Mobile Phone Text Message Based Consultation

An investigation of current practice and associated best practice recommendations

Bernice Baker
Lecturer practitioner IHCS Bournemouth University
Freelance Consultant Nurse
Steering Committee Member, Information in Nursing Forum RCN.

March 2006

Acknowledgements

Without the support and/or input of the following the scope and presentation of this paper would not have been possible:

March 2006

Contents:

1. Background and Overview of the Project

The RCN had received a number of enquiries from nurses seeking best practice advice associated with the use of mobile phone text based messages for interacting with clients. This need was also recognised by the RCN School Nurses Forum as they were aware that increasing numbers of school nurses were adopting this modern method of consultation with children and young people. As a direct result of this awareness the School Nurse Forum accepted the need for the generation of guidelines, since it was quickly clear that there was nothing readily available.

At the same time members of the RCN Information in Nursing Forum (ING) similarly recognised that there was a need to spend time collating current knowledge and experience in relation to this fast emerging field of eHealth practice which would then underpin and generate recommendations for consideration when evolving guidelines. A collaborative project between ING and the Institute of Health & Community Studies (IHCS) at Bournemouth University was put together and it is the work and recommendations from this collaborative project which is presented here.

These two initiatives naturally complement each other and ING and the School Nurse Forum are working together in order to make these recommendations and the information contained in this work available on line whilst the actual guidelines underpinned by this work are to be released as a paper-based publication at a later date.

The use of mobile phone technology in health care in the early 21st Century extends far beyond one to one nurse text based consultation (see 2.1 literature search) but fully exploring all of these evolving usages is outside the scope of this project.

This work is therefore focused upon the emerging issues and associated current best practice recommendations associated with:

> *Any mobile phone text message based consultation/interaction or series of interactions between a nurse/health visitor/midwife and a client that results in some form of one to one text delivered professional support or advice.*

Note: It will become clear within this paperwork how the concept of a *client initiated*, on-going series of text based *interactions* with a *professionally defined nursing* service differs from the many emerging mobile phone based 'healthcare management' options (which include for example):

- managing Out Patient Department (OPD) attendance via text message
- tagging of vulnerable clients via mobile technology
- wireless monitoring of clients with chronic conditions (eg diabetics) via mobile technology
- managing staff movements/shifts

It is quite possible that all of these concurrent developments would benefit from similar investigation and collation of recommendations for best practice but remain outside the scope of this project. It is important to define this focus since the potential scope of mobile phone usage is immense and still in its infancy (Wireless Healthcare 2005).

1.1 Aims

In relation to the defined focus this work aims to:

- investigate the range of current published or established guidelines and/or practice both inside and outside of traditional healthcare practice
- illustrate current innovative practice using case studies as examples
- collate current issues, such as challenges, risks and scope for development, and offer associated best practice recommendations
- make the subsequent findings and recommendations available on-line on the RCN web-site free of charge.

2. Findings

Approach
The following approach was undertaken and the findings are presented below:

2.1) **Literature Search**
2.2) **Feedback from Regulatory/Professional Bodies**
2.3) **Feedback from Key Informants/case studies**
2.4) **Related external/non healthcare documents and Guidance**

2.1 Literature Search
This review investigates the use of mobile telephone text messaging / short messaging service (SMS) in health care practice. Mobile telephones are becoming increasingly common in the United Kingdom. ICM Research interviewed a random sample of 1003 adults in November 2002 and found that 69% owned a mobile phone; a recent ICM survey indicated that 73% of mobile phone owners use the texting facility.

The use of text messaging in health care is at its formative stage at present. Its use can be divided into four broad categories: enhanced self management of chronic diseases, improved attendance at health care appointments, communication between professionals for clinical expertise and commercial use. There are professional issues related to the use of text messaging; these include medico-legal and ethical concerns and financial implications.

There is a small body of literature about the use of SMS in health care, much of which emanates from outside the United Kingdom. There are few high quality research studies although a number of such studies are in progress. Most evidence is anecdotal and there is some correspondence in professional journals particularly relating to concerns about the use of SMS.

<u>Search Strategy</u>

Databases:	BNI
	CINAHL
	Medline
Web sites:	Department of Health (England)
	Nursing and Midwifery Council
	Health Professions Council
Search engines:	Google
	Yahoo
Search terms:	text, text$, consult$, advice, enquiry, policy, guideline, practice, communication, message$, mobile, phone, telephone, health, SMS

<u>Evidence</u>
Current uses can broadly be divided into the categories of
- Enhanced self management of chronic diseases
- Improved attendance at health care appointments
- Communication between professionals for clinical expertise
- Commercial use

- **Enhanced self management of chronic diseases**
  The use of text messaging in the management of chronic diseases is noted in Self care – A real choice: Self care support – A practical option (DoH 2005) but is not explored in detail. Pilot projects have been set up using SMS messaging particularly for people with diabetes and asthma. There is an absence of high quality evidence to support this use at present although further research is reported as being in progress. Anecdotal evidence suggests that service users, especially younger people, are very satisfied with this method of communication.

- **Improved attendance at health care appointments**
  The evidence that SMS reminders improve attendance at health care appointments remains equivocal with some studies showing benefits whilst others show no significant difference in attendance.

- **Communication between professionals for clinical expertise**
  Text and photograph messaging from mobile phones has been used particularly in wound care with some success although the evidence for this practice remains sparse. It is considered to be a cheap, rapid and convenient way of seeking advice from colleagues.

- **Commercial use**
  A number of services are available to the public, for example contraceptive pill reminders.

Financial Implications
The cost of text messaging is discussed although it is noted to be more economical than sending letters to patients. Sponsorship is seen as the way forward by some practitioners. Financial implications to the client/the person responsible for the mobile phone payments might be a limiting factor in some cases.

Further details of reviewed studies are in appendix 1.

Conclusion
The use of SMS in health care is in its infancy at present; much of the development work is taking place outside the United Kingdom. Anecdotal evidence implies that there is a value in using this form of communication in a variety of situations; more robust research is in progress or planned for the future. Text messaging appears to be a generally acceptable form of communication particularly amongst younger service users. There is a need to develop systems to ensure that confidentiality is maintained. It is likely that professional and regulatory bodies will begin to develop guidelines and standards for the use of text messaging in practice.

2.2 Feedback from Regulatory/Professional Bodies

The following organisations were investigated on-line and/or directly contacted for information about the use of SMS/text based messages for healthcare consultation:

- The Nursing and Midwifery Council (NMC)
- Health Professions Council
- The Society of Radiographers
- Royal College of Speech and Language Therapists
- British Paramedical Association
- Medical Defence Union (MDU)
- American Nurses Association (ANA)
- General Medical Council (GMC)
- General Practitioner Committee of the British Medical Association (BMA)

Apart from the information listed below no other information was available or responses received..

The NMC provided the response below

The NMC currently has no specific guidelines on using text messaging as a means of communication or consultation.

The same basic principles that apply to information technology, computer held and manually held records would need to be applied in the case of text messaging, if this was to be used as a means of consultation. These principles should include security, access and confidentiality as well as looking at how these consultations are to be saved. Local guidelines and protocols should include procedures on ways of establishing the date and time of any entry, the person making the entry and should ensure that any changes or additions to entries are made in such a way that the original information is still visible and accessible. Further details are contained within the NMC Guidelines for records and record keeping which can be viewed and downloaded from the NMC website at www.nmc-uk.org

All registered nurses, midwives and specialist community public health nurses are professionally accountable for ensuring that whatever system they use when recording patient details is fully secure and, as per clause 5.1 of the code of professional conduct, registered nurses must guard against breaches of confidentiality by protecting information from improper disclosure at all times. How this would be achieved with text consultations would need to be addressed and clear local protocols would need to be drawn up on staff access.

(Woolrich 2005)

Medical Defence Union: Medico-legal and ethical issues discussed in a letter to the BMJ: (Norwell 2003)
Confidentiality is a major concern for practitioners using SMS, particularly as messages cannot currently be encrypted. There are indications that more advanced systems are being developed that will ensure more security in the future. Norwell advises that there is no reason why doctors should not make use of this technology but suggest that they need to reassure themselves and their patients that the value of text messaging outweighs its drawbacks. It is further noted that there is a need to record messages and date and time sent, to agree vocabulary to reduce risk of misunderstanding and to use code words and other security features to protect confidentiality. These issues are raised in a number of articles and letters in professional journals.
Potential increase in inequality of health care provision is noted as it is likely that mobile phone ownership may be more common in affluent groups.

The ANA Code of Ethics includes:
Provision 6: The nurse participates in establishing, maintaining and improving health care environments and conditions of employment conducive to the provision of quality health care and consistent with the values of the profession through individual and collective action.
6.2: Influence of the environment on ethical obligations: All nurses, regardless of role, have a responsibility to create, maintain and contribute to environments of practice that support nurses in fulfilling their ethical obligations. (ANA 2001)

GMC
Guidelines on the making and use of visual and audio recordings of patients
Telephone calls
(21).   Recordings of telephone conversations fall into a category of their own. Anyone using a telephone is subject to licence conditions under the **Telecommunications Act 1984**. They require you to make every reasonable effort to inform callers that their call may be recorded, and maintain a record of the means by which callers have been informed.

