In British medical practice we have been slow to embrace the use of the telephone, but now, over a century on from its invention, a quarter of primary care contacts are by telephone and likely to grow further. The proportion of direct versus telephone contacts varies considerably between practices and individual doctors.

Telemedicine is where interactive audio, video or other media are used to deliver health care. It encompasses the use of video conferencing, e-mail and texting as well as telephone consulting.

Telephone consulting has become more important in contemporary British General Practice due to a number of factors:

- **Access** - demand for appointments commonly outstrips supply so daytime telephone triage has become the norm for juggling appointment systems, waiting times and prioritizing emergencies. Government incentivised directives, in the form of Advanced Access and now Extended Access, have driven changes in consulting practice with an increasing number of clinical contacts being provided by phone. Primary care (whether from traditional or corporate providers) is challenged to provide more flexible access and telemedicine may, in part, help to meet the 'gap'.
- **Consumer demand** - with the advent of mobile communication technologies and a faster, 'money rich-time poor', 24/7 society, many expect that they can obtain medical advice 'on the go'. Mobile phones are ubiquitous - many of our patients expect to be contactable wherever they are (consider the frequent interruption of mobile phones to conventional consultations) and this has a knock-on effect in terms of demand for telephone consultation.
- **Out-of-hours (OOH) changes** - with the transfer of OOH responsibility from GPs to PCTs, care has frequently been organised around telephone advice and triage.
- **Clinical targets** - the telephone has become a vital administrative tool enabling practices to achieve targets within the Quality and Outcomes Framework (QOF) of the new GMS (nGMS) contract. For example, telephones are widely used to prompt attendance at clinics and to monitor a chronic disease patient's progress without the need to come in to the surgery.

The use of telephone consultation is growing in other areas of medicine, not just in primary care. For example, telephone follow up has been shown to be safe for oncology follow-up of breast cancer patients with low to moderate risk of recurrence and as an alternative to respiratory out-patient clinic follow-up.

Many clinicians express concerns about the potential pitfalls involved with care 'from a distance' including the loss of vital visual cues, physical examination findings and the consequent fear of 'missing' a serious condition. Many doctors have felt underskilled when it comes to telephone consulting and it has become part of professional training in recognition of its importance and difference to 'normal' consulting.

Benefits and risks

The telephone is both a blessing and a curse: it offers time, efficiency and cost-saving benefits but also the promise of open-ended availability and the risk of fuelling demand. There are many variations in how doctors and practices offer telephone consultations and triage. Even the same variant will be individualised by a particular practitioner so attempting to find any consistent conclusions or to extrapolate research findings is difficult.

**Benefits**

To the patient

- Perceived as more convenient and quicker. In chronic disease management, patients differentiated telephone consultations as a better form for follow-up where asthma was well controlled but preferred face-to-face where control was less good and felt it allowed better assessment of problems.
- Easier access to self-care advice and patient education. Patients like the NHS Direct model and wanted help of this type to be available from their GP surgery during the day.
- Increases access for those:
  - Without their own means of transport.
  - With a physical or psychological disability that makes trips to the surgery difficult.
  - For those in work or their dependants.

- When geographical distances separating the patient and doctor are great, this may be the only realistic means of seeking urgent help.
To the doctor

- Improving efficiency by moving the information instead of the patient.\textsuperscript{[10]} Telephone review of asthmatics is more cost-effective than face-to-face appointments without loss of clinical value or patient satisfaction.\textsuperscript{[11, 12]}
- Can be used to provide a triage system for same-day appointment requests ensuring patients who need to be seen can be given appointments at times when demand is high.\textsuperscript{[13]}
- Can reduce workload - about 50% telephone consults result in telephone advice alone. However there is some evidence that nurse triage increases complexity and workload at the next GP consultation eg more presenting problems, more prescriptions and investigations. Similarly, telephone consultations out-of-hours reduce surgery contacts and visits by GPs but may have hidden costs in terms of use of other services (for example, A&E, 999/112/991 calls), safety and patient satisfaction.\textsuperscript{[13]}

To both

- Reduced visits (both to the surgery and to patients' homes) may mean less use of cars and a potential environmental saving in terms of traffic congestion and carbon footprint.

