

Contents lists available at [ScienceDirect](http://ScienceDirect.com)

EBioMedicine

journal homepage: [www.ebiomedicine.com](http://www.ebiomedicine.com)

## Commentary

## Cost Efficiencies in the Healthcare Setting: Telephone Versus Face-to-Face



Charles R. Doarn

Department of Family and Community Medicine, University of Cincinnati, Cincinnati, OH 45267-0582, United States

The use of a legacy telephone system, often called plain old telephone system (POTS), or any variety of mobile phone in healthcare, is neither new nor novel. Since the beginning of telephony in the late 19th century, the phone has been a great tool to physicians (Aronson, 1977). Physicians, or their clinic office staff, have interacted with patients for decades. Today, mobile phones, or more specifically smart phones, provide health consumers access not only to health information but access to healthcare where the barriers of geography, distance and time are relegated to the back seat.

The potential cost savings to the patient, the healthcare consumer, is quite appealing. Imagine a patient with a disease that can be managed from a distance. For instance, patients with congestive heart failure or Crohn's disease can be monitored in the comfort of their own home through telehealth — using remote monitoring systems or the telephone (Car and Sheikh, 2003; Inglis, 2010; Kane et al., 2003; Hommel et al., 2013). The cost savings to the patient, and therefore, the health system can be significant (Car and Sheikh, 2003; Bashshur et al., 2009). The travel costs and lost labor dollars for the patient and family can also be significant, especially if the patient–physician interaction can be performed over the phone; and the patient can remain in the surroundings that they are most comfortable in.

Recently, Akobeng et al., reported the use of telephone consultations on young people with inflammatory bowel disease (IBD) (Akobeng et al., 2015). The authors set out to assess the effectiveness and cost consequences of telephone consultations versus traditional face-to-face interaction. The patient population were aged between 8–16 years with IBD. A randomized–controlled trial of 86 patients was developed, conducted, and clearly demonstrated no difference in the two modalities (telephone versus face-to-face consultation), and reported a reduction in consultation time. Furthermore, the study demonstrated a cost saving over traditional face-to-face consultations.

This study was well conducted and adds to the growing literature and evidence base that emphasizes the value of telecommunications in medicine. The use of the telephone or Internet in connecting patients and physicians for routine care has clearly been highlighted. The Akobeng et al. article is significant in that it can impact basic scientists who are studying more efficient and cost-saving approaches to clinical practice, as well as clinicians who seek to provide better patient care and effective clinical workflow. Each of these components can make an impact on the overall practice of healthcare.

While the Akobeng et al. study answers some important questions, it is not the first to review this kind of approach. Other researchers, including Hommel et al., have studied the use of telehealth in medication adherence in children with IBD (Hommel et al., 2013). While much work has been done, additional studies need to be conducted to continue to build the evidence base. With a shortage of physicians, nurses and allied health professionals concomitant to the high cost of travel (gasoline) and losses in labor and productivity, new approaches to providing high quality healthcare must be considered.

Randomized–controlled studies, like the one that Akobeng et al. report, clearly demonstrate that telephone consultations can improve the quality of life as measured in this study. While more research is underway around the world and more evidence is forthcoming, key takeaway messages include the following:

- 1) If patients can be seen in their natural setting such as their home, this has numerous advantages related to both outcomes and financial implications.
- 2) While face-to-face consultations may be ideal, it is not necessary in all cases. This may cause some consternation from healthcare providers, but research has pointed us in this direction.
- 3) Patients are consumers of a precious resource — healthcare. They are cost-conscious and more savvy than past generations and are engaged in the management of their care. If they can be seen remotely by their physician or talked to from their home, this will negate travel, thus saving time and money and is common sense.
- 4) Of course, medicine by telephone may not be the best method in all cases. So due diligence must be practiced by the physician and clinical staff.

Akobeng et al. are to be commended for conducting this study and bringing it forward as evidence for all of us to review, embrace and challenge us in our clinical practice.

I declare that I have no financial interest.

## References

- Akobeng, A.K., O'Leary, N., Vail, A., Brown, N., Widiatmoko, D., Fagbemi, A., Thomas, A.G., 2015. Telephone consultation as a substitute for routine out-patient face-to-face consultation for children with inflammatory bowel disease: randomised controlled trial and economic evaluation. *EBioMed* 2 (9), 1251–1256.
- Aronson, S.H., 1977. The Lancet on the telephone 1876–1975. *Med. Hist.* 21 (1), 69–87.
- Bashshur, R.L., Shannon, G.W., Krupinski, E.A., Grigsby, J., Kvedar, J.C., Weinstein, R.S., Tracy, J., et al., 2009. National telemedicine initiatives: essential to healthcare reform. *Telemed. J. E. Health* 15 (6), 600–610.
- Car, J., Sheikh, A., 2003. Telephone consultations. *BMJ* 326 (7396), 966–969.

DOI of original article: <http://dx.doi.org/10.1016/j.ebiom.2015.08.011>.

E-mail address: [Charles.doarn@uc.edu](mailto:Charles.doarn@uc.edu).

<http://dx.doi.org/10.1016/j.ebiom.2015.08.033>

2352-3964/© 2015 The Author. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

- Hommel, K.A., Hente, E., Herzer, M., Ingerski, L.M., Denson, L.A., 2013. Telehealth behavioral treatment for medication nonadherence: a pilot and feasibility study. *Eur. J. Gastroenterol. Hepatol.* 25 (4), 469–473.
- Inglis, S., 2010. Structured telephone support or telemonitoring programmes for patients with chronic heart failure. *J. Evid. Based Med.* 3 (4), 228.
- Kane, S., Huo, D., Aikens, J., Hanauer, S., 2003. Medication nonadherence and the outcomes of patients with quiescent ulcerative colitis. *Am. J. Med.* 114 (1), 39–43.