Information in practice

Telephone consultations

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Delivery of clinical care by telephone is still somewhat controversial. What evidence exists to clarify its potential role, and how can the quality and safety of care be ensured?

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Since its invention in 1876 the telephone has been used as a tool for delivering health care: Alexander Graham Bell's first recorded telephone call was for medical help after he spilt sulphuric acid on himself. By the 1970s clinical enthusiasts were describing the telephone as having become as much a part of standard medical equipment as the stethoscope.[w1] However, despite the widespread use of telephones in daily life and the range of possible benefits that telephones offer in medical encounters their role in medical practice remains, for many clinicians, highly controversial.[w2] We aim to summarise the evidence evaluating the role of telephones in helping to deliver clinical care by considering three of the most commonly asked questions:

- How acceptable is care delivered by telephone to members of the public and healthcare professionals?
- What is the scope for consultations facilitated by telephone in the management of acute and chronic disorders?
- How can the quality and safety of telephone consultations be ensured?

Summary points

Speed, improved access, convenience to patients, and possible cost savings are the principal advantages of consultations by telephone

Public satisfaction with telephone consultations is high, and patients increasingly wish to have this option

Professionals' enthusiasm is tempered by concerns about medical and medicolegal risks

Telephone contacts are comparable to face to face consultations in facilitating health promotional interventions, in triage, and in promoting access and delivery of routine health care to people with chronic disorders

Staff training, protocols for managing common scenarios, dedicated time for telephone contacts, documentation of all consultations, and a low threshold for organising a face to face consultation may help to ensure quality and safety of telephone consultations

Sources and selection criteria

We used established systematic search methods to identify original research studies and systematic reviews evaluating the role of telephone communication as a means of delivering health care. In reporting on the effectiveness of telephone care we primarily rely on evidence from randomised controlled trials and controlled before and after studies. Full details of the search strategy are available from the authors, but in essence this consisted of searching Medline from 1974 (when "telephone" was first introduced as an index term) to 2002 and the Cochrane Library; we searched bibliographies of identified articles to identify additional material.

Attitudes to telephone consultations

Public

Several studies have shown that people want to be able to consult their doctors by telephone and are highly satisfied with this mode of communication.[1 w3 w4] Cited benefits include less waiting, reduced travel time and costs, and the possibility of increased frequency of contact. Telephone consultations are particularly valued by people living in rural areas and those whose health or social circumstances make visits to the surgery or hospital difficult. In one study, a third of people who succeeded in consulting a clinician by telephone would have otherwise gone to an emergency department.[2]

Healthcare providers

Several studies now show that many clinicians also value the convenience and flexibility offered by telephones, not least because these contacts may facilitate regular follow up and, in some instances, obviate the need for home visits. Clinicians are also wary of providing telephone based care, however, and this unease is fuelled in the main by an awareness of the potential risks of missing a serious condition.[3 w5] Many doctors also express some dissatisfaction with communicating by telephone, citing concerns such as the absence of visual cues and an inability to confirm the diagnosis with an examination.[w6] Other stated disadvantages include not being able to use touch as a communication aid, formality, and relative anonymity.

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Scope for telephone care

Telephones are used for accessing a broad spectrum of health care, ranging from delivery of routine and emergency care to obtaining repeat prescriptions and results of laboratory investigations and facilitating health promotional interventions. Interventions range from simple transfer of information to education and, in many cases, complex management decisions (box 1).[w7-w11]

Improving access

Triage

As an initial response to the development of new symptoms, many people would value the opportunity to obtain expert advice over the telephone.[w12] Several countries have responded to this need by providing nurse or doctor led telephone services with the aim of improving speed of access to reliable medical advice (NHS Direct in the United Kingdom, for example), and many general practices and some hospitals now offer their patients an opportunity to consult over the telephone.[w12-w15] Evidence about the overall impact and (cost) effectiveness of these services is limited, although some studies suggest that providing telephone access could reduce use of healthcare resources.[4 w16-w18]

Missed appointments

Missed appointments represent more than 5% of all consultations in general practice.[w19] Telephone reminders have been shown to significantly improve attendance of children, adolescents, and adults.[w20-w27] One study also found that patient initiated confirmation of an appointment by telephone significantly reduced the proportion of missed appointments.[w28]

Preventive health care

Telephone contacts can increase the uptake of various preventive programmes, such as influenza vaccination and childhood immunisation, counselling for smoking cessation, and telephone outreach to people who are otherwise difficult to engage in health promotion interventions.[5–7 w24 w29-w35] Not all telephone based interventions increase access, however; examples of interventions with either marginal or no success include reminders for attendance for routine mammography and screening for other cancers and hypertension.[8 w36-w38]

