

UTHs). Respondents from 14% (21/153) of hospitals (16% of DGHs and 7% of UTHs) expressed uncertainty.

Discussion

Although PACS is being implemented nationwide in NHS hospitals, there is little published information on the extent of progress in the five designated regions or 'clusters' in England (where LSPs have been contracted to install and commission the service) or in other UK countries.

By targeting a large group of acute clinicians whose daily practice is highly dependant on radiological information, this survey has established a 'snapshot' of PACS implementation in the first quarter of 2006 across the whole UK, having achieved a hospital-wide response rate of 99%. A narrow majority of hospitals still had no form of PACS but of these it was anticipated that just under half would commission PACS within a year and a further third within two years. If these expectations are fulfilled nearly all hospitals will have PACS by 2008.

The majority of current PACS users were positive in their responses about the ability of the system to facilitate the manipulation of images, to achieve fast access to stored images and to reduce the loss of images which could occur with hard-copy film. PACS also has majority approval from respondents as a teaching or research tool and as a means of facilitating discussion between colleagues within the same institution at different workstations, as well as reducing clerical time.

Difficulties in transferring images from one hospital to another, however, existed for most PACS users at the time of the survey. One of the stated aims for PACS within CfH is to facilitate such communication,³ an aspiration that has clearly not yet been realised. It is also intended with CfH that each regional cluster of NHS facilities should have a central archive for the storage of old images off site so that these can be retrieved and communicated to other hospitals if necessary. There is, however, no such central archive currently available for any cluster.

Since most NHS facilities do not have inter-hospital links for transferring digital images they have to be transferred physi-

cally by sending the information in stored format such as a compact disc. These must be produced from PACS in DICOM (digital imaging and communications in medicine) format in order for the information to be properly displayed by the PACS system of the receiving hospital.⁴ Other image storage modalities such as JPEG file format and AVI that are commonly used on personal computers/web browsers contain data in compressed form with loss of quality and these formats are incompatible with PACS.

Complaints of poor quality images on the wards, and to a lesser extent in the clinics, were another concern among PACS users. Clinicians currently base important decisions in part on the appearance of conventional images before these have been reported by a radiologist. 'Primary radiological diagnosis' is used routinely in acute medical units and emergency departments and decisions on unreported images are also commonly taken in other settings in particular chest, rheumatology and orthopaedic clinics. The quality of PACS images should be at least as good as the hard-copy radiographs they are replacing. Unless this primary condition is fulfilled the many other advantages of PACS may become meaningless.

Although PACS can produce images as good as high-quality images on conventional film, this comes at an economic cost.⁵ There may have been a misconception with the budgeting of PACS that primary radiological diagnosis would take place only in clinical imaging departments so that high resolution workstations would be centred in these areas only and that the provision of inexpensive lower quality imaging equipment with a radiologist report alongside it would suffice for clinicians. In fact, careful thought needs to be given to the provision of computers, monitors and software that are of sufficient quality to produce good diagnostic images at appropriate locations with optimal ambient lighting conditions outside the clinical imaging departments in order to meet the clinical needs of patients.⁶

It is of concern that in one third of hospitals with a respiratory physician had not been involved in discussions leading up to the implementation of PACS. Such involvement may be especially necessary in times of financial constraint in the NHS. Central

funding for PACS in hospitals is capped and trusts have to meet any necessary additional costs from other budgets; furthermore the cost of any upgrades once PACS has been installed will not be met by CfH.

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References

- 1 Brennan S. *The NHS IT project, the biggest computer programme in the world*. Oxford: Radcliffe Publishing, 2005.
- 2 Granger R. Delivering IT for a modern, efficient NHS in England. *Br J Healthcare Computing Information Management* 23;5:19-21.
- 3 Picture archiving and communications system. www.connectingforhealth.nhs.uk/programmes/pacs
- 4 Stay A. The bigger picture: how PACS fits into health care IT. *Br J Health Care Management* 2003;9:108-10.
- 5 Ng K-H, Rehani MM. X ray imaging goes digital. *BMJ* 2006;333:765-6.
- 6 Pilling JR. Lessons learned from a whole hospital PACS installation. *Clin Radiol* 2002;57:784-8.

