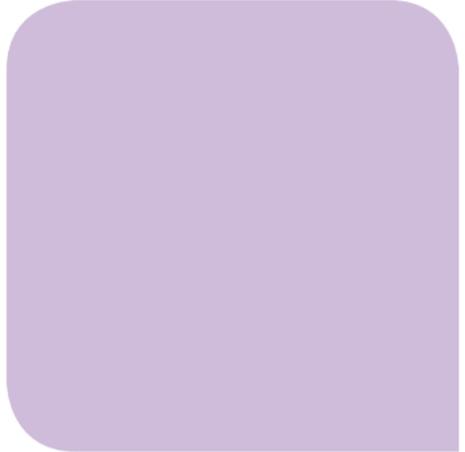


# Using digital media to access information and good practice for paid carers of older people: a summary



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## Background

The provision of information services for paid care workers has lagged behind provision in comparable professions such as the health services, where a multitude of initiatives have been put in place (Ammenworth et al, 2000; Thompson et al, 2002; Williams et al, 2004). The spread of digital media, particularly since the advent of the World Wide Web in the mid-1990s, has resulted in health information being more widely available than ever, to both the medical profession and the general public (CIBER, 2004; Williams et al, 2003). There have also been many recent initiatives to improve timely and effective provision of information to clinical and other staff within the UK National Health Service, notably the National Programme for IT, which aims, over the next 10 years, to connect over 30,000 GPs in England to almost 300 hospitals and give patients access to their personal health and care information (NHS, 2006).

Recently, a number of large-scale programmes for introducing innovative information technology (IT) solutions into local authority work have been launched, such as the Nomad programme

on mobile systems (Nomad Project, 2006) and the digiTV programme for interactive TV (digiTV Project, 2006). Social care may eventually benefit from such initiatives, but until now there has been little investment in digital services and tools for those in social care professions (Harrison et al, 2004). In particular, there has been little in the way of extending information and communication services to care workers such as those employed in residential homes for the elderly.

This report describes a study commissioned by the Social Care Institute for Excellence and funded jointly by them with the National Knowledge Service. It was carried out by the University of Brighton to explore the feasibility and the appropriateness of digital technologies to support the work of paid carers in residential care homes for the elderly. The study used a combination of mutually-informing methods – site visits, questionnaire and design workshops – to develop a picture of current work practices across the sector and to gauge the appropriateness of support mechanisms for seeking information and communication using digital technologies.

## **Visits to care homes**

The first stage of the study took the form of observations of the care staff in six UK care homes – two homes each in London, Manchester and Sussex (though little regional variation

emerged). Typically six to eight hours were spent at each site, with researchers shadowing key staff members (receptionists, care managers, senior care workers, care assistants) as they went about their normal day's (or sometimes night's) work. The emphasis was on observing communication and information-seeking behaviours and, via informal opportunistic interviews, eliciting attitudes both to currently used technologies and tools and to potential future uses of digital technologies.

Staff working in care homes have developed sophisticated and effective information and communication systems that rely on formal and informal face-to-face contact, augmented by paper documents and telephone use. All the homes had diaries and logbooks, each with a different and distinct purpose. This documentation is seen as key, both to the functioning of the home and as a form of evidence for regulatory and inspection purposes. Documents included permanent records, care plans, diaries, daily record sheets, logbooks, personal notebooks and many others.

Using this system, much information needs to be copied from one document to another. Most staff seemed to accept the need for this and the inevitable duplication or omission. Similarly, much work in the care home currently goes into recording snippets of information and either communicating them verbally or transferring them to one or more documents. Again there

was little complaint about this as it was seen as good practice to record every detail of residents' lives and of the care workers' activities: 'If it isn't written down, it hasn't happened' as one manager put it. In other words, recording information is not generally seen as a problem to which an IT solution is sought. Only two of the homes used computerised systems for residents' care plans.

Care assistants played little part in generating paper-based notes. This seems to be related to their limited role in decision making and also to confidentiality issues. It was clear that any abnormality or problem would be referred to a senior care worker or manager for resolution rather than being handled by the care assistant. The senior carer would then note the problem and decision. This division of labour seemed to work well in terms of information handling and was seen across all the homes visited. Care assistants were engaged in the day-to-day physical and social care needs of residents, such as dressing and bathing, while any functions that needed recording, whether one-off incidents such as falls or routine procedures such as medication dispensing, were carried out by senior staff.

The need for easy access to non-confidential information was a recurring theme for all staff. For instance, one manager gave the example of a family member phoning to find out when her mother had last been to the hairdresser. It was

important that any staff member should be able to access information such as this instantly.