Costs

- Increased risk:
  - Documentation has been less rigorous than for face-to-face consultations in the past.
  - Most symptoms have a wide-ranging differential - protocols often lack the 'intuition' of experience.
  - Riskier as eliminate traditional sources of information (visual information gleaned from a patient's general appearance and behaviour, from more formal physical examination and non-verbal cues).
  - With fewer consultations face-to-face and less continuity, it is unclear how a doctor-patient relationship and the trust implicit in that, is built and maintained.
  - Confidentiality issues - see below.

- Little overall effect on service use.
- Loss of opportunities for health promotion.
- Increased overheads (eg telephone bills) and opportunity costs (eg practice nurse is now occupied with telephone triage and less available for other roles).
- May reduce access for some patients and by diverting resources into this form of consultation, may potentially increase health inequalities. Consider:
  - Those with sensory or cognitive impairments (in particular, the elderly).
  - Those with poor english.
  - Households without a telephone.

- May increase perceived barriers to seeing the doctor with the need to get through 'triage' and is disliked by some patients (consider attitudes to corporate call centres). Frustration with engaged telephone lines when attempting to call for same-day appointments (as frequently required in Advanced Access) and the high-rate cost of telephone calls to some surgeries have been controversial.
- There are unresolved issues regarding the official status of telephone consultation eg sickness certification requires a doctor to sign to say that they, or a colleague, have 'seen' a patient and the GMS contract has sets targets for review of patients with chronic diseases without always making clear whether the choice of a telephone or e-mail review is acceptable.\textsuperscript{[14]}

The GMC has emphasised\textsuperscript{[15]} that phone (or e-mail) should not diminish the quality of care patients receive. This is most likely to occur where:

- The patient is not previously known to the doctor.
- The assessment may be helped by examination.
- There is little or no provision for appropriate monitoring of the patient or follow-up care.

Basic quality and safety concepts

Risk management and clinical governance is particularly important in providing safe and high quality telephone care. When developing a service consider the following issues:

**Training**

- Train the team of people who may be involved in responding to a phone call.
- Training in telephone consultation skills should focus on:\textsuperscript{[16]}
  - Active listening and detailed history taking
  - Frequent clarifying and paraphrasing (to ensure that the messages have been brought across in both ways)
  - Picking-up cues (eg pace, pauses, change in voice intonation)
  - Offering opportunities to ask questions
  - Offering patient education
  - Documentation

**Triage**

- Use a clear system of triage with clearly defined tasks of each member of the team.
Written protocols and agreed standards can be useful and need to describe and standardise the process of data collection, planning, intervention and evaluation. They can also help reduce risk of liability.

Dedicated time slots when a doctor/nurse can be consulted by telephone enables the clinician to pay appropriate attention to the caller, without being interrupted. Efficiency can be enhanced by using initial triage by a nurse or a healthcare assistant with the option of a ‘call-back telephone appointment’ by a doctor.

Ensure that the patient understands the instructions provided and feels free to ask questions and receive clarification of any information that is not entirely clear. A caller should receive sufficient information to allow him/her to manage a disorder at home and understand when further advice needs to be sought.\[17\]

**Documentation**

- Document all incoming and outgoing calls with patients (and third party informants). Even brief contacts can be critical and note-keeping must be as reliable as for a face to face contact.
- A standardised telephone consultation form will be helpful and it is extremely important that the record of the consultation should become part of the chronological patient record (paper or electronic).
- Sometimes it will be useful to record verbatim what is said by you and the patient.
- On occasion, it may be important to reinforce important information with a letter - eg "Further to our telephone consultation today I would like to emphasise the importance of avoiding aspirin whilst on warfarin - and I enclose a patient information leaflet".
- Many of our day to day telephone calls to commercial organisations are recorded - often "for training purposes". There is an increasing trend for calls to OOH centres to be recorded and it may seem prudent to record telephone consultations in daytime practice as well. In such cases it is usually recommended to seek express consent to recording, and offer a non-recorded option.\[18\]

