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What relevant technology trends are likely to impact on health and healthcare in the next ten to fifteen years?
As a practice nurse I would consider the use of expert systems to enable me to access information in an intuitive manner. With the shortage of GPs and nurses keen to advance their role it is a way of accessing useful and appropriate information in a timely way.

We are being encouraged to give patients self-management sheets for chronic conditions such as diabetes and asthma. I think this is a backward step as we could send such information via email to their computer at home, PDA or mobile phone. We could also blue tooth information to them within the consultation.

Generally, the advance in communication technology as above could be utilised in healthcare. Other areas could be advances in artificial intelligence and micro electronics in developing limb replacements, body parts etc.
Other technologies may be biologically based such genetic engineering in disease prevention and cures.

What areas in the provision of health and healthcare could be positively or negatively affected by these developments?
- Expectation of patients where resources are not available.
- Reluctance of patients where resources are available.
- Unequal distribution of availability of service provision and service acceptance.
- Training of staff in appropriate use, willing to change and move forward as a team.
- Cost
- Lack of appropriate training.

What actions should be undertaken now to maximise positive impacts, or to prevent or minimise adverse effects?
- Good planning and cost analysis
- Communication top down and bottom up.
- Education and preparation to so that those involved can make an informed choice. (E.g. unlike installing ineffective computer systems in a hospital where staff with no previous knowledge or use of computers make their first judgement on that poor system. This then has a knock on effect of making those staff negative to change as they then expect poor performance to continue.)

Do you have any concerns associated with the generation, release and subsequent use of personal data?
Yes. We are currently collecting a lot of useless, non integratable data that is time consuming and poorly thought out. E.g the splattering of Read codes with little guidance on how to use them. We also need to consider accountability of health professionals having appropriate data whilst at the same time considering patient confidentiality. E.g HIV testing.

What medico-legal and ethical issues merit consideration when introducing new technologies, such as the responsibilities, processes and liabilities for decision making?
Would health professionals be expected to understand all aspects of the new technologies in utilising and applying it. For example, if a patient is ethically entitled to

the ‘best’ treatment which involves the use of a complicated gadget, could the health professional applying it be held responsible if her training on the gadget did not demonstrate that pressing button B applied the ‘advanced’ treatment, so she only felt professionally qualified to press button A. As a result, the treatment was less effective and meant the patient would need an operation that he wouldn’t have otherwise needed.
Could it be the training that was at fault?
Could it be the process designing the training and the absence of updates that were at fault?
Could it be that the health professional’s employer did not deem the extra training was necessary?
Could it be the health professional herself because she did not read the update instructions and use her own autonomy in her decision making?

What regulations or other mechanisms (including standards) would facilitate the responsible development of relevant technologies?

- More public knowledge and education to enable informed decision making instead of knee jerk reactions.
- Involvement of lay people in steering groups.
- Public access record keeping to allay suspicion.
- Take advice from other successful ventures and share good practice.

What infrastructure would be required to allow any new technologies to be used effectively?

- Training and education of end users
- Training updates
- Planning implementation so that all levels of people involved know what is expected of them.
- Awareness of those receiving the technology to be aware of it’s cost effectiveness and relevant and appropriate application.
- Good back up system for technology maintenance.

What are the most likely promoters and barriers to the take up of new ICT devices and systems?

Promotors –

- making a quick buck on ineffective systems re past experience.
- Lack of adequate presentation and knowledge.
- Cost.
- Back up services that are affordable.
- Helplines.
- Correct installation and ease of use
- Servicing efficiency.
- Availability
- Usefulness

9 What education and training would need to accompany the introduction of any technologies, and who would need to be involved?

All levels involved and as suggested previously.

10 How are professional roles and responsibilities likely to be affected by the increasing use of ICT?

- More technological ability will be expected from employers.

- Some professions such as nursing may see ICT as less ‘hands on’.
- More knowledge required at a faster pace to enable role to be fully functional whilst still needing basic knowledge for original role.
- More pay.
- Less face to face communication.
- More isolation in working environment.
- Increase in responsibilities may lead to increased risk of litigation.

11 How can the development of technologies that meet patients and informal carers needs and are practically useable be best facilitated?

By demonstration to end users, NOT just those deemed to be the decision makers as those accepting of technology in health varies so much.

12 What are the potential impacts of the costs of any of these new technologies?

Higher production, lower the price. Expensive at first, but improvement in quality of life or working life. Need to consider ‘the big picture’ where expense may be recouped by people taking less time of work, or having more productive lives, less dependant on the nations economy.

13 What are the implications of the international use of future technological developments, such as global use of health data, variability of ICT-enabled support, and interoperability?

Trusting other countries regulations and standards that may be different to UK. Leakage of inappropriate data. Melt down. Dependency. Monopolisation e.g Microsoft.
Improved communication globally, access to data such as if ill on holiday, improved integration of systems.