slip resulted in an error in table 2 of this paper by Taylor and colleagues (19-26 August, pp 471-6). The mean difference between groups for evening nasal inspiratory peak flow should be 14.1 [not 12.1].

In-flight medical emergencies: an overview

In the section entitled "automatic external defibrillators" in this article by Tony Goodwin (25 November, pp 1338-41) it was wrongly stated that Virgin Atlantic Airways was the first airline to carry such equipment; in fact, British Caledonian was the first, in 1986.