(22).   Given the sensitive nature of calls to medical advice lines or similar services, you should pay particular attention to ensuring that callers are aware that their call may be recorded. You must not make intentionally secret recordings of calls from particular patients. (GMC 2002)

> **Telecommunications Act 1984.** This Act was passed by the government in 1984 to licence British Telecom when it was split off from the Post Office and privatised and to provide a framework for promoting competition. Since that time other telecommunications network and service providers have been licensed, and now there are over 300 licensed companies. Their licences are issued by the Department of Trade and Industry, but monitored and when necessary amended by OFTEL.

BMA General Practitioner Committee: Consulting in the modern world; guidance for GPs
(GPC 2001)
In the section on telephone consultations this BMA paper recognizes that in telephone consultation the doctor cannot see, touch, examine, investigate .. (or, when texting, for example, even hear) .. the caller/patient. Interaction is limited to what is said (or texted) which is often relatively limited. The need to have easy, organized access to subsequent face to face consultation or referral for any situation where it is not considered safe to manage the patient over the telephone is noted. The need to consider the authentication of the identity of the caller and the fact that telephone connections are rarely secure is also highlighted and that "the fact and content of all telephone consultations should be recorded in the patient's notes".

This work demonstrates well how text based consultation has elements of both telephone consultation and 'on line' consultation – but falls exactly into neither type of relatively conventional practice. Whilst the telephone section does not 'quite exactly' reflect the process and experience of texting, the section on on-line consultations includes a note that "exchanges are severely limited by the keyboard" and that "attempts to develop 'netiquette' symbols to convey meaning …should not be considered robust enough for a doctor to have adequately communicated with the patient".

Department of Health publications/guidance:
Includes the Caldicott Report (DoH 1997) and the NHS Confidentiality Code (DoH 2003). Awareness of electronic records generally is included in the For the Record Document (1999) and is key in the more recent Connecting for Health Records Management consultation document (DoH 2005), but none of these address the uniqueness of the mobile phone text message option – even though the increasing use of wireless technology in health care settings is inevitable.

2.3 Feedback from Key Informants/Case Studies

It is an interesting point that the defined focus of this work – text based nurse consultation - is not sufficiently represented in the published literature to warrant being defined as a category in its own right in the Literature Search in 2.1 above. Yet it is a substantial area of professional awareness and anxiety for practising nurses since it has generated many requests for advice from the RCN. In many cases the leading edge nurse/midwife services contacted for this project had developed some sort of organisational guideline or policy to underpin their service. Rarely was one aware of the other. This is yet another example of fast emerging practice developed by front line nurses too busy (or with no established method) to get their work published, recognised and/or shared.

Other potential UK Informants were contacted:

> UK eHEalth association (UKeHA)
> British Computer Society

Case Studies

Nurses within the following established School Nurse services were willing to share their experiences and associated documents in order to inform this work.

EAST KENT SCHOOL NURSE TEAM: Lead Nurse, Lisa Maidment; Head of School Nursing Service East Kent Coastal Teaching PCT

Young People in East Kent have 9am – 5pm weekday access to a School Nurse via a mobile phone. The service offers either text message or voice call. Young people were consulted on all aspects of the service which was launched in school assemblies, SRE (Sex and Relationship Education) lessons, Young persons Family Planning Clinics, local media and via posters and flyers. The service is advertised on 'credit cards' which give the mobile phone number and contact details. The service has been developed in line with government targets, in particular Teenage Pregnancy and the Child and Adolescent Mental Health Services (CAMHS) strategy. The service offers an open, confidential, accessible contact route for any health related issue for young people. Lisa and her team have made their standards and policies available to inform this paper.

CEREDIGION SCHOOL NURSE TEAM: Lead Nurses, Tina James and Sandra Williams
Ceredigion and Mid Wales NHS Trust

Initial pilot scheme launched in January 2004 to one school. 9am – 6pm Monday to Friday.

Following audit, three main categories of queries and problems emerged:
- sexual health,
- emotional health and
- physical health.

Users were 70% female 30% male. Users from all school year groups accessed the service. 100% satisfaction with the service - over 88% would use the service again. When asked who they would have asked if text service was not available: 47% said GP; 12% said their Mum; 6% said their teacher; 6% their friend and *over 29% said they would not have known who to ask for help and advice.*

Currently roll out to all local schools is not planned for a number of reasons including the availability of school nurses – most are part time with already heavy workloads – and the fact that not all the school nurses wish to implement this type of service.

A 'call handling' element has been considered with the initial text being 'front ended' with a dedicated clerk who would take the initial request then allocate the contacts accordingly. The team feel there might be issues here with same day replies, funding and confidentiality.

NOTE: Thanks again to the nurses within these leading edge services for their enthusiasm and willingness to help and to the many services who wished to remain anonymous and who similarly provided critical and invaluable insight into current practice.

Overview of Emerging Models
It appears that in all text based consultation services contacted and willing to inform this paper, the generation of the service followed two steps:
1. The need was recognised
2. Those involved in recognition evolved/innovated a local model

The need was recognised: Single practitioners – or teams of practitioners – exposed that:
- Their client base (often vulnerable young) predominantly used/preferred the text method for communication and/or
- That texting helps them manage service demand/delivery in a more cost effective manner

These practitioners themselves fall into 3 general groupings:
   Group 1: School Nursing Services
   Group 2: Midwifery Services
   Group 3: Acute Trust/Specialist Services

A Local Model was evolved/innovated: in all cases services are run by highly motivated and enthusiastic individuals. Where these individuals run/manage a team a slightly different operational trend is evident. This is best illustrated by the following initial conceptual models.

Examples of Current Text Based Consultation Practice : Emerging Models

Group 1 – team environment/team delivery (eg School Nurse Teams)

Need recognised Initial need for guidelines/ policies agreed

Sometimes funding permits phone equipment purchase Often service commenced using existing equipment

Text service publicised/ launched to target group Sometimes with handouts to clients sometimes not

Clients text School Nurse

School Nurse replies Within agreed guidelines

Documentation varies Sometimes method agreed in guidelines, sometimes not

Which team member will be available/when/how contacted agreed.
Often 'text' service offers mix of SMS/telephone/Face to Face (FtF) consultations
Consideration is given to support /referral needs/access for referrals and these agreements/methods are included in policies

Sometimes via text or phone or FtF Methodology addressed in guidelines

Group 2 and 3: These services are usually provided by individual practitioners and the emerging models fall into two general types:

Type 1: Little formal organisational involvement

Need recognised by individual practitioner

→

Individual offers/evolves service from own practice knowledge of need/ awareness of usefulness to own client group and/or pressure from organisation to meet service pressures or requirements

→

Text service publicised to target group Sometimes with handouts to clients sometimes not

→

Client texts the individual clinician/ clinician texts client

→

Clinician replies Method of response/ recording evolves in response to reality of demand and is evolved by the clinician

↓

Sometimes via text or phone or FtF methodology Not formally standardised

→

Documentation varies and need for record is decided on an individual interaction basis by the clinician. Service expands driven by the enthusiasm and commitment of the individual

↓

Rarely are any local guidelines or policies generated as this model evolves and it is perceived purely as a personal service

Type 2: With varying amounts of organisational involvement/support

Need recognised By Individual practitioner

Individual offers/evolves service from own practice knowledge of need/ awareness of usefulness to own client group and/or pressure from organisation to meet service pressures or requirements

Text service publicised to target group Sometimes with handouts to clients sometimes not

Client texts the individual clinician/ clinician texts client

Clinician replies Method of response/ recording evolves in response to reality of demand and is evolved by the clinician

Services expand sometimes with formal support/method sometimes not Individual's enthusiasm and commitment carries the service

Individual perceives local organisational involvement need

Caldicott Guardian Advice Local Best Practice

The need for organisationally purchased equipment

Might be dedicated mobile phone equipment only, might be consideration of generation of SMS calls from Computer software Latter requires consideration of cost: Companies offer free service in return for advertising

Sometimes via text or phone or FtF methodology / record varies according to local method adopted/funded/ not

2.4 Related external/non healthcare generated documents and guidance

Amongst the many diverse non healthcare based commercial companies who use mobile phone messaging within their businesses there is a substantial amount of awareness of the need for codes and associated standards. This awareness has been underpinned by various published Codes of Practice and Guidelines.
The non healthcare based codes/recommendations considered here are:

ICSTIS: Code of Practice (Independent Committee for the Supervision of Standards of Telephone Information Services 2004)
ICSTIS is the UK Regulatory Body for premium rate telephone services; it is independent of the industry but is funded by a levy on it. ICSTIS investigates companies and has the power to fine companies and bar access to services. It can also bar any individual from running any premium rate services under any company name on any telephone network for a set period.
The ICSTIS Mission states: ".. we create a Code of Practice which sets appropriate standards for the promotion, content and overall operation of premium rate services, taking account of those who may be specially vulnerable, particularly children..."