Accessing results

Telephones are commonly used as a means of informing people about the results of diagnostic tests (for example, cervical smear test results).[w39] However, people vary in their preferred methods of being notified of results, and preferences may change depending on the findings of investigations.[w39 w40]

Box 1: Examples of effective delivery of health care over the telephone

- Management of urinary tract infections in women[10]
- Monitoring of care and follow up for depression[14]
- Management of diabetes[15 16]
- Counselling for smoking cessation[6 7]
- Follow up after transurethral prostatectomy[17]

Telephone based management

Telephones provide several other advantages. Some examples are easy integration of care between various healthcare professionals (a call can be referred within a consultation from one professional to another), comprehensiveness (through conference calls, for example), and the possibility of increased continuity of care.[9]

Acute conditions

Telephone management may be appropriate for many acute disorders—for example, respiratory tract infections, musculoskeletal problems such as low back pain, and common symptoms such as headache and fever.[w41 w42] However, only a few studies have formally evaluated the appropriateness of telephone based management for individual acute disorders. Where such studies have been undertaken, telephone based care has been shown to be safe and cost effective—for example, in the management of uncomplicated acute cystitis in women.[10 w43]

Chronic conditions

Standardised telephone case management in the early months after admission for heart failure has been shown to reduce readmission rates and healthcare costs compared with routine models of care and is comparable to other disease management approaches.[11] Telephone interventions, especially using the treatment counselling approach rather than just monitoring symptoms, are effective for improving the functional status of people with systemic lupus erythematosus.[12]

Researchers in mental health have noted the possible psychological advantages of communication by telephone.[w44 w45] For example, a person can participate, ask questions, and receive support without the stress, expense, or time commitment of face to face contact. Cognitive behaviour therapy administered by telephone for the treatment of depressive symptoms in patients with multiple sclerosis significantly improved adherence to treatment and clinical outcomes.[13] Management and follow up care by telephone of people with depression improves outcomes at modest cost.[14 w46]

Several studies have found beneficial effects in the management of people with diabetes by using automated or computerised telephone communication.[15 16 w47 w48] Telephone support also increased adherence to drug treatment and to foot care instructions and behavioural recommendations in patients with type 2 diabetes mellitus.[w47 w49] Other successful examples of the use of the telephone are management of anticoagulation, measurements of health, and patient reported drug use in asthma.[w50-w52]

Telephone follow up

The best researched area is follow up by telephone of various acute and chronic disorders.[w53-w56] Telephone consultations may be used as an extension of or substitute for traditional inpatient and outpatient care or general practice visits. With established trends towards reduced length of inpatient stay and increased use of outpatient follow up assessments, telephone follow up may be a particularly attractive alternative to face to face reviews. For many diseases, no reliable method can identify patients who need full follow up, those who need just advice, and those who do not need any intervention after discharge from hospital. Telephone

Box 2: Suggested approach to a telephone consultation

- Answer the telephone promptly
- State your name
- Obtain the caller's name and telephone number (in case the patient has to be called back by another member of the team or the call is disconnected)
- Speak directly with the person who has a problem
- Record the date and time of the call
- Record the person's name, sex, and age (obtain medical record, if available)
- Take a detailed and structured history
- Provide advice on treatment or disposition
- Advise about follow up and when to contact a doctor (for example, worsening symptoms despite treatment, symptoms failing to improve within a week, onset of new symptoms)
- Summarise the main points covered
- Request the caller to repeat the advice given (several times throughout the consultation)
- Ask if the person has any outstanding questions or concerns
- Let the caller disconnect first

Box 3: Acquiring skills for telephone communication

Training in telephone consultation skills should focus on

- Active listening and detailed history taking
- Frequent clarifying and paraphrasing (to ensure that the messages have been got across in both directions)
- Picking up cues (such as pace, pauses, change in voice intonation)
- Offering opportunities to ask questions
- Offering patient education
- Documentation

As the assessment is based solely on the history, and the management plan cannot be reinforced with non-verbal cues, being systematic in covering all issues is especially important

screening can be a valuable tool for identifying patients who need face to face review, as shown in a study of patients after transurethral prostatectomy.[17] Such screening identifies those patients who need an outpatient review and enables resources to be targeted towards this group of patients. Postoperative management by telephone for children who have undergone adenotonsillectomy is also safe, cost effective, and acceptable to parents.[18]