MRCP(UK) Part 2 clinical examination (PACES): examiners reflections

PACES: The training

The over-solicitous introduction is followed by affected concern for the patient's comfort. Patients *are* real people, but the 'Can I now examine your hands? Can I now take your pulse? Can I now look at

your face if it's not too painful?' routine soon becomes tedious.

So does looking for 'clues'. This hitherto 'street-wise' ploy has clearly gained course-endowed approval. One person declared the chest examination normal, but in view of the inhaler under the newspaper, and the oxygen cylinder, the patient had chronic obstructive pulmonary disease. Another stepped back to scan bedclothes, locker, walls and floor. No subterfuge. We were being asked to notice, like an over-elaborate look in the driving-mirror.

Leaving no stone unturned was another feature. Respiratory and abdominal patients were checked for ankle oedema, and raised jugular venous pressure. It clearly bore no resemblance to their approach to a real patient. Not just careful. This was a performance 'for one night only'.

Actors

The communication sections would be tricky using real people (not that actors are not real people) but it's disturbing to watch your colleague's secretary break down in tears about her non-existent husband's non-existent schizophrenia in front of 10 consecutive doctors. And what's the candidate to do? How do you console someone you know is pretending? One leant forward and put her hand on the 'patient's' knee. It might be appropriate in real life but could you bring yourself to do it in an exam?

Communication skills

This is impossible to evaluate fairly. The way I tell bad news (why no scenarios with good news?) might appal an examiner but that doesn't (necessarily) mean that I'm bad at it. Communication is too personal a skill to judge others.

And what about the language problem? Surely someone using his second language is at a disadvantage? It would, however, be unfair to make the UK candidate perform better than him to obtain the same mark. If an overseas candidate can't understand the Scouse accent, is that a fail? After all, he is not communicating with the patient.

Elastic time

Thousands of candidates but there are not thousands of examiners...so let's pretend examiners can do twelve things at once.

Preliminaries: case 1. Read the history, signs, examine him, thank him, listen to how he got here, gently decline to alter his management (he assumes I'm an expert!). Back to co-examiner, agree our findings, check a discrepancy, then write it all down on big calibration sheet. Just twelve minutes gone from the 25 and I'm ready – except that I should have assessed another three cases.

Change-over: I've watched the candidate examine for seven minutes, grilled him for three minutes, then immediately moved to the abdominal case. Afterwards, in five minutes, I have to throw my mind back to the chest, mark it, write down my comments then forward to the abdomen, repeat it all, decide about counselling, then get the next candidate's papers, insert my name and examiner's number (twice) and sign it in preparation for 'next!'

Impossible. So you write while the candidate is examining, and you miss things. But that's alright because by the thirteenth time you are just making an informed stab at assessing the blur of candidate in front of you, unless something obvious wakes you up.

The outcome is an exam geared to getting through the candidates in a reasonable time frame, at the expense of functioning as an exam.

Supremacy

Why this frenetic chaos? Each consultant has less than one 'attached' senior house officer sitting the exam each year – so one day's input per consultant should be ample. But no. Numbers are swelled hugely by overseas candidates – still seeing the MRCP as a 'gateway' to a consultant career. Is this a good thing? Or an anachronism? Are we improving clinical acumen, or overseeing a growth industry churning out certificates, with time-pressures impeding quality control? The Colleges may consider this a less important role – the RCP website has oodles on 'clinical standards' and 'patients and carers' before you find anything on the exam – others may not agree.

Can we keep up this ever-expanding remit (the Glasgow College is advertising for examiners)? Should we? Am I alone in my post examination ruminations?

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