MMA Code for Responsible Mobile Marketing; A code of conduct and guidelines to best practice (Mobile Marketing Association 2003)
The MMA is an independent UK body open to any commercial entity that is engaged or otherwise involved in mobile marketing, including those who provide services via a mobile phone. The MMA note: "The mobile is a more personal communication channel than any other…As it is more personal; however, particular care is needed not to abuse the power of the medium and to put control of the channel firmly in the hands of the user". In order to achieve this MMA has developed a Code of Conduct and best practice guidelines for self regulation by members.

Study on pan-European market for premium rate services: Draft final report (Cullen International & WIK Consult GmbH, 2005)
This report investigates the needs for pan-European standards and codes for premium rate telephone services. The report suggests that such actions: "…require the elaboration, after consultation of all interested parties, of a Community instrument on PRS accompanied by a code of practice for pan European PRS".

UK Code of practice for the self regulation of new forms of content on mobiles (Orange et al 2004)
The Mobile Data Association (MDA) promotes the uses and benefits of mobile data through the industry and business press, conferences, seminars and the maintenance of a website. In addition, the Association provides a forum for members of the industry to meet and share information on technical and business issues. The Code of Practice was developed by members as a result of the enhanced services increasingly available by mobile phone and "…In anticipation of these products being widely adopted by consumers, including consumers under the age of 18, the mobile operators are putting in place the measures described in this Code. The intention is that parents and carers should have access to the information with which they can show their children how to use new mobile devices responsibly and the power to influence the type of content they can access." Section 6 addresses Information and Advice.

Direct Marketing Code of Practice (Direct Marketing Authority 2005)
The Direct Marketing Authority is an independent body established by the Direct Marketing Association (UK) Ltd in 1997, to ensure the direct marketing industry continues to maintain and continually raise its standards. The Authority investigates any complaints made by consumers and other businesses against DMA member companies to decide if there has been any breach of the DMA's Code of Practice, and makes adjudication as appropriate. Complaints against non-member

companies who have applied for membership of the DMA will be assessed as well. Section 20 of the Code addresses SMS Marketing.

Information Commissioner's Office Research (Information Commissioner's Office 2003, 2004)
The Information Commissioner is an **independent official appointed by the Crown** to oversee the Data Protection Act 1998, the Freedom of Information Act 2000 and the Environmental Information Regulations 2004. The Commissioner reports annually to Parliament. The Commissioner's decisions are subject to the supervision of the Courts and the Information Tribunal. Their Mission**:** 'Promoting public access to official information and protecting your personal information'

New Local Government Network 'Cutting the Wires' (Cross M, MacGregor J 2006)
The NLGN is an **independent** think tank that seeks to transform public services, revitalize political leadership and empower local communities. NLGN published this report as part of its programme of research and innovative policy projects. The views expressed are however those of the authors and not necessarily those of the NLGN. In this very recent document – which contributes to the debate about the potential of mobile technologies to reshape local governance and to change working lives – some elements are relevant for consideration by nurses and the health organizations in which they work. Especially relevant is section 6: Obstacles to cutting the wires where 'challenges' are listed which have some relevance to nurses and midwives:

> **Competence**: In general those most in need of complex services are those least equipped to use IT – here mobile technology provides some grounds for optimism. "This optimism is based on the fact that mobile phones have roughly the same penetration in sink estates as they have in millionaires' row".
> **Scaling up**: Deploying IT devices to a small group of committed enthusiasts is one thing; implementing organization/department wide mobile IT is another thing. Users will not in the future come from the ranks of self motivated volunteers.
> **Central meddling**: The experience of Local Authorities (LAs) is that successful projects tend to be conceived and initially developed in small teams without meddling from centre. Once these initial projects are demonstrated to be successful the further roll out needs the commitment of 'senior officers' – an approach that 'nurtures innovative approaches and takes into account local circumstances, allied with the embedding of sound learning in local strategies at the appropriate time To date much e-government has been driven by centre…the danger of over-prescription is obvious: for example when councils were told to put all services on-line by April 2006 plenty concentrated on ways in which they could 'tick the box' without thinking about improving the service itself".
> **Organisational cultures**: "Several IT projects have faltered because the costs lie with one organization and the benefits with another"
> **Business cases**: Many mobile IT projects rely initially on grant funding/special deals from IT suppliers. There is a need to turn this 'pump priming' short term approach into business case planning into longer term strategies – but "The difficulties of building a traditional business case for mobile office based on pure financial ROI (return on investment) means that wireless initiatives run the risk of becoming stuck at the pilot or roll-out stage"
> **Data sharing:** Issues recognised by LAs just as in health sector

The Limits of Mobile IT:
- Battery life, invariably shorter than manufacturers figure
- Display legibility, especially when devices have to be used in the street
- Device management/security
- Ruggedness of hardware
- Slow 'wake-up' time of PC-based systems
- Constant need for software upgrades
- Gaps in wireless coverage
- Future proofing of the network (3G to replace GPRS? Could WiMAX render some systems obsolete

Relevant content within all of these documents/sources will be referred to further below.

3. Collation/Synthesis/Analysis

3.1. Non healthcare/commercial
3.2. Nursing, medical and health care derived
3.3: Trends from emerging models
3.4. Outstanding issues requiring further legal advice

3.1 Non Healthcare/Commercial

From the published text messaging aware codes and guidance (which is predominantly derived from non health care, commercial practice – especially from mobile phone based marketing experience) two key areas of commercial awareness which are professionally relevant to nurse consultation services clearly arise:

- **Planning services according to the discrete needs of the age groups which comprise the biggest SMS users:**
  The need to recognise that the main users of text messaging are likely to be children, teenagers and adolescents and awareness of the associated special needs and potential vulnerability of these groups when designing services (DoH 2003, Orange et al 2004, MMA 2003, Information Commissioner 2004, ICSTIS 2004, Norwell 2003, Direct Marketing Authority 2005)

- **Adequate/reasonable information regarding the service prior to engagement:**
  The need for clarity and information regarding the scope and content of the SMS service (targeted to the relevant client group as above) *prior* to clients entering into the service. Fully contextually appropriate, informed consent into the method/process to be used (including language and the responsibilities associated with/expected from both parties) together with a clear explanation of the opt in and out method. (GPC 2001, MMA 2003, Information Commissioner 2004, Office of Public Sector Information 2003, ICSTIS 2004, 2005, Norwell 2003,)

3.2 Nursing, medical and health care derived

Whilst matters raised predominantly within the nursing, medical and healthcare related documents include inferred awareness of the above key commercial points, here pre-occupation is with more discrete, process related areas/potential issues which include:

- **Confidentiality/Security/Access**
  The NMC (Woolrich 2005) highlight clause 5.1 of the code of professional conduct, noting that registered nurses must guard against breaches of confidentiality by protecting information from improper disclosure at all times. In this respect, texting is an unusual medium which requires consideration of new approaches such as the use of established code words (Pal 2003, Norwell 2003) or other innovative ID possibilities as discussed in security below. Confidentiality of saved text message 'documentation' by commercial companies is similarly noted below.

  Confidentiality of records - of all types, but predominantly conventional, (SMS is not specifically mentioned), is key in Department of Health Guidance (DoH 1997, 1999, 2003, 2005) and explicit in statute for public service workers (Public Records Act 1958).

- **Documentation/Recording of text conversations and access to records:**
Throughout the literature there is a definite trend that illustrates how mobile phone based text messaging encompasses elements and perceptions of both 'conventional' telephone consultation *and* on-line consultation. This has repercussions for how and when, and where the subsequent notes (documentation) are generated and recorded and raises the question of whether the texted interactions on both mobile handsets are actually more reasonably compared to the 'audio recording' of the telephone consultation/conversation than to the run of email interactions/written messages of on-line consultation.

Norwell (2003) in his letter from an MDU perspective recommends that doctors need to "reassure themselves and their patients that the benefits from text messaging outweigh the drawbacks. They will need to have a system to record the messages themselves, the date and time sent and received, and any action taken". The BMA GPC (2001) advise GPs that "the fact and content of all telephone consultations should be recorded in the patient's notes".

The GMC (2002) note in relation to telephone consultations that "every reasonable effort (should be) made to inform callers that their call may be recorded" and that GPs should: ".. maintain a record of the means by which callers have been informed"..
The NMC (Woolrich 2005) recommend awareness of the code of conduct with regard to information technology, computer and manually held records, and of the NMC guidelines for records and record keeping.

In many of the Case Study sites approached for this paper local guidelines and/or policies had been evolved where the local method for documentation was made clear to the service team.