**Appropriateness and safety**

- Always ask yourself, "Is telephone management appropriate in this situation?".
- Revisit this question several times during the consultation.
- Be guided as to the need to convert to a direct encounter by factors including the working diagnosis, symptom severity and patient preference. 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.

**Confidentiality**

- Be sure to establish the identity of the person to whom you are speaking - if possible a "caller display" option should be used, to confirm where possible that the given telephone number, is that as displayed, and corresponds to that on the medical record, "number withheld" should arouse suspicion.
- If in any doubt either ring the patient back at the patients recorded home number or ask further questions to ensure you are talking to whom you think.
- It may be inappropriate to give out particularly sensitive information (eg pregnancy test results) on the telephone without being absolutely certain about the callers identity - certainly worth specifically covering in any telephone consultation protocols.
- Some suggest establishing a personal password for use in telephone consultations to safeguard confidentiality further.\[19\]

**Communication**

Intuitively we recognise that telephone consultations can never be equivalent to face-to-face consultations. Concepts of psychological distance and cuelessness have been borrowed from social psychology to explain differences.\[20\] Analysis of telephone compared to face-to-face consultations\[21\] shows:

- More biomedical and less psychosocial or affective information is exchanged.
- Shorter interactions account for variation seen in areas such as rapport building, patient education and counselling.
- Doctors behave in a less patient-centred way on the telephone.

**Suggested approach to a telephone consultation**\[16\]

- Answer the telephone promptly.
- State your name.
- Obtain caller’s name and telephone number (in the event the patient has to be called back by another member of the team or the call becomes disconnected).
- Speak directly with the person who has a problem.
- Record date and time of call.
- Record person’s name, gender and age (obtain person’s medical record, if available).
- Take a detailed and structured history.
- Provide advice on treatment/disposition.
- Specific advice regarding follow-up and when to contact a doctor.
- Summarise and record the main points covered.
- Request caller to repeat advice given (several times throughout the consultation).
- Ask if the person has any outstanding questions or concerns.
- Let caller disconnect first.
Miscommunications are common and can result in outcomes ranging from inconvenience to serious medical mishap. In a third of calls patients and doctors see the reason for the call differently.

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<th>Type of error</th>
<th>Common examples</th>
<th>Techniques to prevent error</th>
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<td>• Inadequate drug and allergy history</td>
<td>• Open question</td>
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<td></td>
<td>• Absence of key questions</td>
<td>• Triage protocols</td>
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<td>Relationship building</td>
<td>• Clinician anger and frustration with psychosocial problems</td>
<td>• Attentiveness to verbal and non-verbal cues</td>
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<td></td>
<td>• Patient anger over unmet expectations</td>
<td>• Overt expression of empathy</td>
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<td>• Clarify reason for call</td>
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<td>• Supervision and feedback from regular call recordings.</td>
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<td>Decision making</td>
<td>• Premature decision-making or too early closure in the consultation</td>
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<td>• Absent diagnosis</td>
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<td>• Ask patient to repeat information to check understanding</td>
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<td>• Safety-netting</td>
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The future

Telephones remain essentially audio devices at present. Technological advances are likely to make the use of videophones, webcams or phones that can transmit accompanying data, such as electronic clinical monitoring, more common. Whether or not this makes a ‘telephone’ consult easier remains to be seen.

Further reading & references

- Good Medical Practice (2013); General Medical Council

7. RCGP Core Curriculum.
15. GMC; General Medical Council; Providing advice and medical services on-line or by telephone; (1998); (pdf)