

What is already known on this topic

Videoconferencing allows joint consultations between the patient, general practitioner, and hospital specialist

The clinical reliability of telemedicine has been established, but very little has been published on its cost effectiveness

What this study adds

Virtual outreach consultations incur greater costs to the NHS than standard outpatient appointments

Virtual outreach consultations result in savings to patients in terms of costs and time

Adoption of virtual outreach cannot be justified on economic grounds

relatively small. Also, patients in the virtual outreach group reported significantly shorter time off work than patients in the standard outpatient group. The trial results provide good evidence that virtual outreach consultations are less time consuming and cheaper for patients and are likely to have a positive impact on productivity.

Considering total costs, little justification on economic grounds seems to exist for the adoption of virtual outreach. However, all the benefits may not have been recouped within the six month follow up period, and we did not estimate values of improved patient satisfaction. We may therefore have underestimated the beneficial consequences of virtual outreach. Furthermore, previous subanalysis showed that certain specialties may be more appropriate for virtual outreach than others,⁵ and improved selection of patients may also improve the relative cost effectiveness of virtual outreach.

We acknowledge the invaluable contribution made by all the participating clinicians and nursing, administrative, and management staff in both the London and Shrewsbury arms of the trial (see bmj.com). Ann Bowling and John Wynn Jones provided valuable input to the design of the study, and we thank Will Coppola for help with extraction of prescription data. The project office in London was staffed by Sandra Anglin, Emma Davies, and Rushmi Jayasurya, and that in Shrewsbury by Leo Lewis and Nerrys Lloyd. The WHO Office for Environment and Health, Rome, provided administrative support for P Wallace during the preparation of the manuscript.

Contributors: See bmj.com

Funding: NHS research and development health technology assessment programme, with additional contributions from BT and the MSD Foundation. The views and opinions expressed are those of the authors and do not necessarily reflect those of the NHS Executive.

Competing interests: None declared. Neither BT nor the MSD Foundation had any influence over the design, execution, analysis, or interpretation of the study results.

Ethical approval: All the relevant local research ethics committees approved the study.

- 1 Roland M. Measuring referral rates. In: Roland M, Coulter A, eds. *Hospital referrals*. Oxford: Oxford University Press, 1992:62-75.
- 2 Vierhout WPM, Knottnerus JA, van Ooij A, Crebolder HF, Pop P, Wesselingh-Megens AM, et al. Effectiveness of joint consultation sessions

- of general practitioners and orthopaedic surgeons for locomotor-system disorders. *Lancet* 1995;346:990-4.
- 3 Vlek JFM, Vierhout WPM, Knottnerus JA, Schmitz JFF, Winter J, Wesselingh-Megens AMK, et al. A randomised control trial of joint consultations with general practitioners and cardiologists in primary care. *Br J Gen Pract* 2003;53:108-12.
- 4 Doolittle GC, Williams A, Harmon A, Allen A, Boysen CD, Wittman C, et al. A cost measurement study for a tele-oncology practice. *J Telemed Telecare* 1998;4:84-8.
- 5 Wallace P, Haines A, Harrison R, Barber J, Thompson S, Jacklin P, et al. Joint teleconsultations (virtual outreach) versus standard outpatient appointments for patients referred by their general practitioner for a specialist opinion: a randomised trial. *Lancet* 2002;359:1961-8.
- 6 Wallace P, Haines A, Harrison R, Barber JA, Thompson S, Roberts J, et al. Design and performance of a multi-centre randomised controlled trial and economic evaluation of joint tele-consultations [ISRCTN54264250]. *BMC Fam Pract* 2002;3:1.
- 7 Drummond MF, O'Brien B, Stoddart GL, Torrance GW. *Methods for the economic evaluation of health care programmes*. 2nd ed. Oxford: Oxford University Press, 1997.
- 8 Netten A, Curtis L. *Unit costs of health and social care*. Canterbury: University of Kent at Canterbury, Personal Social Services Research Unit, 2000.
- 9 Department of Health. *Reference costs 2000*. London: DoH, 2000.
- 10 Office for National Statistics. *The new earnings survey*. London: Stationery Office, 2001.
- 11 Thompson SG, Barber JA. How should cost data in pragmatic randomised trials be analysed? *BMJ* 2000;320:1197-200.
- 12 Parkerson GJ. Classification of severity of health problems in family/general practice: an international field trial. *Fam Pract* 1996;13:303-9.
- 13 Burns T, Creed F, Fahy T, Thompson S, Tyrer P, White I. Intensive versus standard case management for psychotic illness: a randomised trial. *Lancet* 1999;353:2185-9.
- 14 Ware JE, Snyder MK, Wright WR, Davies AR. Defining and measuring patient satisfaction with medical care. *Eval Program Plann* 1983; 6: 247-63.
- 15 Bergmo TS. An economic analysis of teleradiology versus a visiting radiologist service. *J Telemed Telecare* 1996;2:136-42.
- 16 Bashur RL. On the definition and evaluation of telemedicine. *Telemed J* 1995;1:19-30.

(Accepted 21 April 2003)

Corrections and clarifications

Head of ME Association is sacked

We added an incorrect title to this "news roundup" article by Owen Dyer (7 June, p 1232). As the first sentence of the article makes clear, it was the medical director (Dr Charles Shepherd) who was sacked from his position at the ME Association (a British charity for people with myalgic encephalomyelitis). Dr Shepherd was not the head of the association.

Canadian government is attacked for plan to legalise marijuana

In the currency conversions in the second paragraph of this "news roundup" article by David Spurgeon, we seriously overestimated, by a factor of four, the value of the Canadian dollar (7 June, p 1232). How we achieved this startling conversion rate has a bizarre explanation, but the correct conversions (for the new \$C100 fines facing people who are found to be in possession of less than 15 g of marijuana) are £45, \$US75, and €64.

Arsenal helps publicise testicular cancer website

Maybe the news team at the *BMJ* should show a bit more interest in football in their spare time. They managed to achieve only a 25% accuracy rate in assigning names to the four Arsenal players in the picture accompanying this news article by Susan Mayor (14 June, p 1282). They got the names right but (except for Kolo Toure) in the wrong order. In their defence, the order was the order provided by the organisation that supplied us with the photograph. An Arsenal supporter in the editorial office has assured us now that from left to right, the names are Kolo Toure, Stuart Taylor, Lauren, and Edu.