DoH guidance (1997, 1999, 2003) makes the generation of a record of any consultation a key part of an NHS employees duties – a record which is then the property of the NHS. There is no clear mention of the unique elements of SMS based consultation and it is not clear at the time of this report if, in law, a text consultation would be reasonably considered to be more like a phone consultation – a conversation with an audio tape recording able to produce a transcript (the SMS messages) - or more reasonably like an email 'computer message' interaction. (For current legal advice re this see page 22). It would certainly appear that it would be prudent and justifiable for any nurse to seek the advice of a local Caldicott Guardian regarding SMS consultation records in their organisation.

- **Security/Disposal of records:**
The NMC (Woolrich 2005) recommends the adoption of the same basic principles that apply to information technology, computer held and manually held records, referring nurses to the NMC's guidelines for records and record keeping. Norwell (2003) similarly recognises the need to address security and authentication from an MDU perspective.

Where the Text message call is not generated from a computer the text message is not held in computer/email format and the original text message is only retained long term by the commercial mobile phone service provider of each handset owner. The safety and security of the individual commercial company held text 'record'/data is regulated and controlled by the industry's self regulation codes and by formal legislation (ICSTIS 2004, MMA 2003, Direct Marketing Authority 2005, Telecommunications Act 1984, Office of Public Sector Information 2003).

Finland is leading edge with regard to authentication of identity in that it has passed legislation to enable a country wide ID card to be developed which carries unique identification for all aspects of technological communication including SMS text (Jelekaien 2005). This project is called The Population Register Centre and enables identification and signature of every individual citizen via

mobile phone. The possibility of this type of encryption being linked to ID cards in the UK is thus theoretically possible but there is much caution regarding this development here (Information Commissioners Office 2005) where the emphasis is seen to be on ensuring that the ID scheme which develops allows people to readily identify themselves rather than being one which might enhance others' ability to identify and record what citizens do in their lives.

The BMA GPC (2001) discusses encryption for electronic communications "it is essential that the message should itself be secure and the minimum to achieve this would be encryption. It is BMA policy that no patient identifiable data should be transmitted electronically unless the message is encrypted". Whilst this is possible via encryption of emails in the NHS, similar encryption is not yet possible for SMS messages. NHS healthcare practitioners to date with an awareness of this need have utilised Code Words (Pal 2003). Many school nurse services use variations of numbers from a date of birth and initials, for example.

Recent DoH consultation on Records Management (2005) makes no specific mention of the unique elements of SMS messaging, especially with respect to retention and disposal of the text records held with the commercial provider. It is reasonable that any associated paper or computer generated records would be included within traditional guidance. (For current legal advice re this element see page 22).

- **Recognition that text messaging is a unique area of professional practice:**
  In much of the medical guidance there is recognition of emerging areas of 'unique' consultation practice (GMC 2002, GPC 2001). Discussion is often confined to telephone consultation and on-line consultation - but it is increasingly clear that, whilst these now relatively conventional forms of consultation are often recognised and regarded as 'unique' and requiring special methods, SMS text based consultation similarly needs to be recognised as in need of discrete guidelines which address the uniqueness of the SMS situation.
  There appears to be a need to recognise that the practice is professionally unique for health care practitioners in relation to:
  - $\Rightarrow$ The interaction method/consultation process,
  - $\Rightarrow$ The contemporaneous generation of SMS 'conversation' 'records'/'recordings' on two discrete handsets provided and stored by possibly two different commercial mobile phone access providers
  - $\Rightarrow$ The unique needs of the age group of the users who often may not be the bill payer of the phone used.

The ICSTIS Code (2004) notes: "we are committed to..staying aware of, and responsive to, the ways in which consumers, or particular sets of consumers, may be vulnerable when using premium rate services and striving to ensure they receive the necessary protection". This emphasis on the need to design services which respect the unique needs of every customer group is underlined by the ICSTIS guidelines – the most relevant of which for nurses are related to Live Counselling Services and Premium Rate SMS Services (ICSTIS 2005). The MMA Code (2003) states that mobile marketing must be: legal, decent, honest, truthful, permission based, responsible, responsive and respectful and that the first key thing that any company must do is to plan appropriate content/action for their defined target group. These commercially originated codes and guidelines have some resonance with the needs for nurses and nursing.

- **Staff need special skills/awareness and the need to keep practice up to date:**
  Since the commercial guidance so openly recognises the need to develop awareness of the needs of discrete user groups (usually young people) it is not surprising that it is in commercial guidance that the associated awareness of the need for the development of special skills and knowledge relevant to the defined/targeted groups of mobile phone users/use is highlighted and regulated. (ICSTIS 2004, 2005, MMA 2003)

This need for a nurse to be aware of his/her individual responsibilities whilst demonstrating an understanding of a fast emerging technological environment and multiple stakeholder agendas and still focusing on the best interests of the individual client is well illustrated by the American Nurses Association code (ANA 2001) which states "The nurse participates in establishing, maintaining and improving health care environments and conditions of employment conducive to the provision of quality health care and consistent with the values of the profession through individual and collective action". This skill is especially needed in an area where there is no published guidance or established education and it is well illustrated by the sample Case Study services included in this paper. In most of these services the lead nurses (midwives) and their teams managed this environmental reality by establishing local policies and guidelines in the best interest of their clients and in the absence of any established health care best practice guidance. It is this level of professional awareness and insight into emerging practice - in the absence of any formal recognition of need - which protects the public in the UK.

In the commercial guidance (ICSTIS 2004, 2005) the need for targeted learning around the mobile phone based practice and the needs of the associated focus client group is clearly stated and underlined in their guidelines. For example, in the ICSTIS guidelines for SMS counselling services, it is recommended that the users must be contacted by a counsellor who is fully qualified, who maintains the requirements of his/her professional code and who has access to supervision and that audit of the interactions is maintained and monitored. This has resonance with nursing in that local guidelines and policies should include such Continuous Professional Development (CPD) and monitoring requirements focused on the need of the target user group/clients. There follows that there is a need to develop educational underpinning/insight for this CPD.

- **Local protocols, guidelines, policies, standards to underpin services:**
  Norwell (2003) highlights from an MDU perspective that GPs should be aware of and plan for all the elements involved in text messaging consultation practice and the NMC (Woolrich 2005) note that local guidelines and protocols should be established in relation to records and record keeping and to guard against breaches of confidentiality.

  Guidelines and policies reflect most of the points and issues in this section. It should be noted here that not all existing services contacted for this paper had established any local guidelines or policies with regard to the practice which serves to highlight the need for national guidelines.

- **Workload implications, text and voice mixed services**
  Health based services often offer the option of either a text based message or a voice mail/subsequent voice telephone consultation from a text or a combination of these to suit the client. The associated unpredictable demand requires flexibility and recognition of associated workload implications. The GPC (2001) note in relation to email 'text messages' how the ease of use of the medium and increasingly familiarity with it potentially increases its availability/usage in health care – and associated demand on practices. It is possible that use of phone based text messaging may prove to have similar characteristics. There is obviously a danger that the practice might be 'tagged on' to a nurse's multiple other more conventional roles and responsibilities and then become unsafe because of the lack of time and recognition/value within the workload. The need for express local guidelines and policies which recognise the requirements of the new practice as above should be noted.

- **Provision and maintenance of equipment:**
  Similarly this is new practice which requires the provision and maintenance of good quality equipment. Norwell from an MDU perspective (2003) reminds GPs to take reasonable steps to ensure the proper functioning and maintenance of the mobile phone(s). In many of the services

contacted for this paper the nurses included this negotiated provision and subsequent support agreement into their local guidelines and policies

▪ **Financial implications for client/bill payer and provider:**
Recognition of this element is included in many of the points above and is strongly noted in commercial company codes and regulation since the prime users of mobile phones are young people whose mobiles are paid for by parents or carers.

In some guidance (ICSTIS 2004, 2005, MMA 2003) it is suggested that providers of services never exceed a maximum cost which is relevant to the associated service and that this is advertised in the pre service guidance/information – for both potential clients and the associated bill payer (if different).

From a provider's point of view, the BMA GPC (2001) reminds GPs that they may "not charge their patients for any form of electronic communication or consultation". Some organisations provide mobile phone services via an agreement with a commercial text message specialist company where the associated advertising results in no cost to the provider.

▪ **The need to actively inform users and carers (usually vulnerable groups) of best/safest usage of the medium in a standardised, collaborative manner**
The clear obligatory requirement of the commercial companies by their regulators to ensure they design services focused on the unique needs of the target audience (often the vulnerable young) is well highlighted above. The MMA Code states that commercial companies are advised to be clear in relation to the information offered to the clients, noting that this should be: clear, concise, easy to understand (bearing in mind the age of the target group) and customer friendly. This wide area standardisation need is underlined by the EC Privacy and Electronic Communications Directive (Office of Public Sector Information 2003) and the recent Report on Premium Rate services for the EU (Cullen International et al 2005) which recognises that the UK is already commercially well regulated for SMS and premium rate services.