All homes contain a plethora of different types of notice board and these are actively used throughout each shift. The types of information displayed on the boards included contact phone numbers, staff rotas, daily tasks, room allocations, residents' dietary information, medication details and so on. Notice boards in the residents' areas showed things like menus, daily activities and weather summaries. In one home a whiteboard was used very dynamically, in conjunction with post-it notes, to show changing information, for example, 'Mr S out for a walk this afternoon'. The whiteboard was constantly updated when tasks were completed or new situations arose and was the prime point of reference for staff as they managed their tasks during their shift.

Another set of documents arises from training and staff development activities. Many care assistants are undertaking work-based training for vocational qualifications. This involves gaining credit for competence in activities such as feeding, bathing, communicating with residents and so on. At the moment these activities are logged on paper 'witness statements' stating that a senior worker has seen them take place.

Information is transferred from shift to shift via 'handover meetings' when the person in

charge of one shift reports to the incoming senior worker or to all the staff on the next shift. Communication here was primarily face-to-face and relatively informal. However, although informal, the process was thorough with information exchanged about each resident in turn, even when there was nothing substantive to report. These face-to-face meetings allowed subtle issues to be raised. For instance, in one home, three separate care staff had a fleeting impression that a particular resident was 'not quite herself'. Their impressions had been too vague for them to note them on the resident's file individually. However, when the resident was discussed at the handover meeting the three staff could confirm their unease and make a note in the resident's file for special attention to be paid that day.

Information during a shift is typically relayed face-to-face and on the move. The overwhelming majority of communication and information-seeking concerned individual residents. One manager made the point that this constant flow of interpersonal communication was valuable in terms of team building and also counted as informal training. At one home we witnessed a team meeting where general issues were discussed, but in general there was little in the way of general discussion or information-seeking observed.

Communication with the world outside the home was overwhelmingly managed by

telephone. Three of the homes visited did use email, although this was mainly restricted to the managers or senior workers, often in communication with other homes in their wider organisation. When not at work, managers tended to be on-call most of the time, preferring to be rung at home or on their mobiles to deal with a difficult decision than to be left out of the loop.

Digital technology of any sort was used little. The homes typically had two or three desktop computers, which were usually kept in separate, sometimes locked, rooms to which only senior staff had access. These computers tended to be older models of low specification. Word processing appeared to be their main use with staff lists and other notices generated from stored templates to save time and create a professional look. Often, though, either keyboards were moved to one side to allow more space for note-taking or computers sat unused in locked offices.

The view was frequently expressed that the sorts of people who chose to work in care were by nature unlikely to be enthusiastic about computer technology. They were people-oriented and in addition had often had low achievement at school, or spoke English as a second language, which they saw as barriers to competent computer use.

However, natural antipathy and lack of confidence amongst care workers do not seem to be the primary reasons for the lack of technology in care settings. The drawbacks and inconveniences of the desktop computer in the care setting simply seem to outweigh any advantages it might have. Several senior staff we interviewed had clearly debated more extensive adoption of desktop computers and decided against it on the grounds of difficulties of physical access to machines, issues of confidentiality, speed and ease of access to information, and the lack of visibility of this information when stored in a central machine.

## Questionnaire

A self-completion postal questionnaire was designed in order to test the wider applicability of the field study findings. Questions were designed primarily to obtain information about current practice in relation to information and communication processes within care homes and, indirectly, to give some further indication of the potential acceptability of supporting technologies. The study aimed to include a sample of care homes for older people that was representative of each of the regions of the UK and also of type of provider, that is, local authority as well as private or voluntary homes. A total of 240 questionnaires were returned from a sample of 1,775, giving a response rate of 14 per cent.

A large majority of managers stated that care staff made no use at all of email, the internet or the computer for word processing or patient records. Managers were more likely than their care staff to use email, the internet and computers at work. A high proportion of managers (82 per cent) used a computer at work for word processing but most (51 per cent) never used computerised patient records. Around a third (32 per cent) didn't use email to communicate with people outside the home and a large majority (83 per cent) made no use of email to communicate with people inside the home. These were in line with the observations made on the site visits.

Local authority care homes appear to be more aware of information and communication technology (ICT). Local authority homes were significantly more likely to have access to desktop computers, pagers and mobile phones than those working in private or voluntary homes. Local authority homes were also more likely to use email and computerised records.

The large majority of managers felt that their care staff were very familiar with mobile phones and most considered them familiar with computers for word processing, email and using the internet for shopping. ICT played little part in the training of new staff. Methods were largely written and verbal. A large majority of care staff had not received any training in ICT but most managers had done so (either informal or on

the job). Care workers, senior care workers and managers working in local authority homes were more likely to have received training in ICT.

A significant number of managers suggested ways in which technology could support care work, though some managers had concerns around related training and finance issues. A number of managers raised doubts about the relevance and appropriateness of ICT in support of care work. Such concerns were particularly expressed by managers of smaller care homes.