A routine telephone follow up (by a nurse or pharmacist, for example[w57]) of patients discharged from hospital or the emergency department offers the opportunity to give further advice, reinforce health education, and assess adherence and, for some patients, helps to provide an emotional bridge between hospital and home.[w58-w60] Such consultations can result in better adherence to follow up instructions, improve patient satisfaction, reduce missed appointments, and reduce the number of return visits to the emergency department.[16 19 w61] Interestingly, such reviews may also reduce pain and use of analgesics.[20]

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One of the most common reasons for calling a healthcare professional is for advice about a sick child

Several potential benefits also exist for hospitals.[w62] Telephone contact with patients after discharge can provide the opportunity for useful feedback on the quality of care provided, be a vehicle for informing patients of investigations, and also check that patients understand any advice that may have been given.[w63]

Telephone follow up has been favourably evaluated in many other areas. Examples include follow up after laparascopic cholecystectomy, after cardiac surgery, and in oncology.[21 w64-67]

In 1990 a randomised trial at one outpatient clinic substituted telephone calls initiated by clinicians for some clinic visits for older patients with chronic diseases as a way of extending the time between face to face follow up visits. The intervention decreased costs and use of resources, with no detrimental effect on measured health outcomes.[9] However, when the study was repeated a few years later in other settings telephone care had no impact on admission rates, total number of clinic visits, laboratory or radiological tests requested, or mortality.[22] Thus, instead of providing an alternative means of maintaining contact with patients, telephone appointments became simply an additional service, and many people have expressed concern that national strategies for delivering telephone based care (such as NHS Direct) may represent little more than an additional mode of service delivery.[w18] These two studies indicate how much more we need to know about the appropriateness and method of delivery of telephone care for each disorder and setting.

Ensuring quality and safety

Organisation and documentation

To ensure a good telephone consultation the team of people who may be involved in responding to a phone call must be appropriately trained.[w68-w70] A clear system of triage should be in place, and each member of the team should document interactions with patients. Studies show that documentation of telephone advice is particularly poor, with only about half of contacts being recorded.[w71 w72] Box 2 gives a suggested framework for recording the interaction. A standardised telephone consultation form will be helpful and could be developed to meet the individual needs of various specialties.

Many general practices and hospitals now dedicate time slots when a doctor or nurse can be consulted. Use of an approach whereby a nurse or a healthcare assistant initially triages calls with an option of a "call-back telephone appointment" may be particularly appropriate.[w69] Good organisation of care enables the clinician to pay appropriate attention to the caller, without being interrupted by other assignments or calls.[w6 w73]

Appropriateness and safety

A key concern in each telephone consultation is to assess whether or not telephone management is

appropriate. This question may need to be revisited on several occasions throughout the consultation and should be guided by considerations such as the working diagnosis, severity of symptoms, and patient preference. In a good telephone consultation a person will receive information that allows him or her to manage a disorder at home and understand when further advice should be sought. Use of written protocols or agreed standards, as well as following guidance from the defence unions, can help to reduce the risk of liability.[23] Quality and safety should be closely monitored and evaluated by, for example, recording calls (with consent from the patient).[w74]

Acquiring the skills

In spite of advances in diagnostic procedures, eliciting the patient's history is still the most important part of the diagnostic process. In new conditions, the final diagnosis can be reached after the history has been taken in up to three quarters of cases. On the other hand, visual messages and non-verbal communication account for up to 55% of the impact in a face to face consultation.[w75] This illustrates the importance of communication skills in the telephone consultation. As a rule, an adequate telephone consultation for the identified problem will be of comparable length to a face to face consultation for the same problem. A recent review in the *BMJ* described key communication skills for a face to face consultation and how to acquire them.[24] Most of these skills are generic and are equally applicable to telephone consultations (box 3).

Looking ahead

New technology has allowed some of the previous limitations of providing telephone based care to be overcome. For example:

- Making contact with people who are unavailable at home or work has been facilitated by use of mobile phones, answering machines, telephone linked computer systems, and text messaging[w76]
- Picking up on visual cues is aided by video phones[w77]
- Various examinations can be performed by electronic instruments at home (for example, temperature, blood pressure, pulse, serum glucose, electrocardiograms, and lung sounds).[w78 w79]

Some limitations cannot be overcome, however. For example, a detailed physical examination may be indicated in some cases.

Increased use of the telephone in health care represents just one of the range of developments in information technology that are likely to greatly alter the way in which clinical care is delivered in the future. Undergraduate medical curriculums and specialist training schemes devoted to the topic of communication need to be appropriately adapted to prepare clinicians for the opportunities and challenges offered by new technologies in the field of human communication. Informing the public on how and when to use these services is equally important.[25]

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Additional educational resources

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