More recently most of the key mobile phone service providers (Orange, T-Mobile, Virgin, Vodafone, Hutchinson 3G (2004)) have come together to formulate a voluntary code for the self-regulation of new forms of content on mobile phones. This work is predominantly motivated by the need to regulate the fast emergence of enhanced mobile phone features, which include colour screens, picture messaging, video cameras and internet browsers but is interesting to nurses in that it also recognises that in this unique area of fast emerging technological practice used predominantly by potentially vulnerable youngsters and paid for by often ill informed/technologically aware adult parents/carers – there is a need to provide *unified* information from all sources which is contextually appropriate for each of these very different groups.

The code talks about a 'basic common framework" and in the information and advice section says "mobile phone operators will provide advice to all customers – including children, parents and carers – on the nature and use of new mobile devices and services and support other relevant media literacy activities designed to improve the knowledge of consumers. It seems that this would be an ideal collaboration for professional bodies to engage in – full standardised best practice information in the advertising and promotion from all the phone providers as part of their commitment to ethical development of enhanced services.

3.3 Trends from Emerging Models

The Emerging Models (pages 11 - 13) have been derived following input from current text consultation services (as defined for this project). Only two of these wished to be formally named

within this paper but without the anonymous willingness of all the others the scope of insight into current practice in this paper would not have been possible.

As noted above, from work undertaken for this project, it appears that text consultation services are mainly being utilised by School Nurses, Midwives and acute specialists, with the former two groups comprising by far the greatest 'consultation' usage. Whilst it is true that the text service development opportunities were usually driven by an individual practitioner, the perception of the need and the associated speed of implementation tended to be driven by a central government target and/or a local demand management need.

For example, in most School Nurse services, the government requirements regarding action in relation to teenage pregnancy rates proved to be the main catalyst. This was both good and bad. It was good in that effort and some time and occasionally monies were released to develop a service which is obviously relevant and useful to the young and which may not have been offered otherwise. On the other hand the speed requirement and need to meet another agenda sometimes tended to preclude adequate planning and investigation of the full scope of needs for what is in actual fact a very innovative and totally new medium of healthcare consultation delivery and documentation. This point is noted here as recognition of experience to date is essential for any further services where the method might be quickly adopted to 'fix' another agenda/another need. It is important that text based consultation is perceived and recognised as an individually professionally accountable health consultation method in its own right – one which is evolving very quickly underpinned by wireless technology, which is itself expanding exponentially.

Acute awareness around possible issues arising from confidentiality is a constant trend in nurse and midwife mobile phone text message services.
There seems to be an association of confidentiality with the need to:

- Immediately delete the message held on the practitioners mobile hand set and to be sure that handsets are password protected and ideally dedicated to the consultation service only
- Shred/dispose of any logs/notes of text calls – especially in school nurse services

This highlights issues around documentation and the uniqueness of the text message 'record'; it could be that this approach to 'confidentiality' clashes with the need to have a legal/professional record of a consultation. Curiously the only 'health' record in this approach is that held with the commercial providers of the mobile networks. It would appear that 'confidentiality' of text records is/will be similar to that of notes derived from any type of consultation. Usual employment/legal awareness should be sufficient for confidentiality in text message based consultation – and Caldicott Guardians involved in every instance. Confidentiality should not preclude adequate professionally accountable documentation/record keeping.

In some nurse services there is a further tension: the nurse often is employed by a health service trust (covered by NHS rules and regulation) but delivers the service within an educational institution(s) where different cultures, rules and regulation are the norm. Here within all the local agencies and organisations policies and procedures it appears it would be prudent to establish clear express formalised inter-agency agreement regarding adequate documentation to meet the client's health care best interests and the professionals need to record care and advice given. The confidentiality of the record is a key element of this best practice approach just as it would be for any type of documentation.

It seems also that there is a need to recognise that the mobility and easy 'on the move' access element of text consultation services – mobility/access both for the client and the practitioner – and the fact that it can be delivered using existing/old mobile phone equipment - has tended until now to make it be perceived by both provider organisation and practitioner as a quick 'add-on' to existing

and traditional operational/documentation methods, equipment and workloads. The findings within this paper clearly challenge these assumptions.

The development of professionally delivered text consultation practice must include two developmental awareness elements:

- for the **provider organisation** with regard to new, formalised, operational methodology, workload and associated requirements for equipment
- for the **practitioner(s)** to continuously address and monitor the associated fast emergent professional, legal and ethical issues

The recommendations in section 4 below recognise and reflect the issues inherent within these two elements which have been exposed by practice to date. Issues from existing practice with current legal advice are noted in 3.4 below. Recommendations follow in 4.

3.4 Current legal advice from RCN Legal Department on issues exposed by this paper (March 2006)

3.4.1 How text based consultation might reasonably be regarded legally viz:

- As a '**conventional phone conversation'** where the texted records are similar to a taped record/transcript and 'records' are generated by the clinician in addition to this in 'notes'. In this case should the caller be warned/reminded that the 'conversation' is being 'taped'/recorded in addition to any notes taken by the practitioner as required for telephone consultations?
- As an '**on line' based consultation** where the texted 'records' of the conversation are treated/considered like an email by both caller and practitioner and therefore able to be directly pasted into notes. Thus it may be assumed that legally it is 'reasonable' for the clinician to assume that the caller knows that every 'word' of their 'conversation' is recorded/potentially recorded in their notes

Current Advice

Whether a mobile phone text-based consultation may be more accurately described (from the legal perspective) as a 'texted record of a conventional phone conversation', or as more equivalent to an 'on-line' based consultation (the significance of this distinction apparently lying with a duty to warn the caller that the conversation may be recorded) – it is probably better to err on the side of the latter (i.e. an on-line consultation), but current advice must be to ensure that the caller is aware that both the fact of, and the content of, such a consultation will be documented, as would any encounter between a health care practitioner and patient/client. In other words, this is probably a distinction without a difference, for the purposes of ensuring the confidentiality, security and access to information disclosed during the course of a consultation.

Given the relative novelty of this method of consultation, and the importance of obtaining the patient/client's fully informed explicit consent to it, practitioners should not be making any assumptions about what the caller should or would 'reasonably know' what to expect.

Awareness of the usual legal issues around the confidentiality of health information (both common law and statutory - e.g. the Data Protection Act 1998), understood in the context of eHealth, should be sufficient in a text-based consultation to satisfy the legal and professional accountability of the health practitioner.

All of the practical issues raised throughout the paper, by the regulatory/professional bodies, are obviously relevant from the legal perspective, in so far as this advice will clearly inform the law as it develops in connection with electronic health practice.

As is also mentioned, seeking the advice of the local Caldicott Guardian is an obvious first step in setting up such a service.

3.4.2 The fact that text records are held in Commercial Company 'archives' – long after the records on individual handsets have been deleted. These 'health' records are potentially:

- In addition to any conventional notes that the practitioner might make
- Potentially held in several different commercial provider archives
- Not covered by DoH health care records disposal requirements

Current advice

As regards the retention, and possible (mis)use of confidential health information by commercial suppliers of electronic communications networks/services, this is an area that is already fairly heavily regulated (not least, with the Privacy and Electronic Communications (EC Directive) Regulations 2003 - which is quite explicit about security, confidentiality, and restrictions on processing including erasure of data. There is also the Information Commissioner's guidance on the same, alongside the Data Protection Act 1998, and other legislation mentioned in this paper and so long as the practitioner is confident that his/her arrangements around security and confidentiality are in accordance with local policies/guidelines, there appears to be no reason to be unduly concerned in this respect.

3.4.3 How 'free in return for advertising' Software services which generate SMS calls and computerised records for NHS providers might be judged/perceived legally and ethically

Current Advice

Again, in relation to the legal/ethical implications of agreements with commercial text message specialist companies, in the absence of specific national guidelines, it appears that it is right that a practitioner should be cautious, taking professional advice and ensuring that relevant codes of practice (voluntary or otherwise) are observed by the provider, before entering into an apparently 'good deal'.

Summary

Proceed with caution but don't be deterred if you are persuaded that the benefits of this form of communication will outweigh any known detriments.

4. Recommendations

In order to recognise the complexity of the many issues exposed in relation to text based consultation within this work, the recommendations which follow reflect the need – as discussed in 3.3 above – to focus on the organisational and professional elements which are both essential and most effectively achieved when addressed collaboratively. The table below also offers an overview of the rationale and associated notes.