## Design workshops

Once an understanding had been developed, from site visits and questionnaires, of the work rhythms of care homes and the attitudes of the people who work in them, a structure was prepared for design workshops with care home workers. The workshops had two objectives: firstly to encourage participants to engage in some future thinking themselves and secondly to give participants an opportunity to react to design ideas generated by the research team in response to the findings of the site visits. The rationale for the particular choice of activities, which were based on future scenarios involving ubiquitous technologies, was that newer technologies such as networks of palmtops or 'wearables' might be of more interest in the care home setting than the desktop computer, which seems to have been discounted due to issues of access, training, confidentiality and so on.

Two sets of materials were prepared for the workshops. The first consisted of a set of prototyping props designed to represent a range of devices. Some of these were real (for example, keyboards and in-trays), while others were constructed for the purpose from cardboard and polystyrene. In addition, a set of scenarios was developed in response to the site visits and questionnaire results. These had suggested that digital technologies might be of use in three areas: communication, information-seeking and training. A scenario was constructed for each purpose. For instance, the information-seeking scenario featured two care managers choosing a destination for a residents' outing using a fictional website for care staff via a large touch screen. Participants were asked to act out scenarios, both present and future, and then to critique the research team's scenarios in the key areas.

The care staff entered cheerfully into the spirit of the workshops and had no trouble imagining how new technologies might support their work. The systems they imagined in their own groups were based on handheld devices that communicated with each other, with a local hub and with other, possibly distant, databases. They also responded positively to the three scenarios acted out by the researchers. A number of interesting criteria for any future device emerged:

- Ease of use was paramount. This included an easy way of inputting information. This might be by handwriting, or possibly speech.
- A means of transforming rough notes into polished documents was needed.
- Transactions must be transparent to residents. It should be possible for residents to hear what is being said over any service.
- The device must be easy to hold or wear. Much care work is intimate and a device that was literally 'handheld' would intrude in carer-resident interactions. For example, one participant acted out a conversation with a resident that involved her kneeling on the floor at the resident's feet with her hand patting the resident's arm. This sort of comforting interaction is typical and must be supported.
- Safeguarding residents' privacy was crucial.
- Focused, local information was valued.

Clearly, when carers are out of their usual surroundings and are encouraged to speculate using props, realistic scenarios, a friendly atmosphere and a definition of 'technology' that is not bound to the desktop computer, they are happy to envisage new technologies to support their work. They were particularly drawn to any technology that might also improve the quality of life of service users. Mobile and ubiquitous technologies were readily understood and pressed into imaginary service. On the other hand, no major pressing concerns were raised with current work practices that called out for a technological solution. These concepts,

if realised, would be likely to bring about modest improvements in both information and communication processes in the residential homes, and also the quality of working life of carers.

## Recommendations

From the site visits, questionnaire results and design workshops, we see four areas where care homes could leapfrog current technologies, avoiding the centralised, deskbound computer by using a mixture of personal technologies and public displays.

- **Communication and record keeping.** A combination of handheld input and display device, and a shared whiteboard to display and store notes might cut down on redundant information storage and trap any stray messages, in a way that might be easy to use and non-intrusive. This would also avoid the physical work of manually entering the information in centralised files.
- **Training support.** A service that prompted assistants about the credits they needed to have assessed and kept a record of achievement could usefully be provided on an unobtrusive handheld device.
- **Information sharing.** A website designed specifically for carers in residential homes for the elderly could be an effective way of sharing information, particularly if local sites could be created.

- Community-building. There is some evidence of demand for services that facilitate community-building amongst care workers, and this could be a useful adjunct to an information sharing or a training website.

A number of points need to be borne in mind about the process for developing such systems and the constraints under which any development takes place. As far as process is concerned, if digital technologies are to be implemented there is a need to carry out further careful and detailed preparatory work in care homes. The best way to do this would probably be by working with a small number of homes varying in size, layout and possibly in services provided, for example, long-term homes and homes providing respite and other short-term care. Care workers and managers in these homes could then act as partners in the development process, giving input at requirements negotiation, design and evaluation stages. It will be necessary to develop services incrementally and to carefully pilot any new service or device in a small number of care homes before wider implementation. Familiarisation and training for staff of all grades will need to be a key part of this process.

Any new systems will need to deal with two sets of constraints in particular. The first of these is the existing ICT infrastructure in residential care homes for the elderly. Given the current situation, where many homes are not connected

to the internet, there may be a case for moving directly to a completely wireless solution. Secondly, any services introduced in care homes would need to be developed with an eye to integration with a range of other systems, from assistive technologies to residents' care records, and in the future possibly to NHS records, NVQ learning profiles and so on.

Whatever services, processes or technologies are taken up, it is important that any new system does not attempt to replace one-to-one spoken communication, but rather seeks to support and enhance it.

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