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
Define Target Client Group NB: awareness of potential vulnerable groups	Recognise that client groups associated with current government targets (eg action on teenage pregnancy) *might not* be the main users of eventual service in reality Therefore need to define likely client base/ensure appropriate care/support strategies and options accessible	Need to investigate and define likely client group needs/presenting issues and problems This work exposes assessment scope/knowledge base required for each member of nurse team prior to commencing the service Exposes likely referral/support needs Knowing the expected ensures that unexpected caller needs are immediately and openly apparent – stimulating insight into extra, unexpected care needs and skills	Avoid knee jerk reaction to target which then leaves practitioners at risk in reality of service delivery Known/anticipated real demand is planned for in advance. High risk *unexpected* demand is exposed, learning/development action possible and risk avoided Client groups gain from pre-planning of their needs/re-design as necessary NMC requires nurses to have competences in line with the scope offered to the client	Much of this information already able to be predicted from current conventional use *Need to monitor service to expose unexpected demand/unexpected needs

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
Consider educational/training needs	Few managers up to date with latest technological options; organisational learning need if a new service is to be initiated Ability to investigate legal/ethical issues associated with management/employer responsibilities with respect innovative and fast emergent eHealth options	Need to investigate and access adequate learning and CPD with respect assessment, advice and referral needs of anticipated client base and use of equipment Awareness of the unique elements of text based consultation which underpin professionally accountable clinical decision making: - No visual clues - No voice (tone, speed) - No touch - Minimal text characters only - Often delivered 'on the move' added on to current role – time, environment Need to consider monitoring and audit of professional clinical safety Clinical Supervision	Learning needs for both groups complement each other; should be a shared, 'strategic' planning approach to learning needs Open consideration enables learning environment, learning organisation - avoidance of litigation/risk	Need to start to develop units of learning and CPD which adequately prepare practitioners for, and support the development of, text based consultation Probably some need for working with commercial companies *Monitoring exposes additional, unexpected, learning needs

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
Publicity/publicising the service	Directly related to market analysis as in 1 above. Consider costing of options to adequately publicise the service Remember information for both client and carer/bill payer	Focus information contextually. Informed consent Ensure what you offer is clearly stated Ensure what you do not offer is clearly stated Ensure the limits of your service/associated rules (eg language/code words) are understandable	Informed consent key in new innovative, far from conventional, service	Consider SMART cards for certain age groups – able to be kept with credit cards etc Consider working with commercial companies to standardise best practice 'using your mobile for health care' advice into their advertising right across the board

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
Consult Caldicott Guardian	Essential	Essential	Required professionally and legally	Practitioners utilising this medium for consultation might be employees of the health care sector but deliver care in the educational sector. Cross agency clarity and best practice essential

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
Documentation method Associated security/disposal methods **(NB: See page 22 for current Legal advice re text based consultation)**	Need to be clear that recording method adopted for text based consultation meets current DoH organisational requirements and/or would be perceived as prudent and justifiable innovation in a court of law Clear procedures for stolen and/or mislaid phones	Need to meet professional, legal and ethical requirements associated with record keeping and confidentiality Tension between phone consultation and on line consultation needs recognition and associated innovative best practice adopted locally needs to be prudent and justifiable Include code words Care with text language Need to meet all DoH guidelines and policy documents for conventional practice Stolen/mislaid phone (and records) procedure	Legal, central need to adhere to statute, policies and guidance Where there is no direct guidance regarding such a new medium as text message consultation, then very careful, standardised, and monitored approaches are recommended, with clear informed consent from the client Awareness of any cross agency/organisational issues. Code words (in the absence of encryption) offer a known/informed – and accepted by implication - level of confidentiality Short text language (unless standardised) questionably adequate for reliable health assessment of complex needs	Statutory/legal/professional need to keep an adequate record of every health care interaction – in whatever medium. A) Conventional Subsequent written record of mobile-mobile, phone only held, text interaction in current paper based records following consultation B) Real-time eHealth options Generation of mobile text message via computer/internet/web page: 1. Directly via web page 2. Via email (see Appendix 2) Both of the above result in a real time e-record of the run of texted interactions which can be pasted/transferred via print out into current notes This option requires further innovative developmental work

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
Guidelines/Policies ** Include monitoring*	Organisational policies guidelines and procedures formalise the new service and expose new operational methods required to support the service Organisation needs to monitor (eg) demand, cost (include savings/income generation from met targets)	Policies and procedures expressly formalise the scope of the new service and enable nurses to ensure that they negotiate in essential organisational support, equipment, learning and reviewing requirements which meet professionally accountable responsibilities before commencing the service Professionals need to monitor clinical delivery reality: eg. presenting problems/needs, associated referral support/access, outcomes, effect on current workload	Without adequate policies and guidelines, the needs and responsibilities of the professionals and the organisation are not addressed Danger is that absence of adequate formal planning is only exposed after an incident	Managers and nurses should recognise the needs of this non conventional model of delivery/documentation at start-up and collaborate to develop a safe, organised service which is responsive to a fast changing environment

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
Workload implications Consider mix of FtF, phone and text follow-up options	Staff who take on the service by definition will offer a variety of other complementary consultation options. Often these will be those from within their current, traditional role. Thus the text service is often an add on Text based consultation has a developmental future in managing health care demand – there is a need to build managerial understanding of operational delivery which reflects best organisational/Human Resource practice and is lowest risk	Nurses are professionally accountable for the safety and competency of every interaction. This requires the right environment and sufficient time/resources Need to monitor demand/time/resources required and effect if any on associated face to face or phone follow-up demand	Collaborative planning for monitoring demand/staff stress in such an accessible service NMC requirement	Include in review process

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
Mobile equipment/computer/internet access; maintenance	Consider adequate/up to date equipment Maintenance/break down Internet access if web based generation to be used	Ensure equipment fit for purpose eg sufficient text characters (400 characters minimum) Dedicated phones Adequate lost phone/stolen phone procedures	Approach adopted should be fit for purpose and in the best interests of the client Prudent and justifiable approach	Fitness of current equipment should be included in review system – on-going

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
Referral access/need/methodology	Might be need to consider new service level agreements/other referral strategies if monitoring exposes shortfall in current pathway options Many problems avoided by adequate initial investigation as in 1 above followed by good monitoring and regular review	Real time professional tensions/dilemmas avoided if adequate, organised referral and support pathways are planned in as part of service organisational approach	Professionally sound approach to competency within scope	Text services often associated with groups who are currently covered by central targets/care pathway initiatives eg Children's NSF, teenage pregnancy

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
*Regular review of service: operational delivery method/demand/referral needs	Regular review of new area of service delivery enables maximally effective management	Regular review which re-visits information derived from monitoring with management enables maximally effective professional delivered service supported and facilitated by management	Without adequate monitoring information and regular review, the service will be left to fire fight following critical incidents/near misses	Time for input into such monitoring and review by both managers and practitioners can be viewed/funded as Clinical Governance and/or risk management

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
Financial implications Client/bill payer Provider	New service needs recognising as such, costing and planning Many eHealth systems which avoid face to face consultation and/or result in advice only save money/other resources Awareness of ethical implications of commercial companies which offer free text messages in return for advertising offers	Nurses should be aware that the client (often a child) is not the bill payer. Consideration might need to be given to length of interactions/maximum numbers of text interactions Awareness of professional responsibilities/ethical awareness when involved in a free text messages in return for advertising approach.	As use of the wireless option expands (increasingly with internet access via mobile technology) this element will increasingly become an area of awareness	Collaboration with commercial providers in order to standardise the advertising and information with regard use for health consultation (see below) will increasingly become an option Legal advice sought re free in return for advertising options

Issue/Need	Organisation/ managerial	Practitioner(s)/ Professional	Rationale	Notes
Standardisation of advice Collaboration/active involvement of potential users	Publicity/information standards across providers and commercial companies in a complex fast moving market appears to be a prudent organisational approach	Standards which are contextually appropriate, standardised and monitored for effectiveness meets professional obligations	Nurses required to be honest and trustworthy and to act always in the best interests of clients and carers	Opportunity for collaboration with commercial companies to formalise standard mobile phone text consultation for health use across all commercial companies

5. Conclusion

Mobile phone text message based consultation is a fast emerging health care delivery option which is supported by an area of wireless technology which itself is developing and expanding daily. Currently the main client groups utilising this option are schoolchildren and the young – but this situation is unlikely to be permanent. Increasingly the age groups and the scope for usage of the medium itself will expand greatly.

This work has demonstrated the learning needs and issues that have been exposed by services to date and has emphasised how this method of consultation should be perceived and valued as a professionally accountable unique new method in it's own right. This scope of use of e-consultation can only become greater as the client base and age groups expand alongside the wireless facilities and internet access etc that will increasingly become available via the mobile phone.

It is important to recognise that this work only reflects the situation as at March 2006. There is a need in such a fast moving arena to apply the recommendations with an awareness of any subsequent developments or issues that might have become available or apparent since publication.

It is finally recommended that these recommendations are updated/revisited at least every 6 months and/or that anyone who visits them for information **notes carefully the current latest date of revision and associated advice**.

This is an area of e-consultation which will become increasingly valuable in the next few years, reaching an increasingly wide client base with an ease of access unknown in any other delivery option. It is important that nurses ensure that the huge benefits of the amazing advances in technology are balanced by careful awareness of fitness for purpose and best interests of all the various client groups – many of whom may be vulnerable.

REFERENCES

AMERICAN NURSES ASSOCIATION 2001 *Code of Ethics for Nurses with Interpretative Statements* ANA available on line at http://nursingworld.org/

ARMITAGE C 2001 Unlocking the mystery of public key encryption….or how to send secure messages within the NHS. NHS Information Authority   last accessed July 27th 2005 http://www.nhsia.nhs.uk/def/pages/informish2/informp7.asp

CULLEN INTERNATIONAL SA, WIK CONSULT GMBH 2005 *Draft Final Report for Study on Pan-European market for premium rate services* WIK Consult Germany http://www.cullen-international.com/documents/cullen/publicar.cfm

CROSS M, MacGREGOR J 2006 *Cutting the Wires Mobile IT and the transformation of local services and governance* New Local Government Network www.nlgn.org.uk

DARLINGTON R 18 July 2005 SmartTrust Provide SIM-based 'State ID' To Finland *Digital Lifestyles Info* accessed on line 26th July 2005 http://digital-lifestyles.info/display_page.asp?section=cm&id=2399

DEPARTMENT OF HEALTH 1997 *The Caldicott Report: Report on the review of patient- identifiable information* DoH London http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsPolicyAndGuidance/PublicationsPolicyAndGuidanceArticle/fs/en?CONTENT_ID=4068403&chk=jsKw07

DEPARTMENT OF HEALTH 1999 *(HSC 1999/053) For the Record: Managing Records in NHS Trusts and Health Authorities* DoH London available online at: http://www.dh.gov.uk/PublicationsAndStatistics/LettersAndCirculars/HealthServiceCirculars/HealthServiceCircularsArticle/fs/en?CONTENT_ID=4003513&chk=Y%2BiufR

DEPARTMENT OF HEALTH 2003 *Confidentiality: NHS Code of Practice* DoH London available online: http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsPolicyAndGuidance/PublicationsPolicyAndGuidanceArticle/fs/en?CONTENT_ID=4069253&chk=jftKB%2B

DEPARTMENT OF HEALTH 2005 *NHS Connecting for Health, Records Management: NHS Code of Practice* DoH London available on line at http://www.dh.gov.uk/Consultations/LiveConsultations/LiveConsultationsArticle/fs/en?CONTENT_ID=4114092&chk=l6ggnN

DIRECT MARKETING AUTHORITY 2005 3rd Edition *Code of Practice* DMA http://www.dma.org.uk/content/Pro-Code.asp

EUROPEAN COMMUNITIES 2004 Mobile identification solution to boost e-government in Finland *eGovernment News* accessed online 26th July 2005 http://europa.eu.int/idabc/en/document/3664/355

GENERAL MEDICAL COUNCIL 2002 *Guidelines for Making and Using Video and Audio Recordings of Patients* GMC available on line at http://www.gmc-uk.org/standards/AUD_VID.HTM

GENERAL PRACTITIONERS COMMITTEE 2001 *Consulting in the modern world; Guidance for GPs* BMA

INDEPENDENT COMMITTEE FOR THE SUPERVISION OF STANDARDS OF TELEPHONE INFORMATION SERVICES (ICSTIS): 2004 *Code of Practice* Tenth Edition ICSTIS London www.icstis.org.uk

INDEPENDENT COMMITTEE FOR THE SUPERVISION OF STANDARDS OF TELEPHONE INFORMATION SERVICES (ICSTIS): 2005 *ICSTIS Guidelines* (No's 4 & 20), ICTIS http://www.icstis.org.uk/icstis2002/default.asp?node=6#161

INFORMATION COMMISSIONER'S OFFICE 2003 *Who Cares About Data Protection? Data Protection Act: Segmentation Research*. Information Commissioner's Office http://www.informationcommissioner.gov.uk/eventual.aspx?pg=SR&cID=8444

INFORMATION COMMISSIONER'S OFFICE 2004 *Annual Track Research Findings: Individuals*. Information Commissioner's Office http://www.informationcommissioner.gov.uk/eventual.aspx?pg=SR&cID=8444

INFORMATION COMMISSIONER'S OFFICE 2005 *Identity cards - The Commissioner's View* http://www.informationcommissioner.gov.uk/eventual.aspx?id=2655

JELEKÄINEN P, 2004, GSM–PKI solution enabling secure mobile communications *International Journal of Medical Informatics, Volume 73, Issue 3, Pages 317-320*

MOBILE MARKETING ASSOCIATION 2003 *MMA Code for Responsible Mobile Marketing; A code of conduct and guidelines to best practice* MMA www.mmaglobal.co.uk

NORWELL N 2003 Text messaging raises medicolegal issues (letter). British Medical Journal 326(7399):1148

OFFICE OF PUBLIC SECTOR INFORMATION 2003*The Privacy and Electronic Communications (EC Directive) Regulations - Statutory Instrument 2003 No. 2426* available on line at http://www.opsi.gov.uk/

ORANGE, T-MOBILE, VIRGIN, VODAFONE HUTCHINSON 3G 2004 *UK Code of practice for the self-regulation of new forms of content on mobiles* Orange Personal Communications Ltd, T-Mobile UK Ltd, Virgin Mobile Telecoms Ltd, Vodafone Ltd, Hutchison 3G UK Ltd http://www.mda-mobiledata.org/MDA/Page_Resource_Centre.asp

PAL B 2003 The doctor will tell you now: is there a role for the mobile phone in health care? *British Medical Journal* 326: 607

PAL B, ISALSKI M, BELL J, MYERSCOUGH J; KAY J 2004 The doctor will text you now – is there a role for the mobile telephone in health care? He@lth Information on the Internet, Issue 40, pp. 3-4(2) *Royal Society of Medicine Press*

PUBLIC RECORDS ACT 1958 AVAILABLE ON LINE AT: http://www.nationalarchives.gov.uk/policy/act/act.htm#101

TELECOMMUNICATIONS ACT 1984 available from The Stationary Office See also Crown Prosecution Service http://www.cps.gov.uk/legal/section12/chapter_k.html#_Toc44654290

WIRELESS HEALTHCARE 2005 *101 Things To Do With A Mobile Phone in Healthcare* Steinkrug Publications Ltd available on line at www.wirelesshealthcare.co.uk

WOOLRICH C (Caroline.Woolrich@nmc-uk.org) 27 June 2005 *Advice re Mobile Phone Text Message Consultation* e-mail to: B.BAKER (bbaker@bournemouth.ac.uk)

LITERATURE SEARCH: SUMMARY OF EVIDENCE

ENHANCED SELF MANAGEMENT OF CHRONIC DISEASES

Department of Health 2005 Self care – A real choice: Self care support – A practical option London.
This document advocates the use of texting particularly in terms of enabling people to manage their long term conditions such as asthma or diabetes.

Ferrer-Roca O et al 2004 Mobile phone text messaging in the management of diabetes. Journal of Telemedicine and Telecare 10(5):282-285 (Spain)
Trial of mobile phone text messaging for diabetes management. 23 patients involved: average of 33 text messages sent per month. Data such as blood glucose levels and weight transmitted. Acknowledgement sent automatically and a monthly glycosylated haemoglobin sent automatically. Generally good acceptance of system with some concerns such as the inability to send retrospective data. Results indicate that SMS may provide a simple, rapid and efficient adjunct in the management of diabetes.

Ostojic V et al 2005 Improving asthma control through telemedicine: a study of short-message service. Telemedicine Journal and e-Health 11(1):28-35 (Croatia)
Randomised controlled trial involving 16 subjects for 16 weeks. Peak flow readings recorded three times per day and sent by text to asthma specialist. Symptom diary maintained. In the study group therapy was adjusted weekly by an asthma specialist according to peak flows sent daily. This study is not statistically significant due to sample size; however there are indications that SMS is a convenient, reliable, economical and secure means to improve asthma control.

Pal B et al 2004 The doctor will text you now – is there a role for the mobile telephone in health care? Health Information on the Internet 40:3-4 (UK)
Project investigating use of text messaging for communication with patients using rheumatology services. Advantages described as easy and convenient communication, rapid access to advice and test results, less need for repeat outpatient appointments, and reduced anxiety. Note need for maintenance of confidentiality and development of standard message formats to reduce texting time.

Franklin V et al 2003 'Sweet talk': Text Messaging Support for Intensive Insulin Therapy for Young People with Diabetes Technology and Therapeutics 5(6):991-996 (UK)
Describes pilot project in which patient specific text messages are sent to young people with diabetes with the ultimate aim of improving glycaemic control. RCT of system is currently in progress.

Armstrong D 2004 The mobile phone as an imaging tool in SLE Rheumatology 43(9):1195 (UK)
Letter describing patient taking mobile phone picture of transient rash to show at outpatients appointment.

http://www.nmc-uk.org/nmc/main/news/joyOfTxtForTbPatients.html (accessed 1.6.2005)
Reports of use of text messages to remind people in South Africa to take TB medication.

Kwon H et al 2004 Development of web- based diabetic patient management system using short messaging service (SMS) Diabetes Research and Clinical Practice 66 (suppl 1): S133-137
Research involving 185 diabetic patients who sent details of their blood glucose levels, exercise and dietary intake to health care providers via SMS. Individualised management plans were texted back. HBA1c improved from 7.5 to 7 thus supporting use of this method of management.

IMPROVED ATTENDANCE AT HEALTH CARE APPOINTMENTS

Bos A et al 2005 Failed appointments in an orthodontic clinic. American Journal of Orthodontics and Dentofacial Orthopedics 127(3):355-357 (Netherlands)
Retest of hypothesis that a reminder would reduce failed attendance rate and that the form of reminder would be irrelevant. All people with appointments at an orthodontic clinic during a three week time span were divided into four groups. Three groups received a reminder the day before their appointment either by letter, telephone or SMS. The hypothesis that reminders would reduce missed appointments was not confirmed.

Walker S 2004 To text or not to text CPJ April: 40-41 (UK)
Describes the value of text communication between a counsellor and one client in arranging appointments and ultimately in closing their relationship.

Treweek S 2003 Joining the mobile revolution Scandinavian Journal of Primary Health Care 21:75-76 (Norway)
Discusses the value of SMS in booking appointments and in attendance reminders. Notes issues of security of sensitive information both for SMS and other traditional methods of communication.

Vilella et al 2004 The role of mobile phones in improving vaccination rates in travellers. Preventative Medicine 38: 503-509 (Spain)
Experimental, controlled study to evaluate whether the use of reminders via SMS would increase uptake of hepatitis vaccination. 738 travellers sent SMS reminder when subsequent vaccinations due, 1610 not sent reminder. Concludes that SMS seems to be an effective method of increasing uptake of vaccination with a statistically significant increase amongst those who received an SMS reminder.

Reda S and Makoul S 2005 Prompts to encourage appointment attendance for people with serious mental illness. The Cochrane Library (ID#CD002085)
Systematic review of several methods of prompting attendance at appointments. Two trials concluded that text-based prompts a few days prior to appointments did increase attendance when compared with no prompt.

Tomnay J et al 2005 New technology and partner notification – why aren't we using them? International Journal of STD and AIDS 16(1):19-22 (Australia)
Examines use of SMS and other technologies to communicate with partners of people with STDs. Notes need to explore basic tenets of confidentiality and privacy in more detail before increasing use of technological communication of this type.

COMMUNICATION BETWEEN PROFESIONALS FOR CLINICAL EXPERTISE

Tsai H et al 2004 Teleconsultation by using the mobile camera phone for remote management of extremity wound: a pilot study Annals of Plastic Surgery 53(6):584-587 (Taiwan)
To assess the use of remote management of extremity wounds using mobile camera phones. Teleconsultations with 60 patients over an eight month period, surgeons reviewing images achieved 66-80% agreement on diagnosis. The preliminary results indicate that the camera phone has potential to be a valuable tool for remote management of extremity wounds.

Braun R et al 2005 Archives of Dermatology 141(2):254-258 (Switzerland)
To assess the use of mobile phones with integrated cameras in the management of leg ulcers. Sixty one leg ulcers were reviewed by three physicians using nine variables. One physician had face to face consultations

and two made remote evaluations. In 82% of cases participants were satisfied making a diagnosis from the picture. Thus study indicated the feasibility of telemedical wound care.

Lam T et al 2004 Mobile phone photo messaging assisted communication in the assessment of hand trauma ANZ Journal of Surgery 74(7):598-602 (Australia)
To assess the use of mobile phone photo messaging between a registrar and a consultant in the assessment of hand trauma. Correspondence for 27 hand trauma cases in an emergency department over a two months period. Results showed that mobile phones were a low cost and easily accessible adjunct to clinical practice.
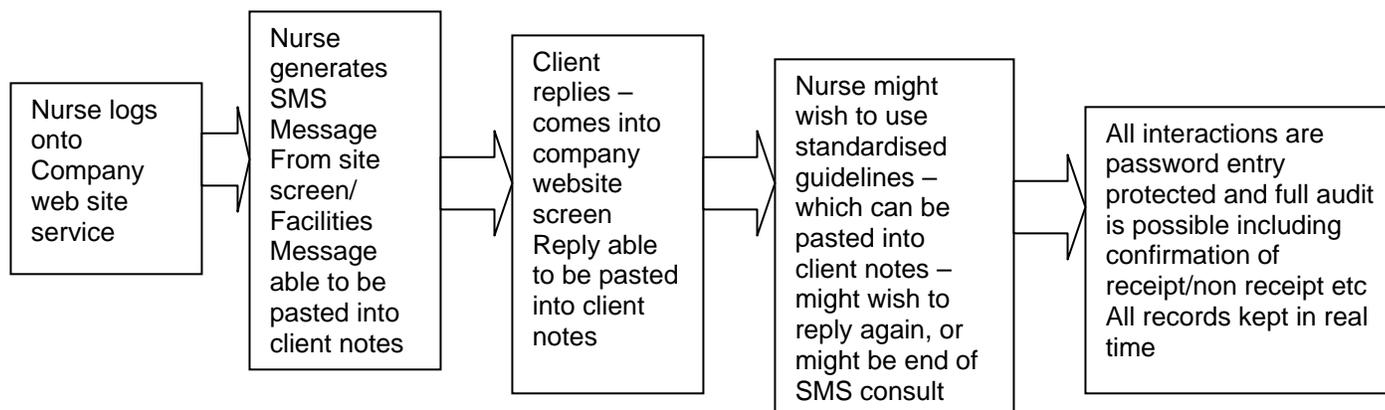
COMMERCIAL USE

http://www2.netdoctor.co.uk/sms/mainindex.shtml (accessed 1.6.2005)
Offers a range of services to the public including contraceptive pill reminders.

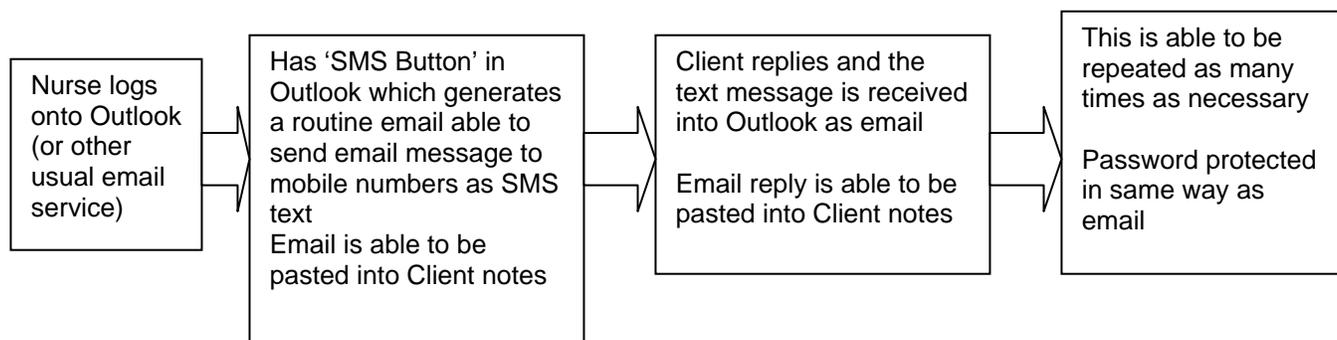*Current* **EXAMPLES of COMPUTER GENERATED and RECORDED OPTIONS**

1. Healthcommunications example

| Nurse logs onto Company web site service | → | Nurse generates SMS Message From site screen/ Facilities Message able to be pasted into client notes | → | Client replies – comes into company website screen Reply able to be pasted into client notes | → | Nurse might wish to use standardised guidelines – which can be pasted into client notes – might wish to reply again, or might be end of SMS consult | → | All interactions are password entry protected and full audit is possible including confirmation of receipt/non receipt etc All records kept in real time |

See http://www.healthcomm.co.uk/nhstextpw.htm
Problem: nurse must be at PC in order to generate/receive messages **that are recorded**

2. Textanywhere example

| Nurse logs onto Outlook (or other usual email service) | → | Has 'SMS Button' in Outlook which generates a routine email able to send email message to mobile numbers as SMS text Email is able to be pasted into Client notes | → | Client replies and the text message is received into Outlook as email Email reply is able to be pasted into Client notes | → | This is able to be repeated as many times as necessary Password protected in same way as email |

See http://ws.textanywhere.net/web/Products/TextEmail.aspx
Problem nurse must be at PC in order to generate/receive messages **that are recorded**