

T. Arscott, R. Hall, and C.A. Lewis.

Department of Medical Engineering and Physics, King's College Hospital, Denmark Hill, London, SE5 9RS, UK.

## 1. Introduction

In the UK the Ionising Radiation (Medical Exposures) Regulations 2000 [1] state that 'the written procedures for medical exposures shall include ...procedures for making enquiries of females of childbearing age to establish whether the individual is or may be pregnant...'

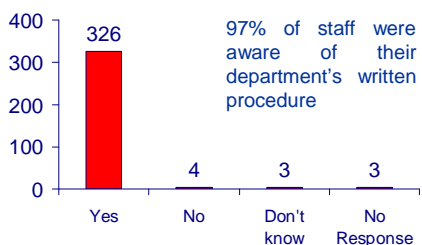
Guidance on determining the pregnancy status of patients is given in:

- Protection of Pregnant Patients during Diagnostic Medical Exposures to Ionising Radiation [2].
- Notes for Guidance on the Clinical Administration of Radiopharmaceuticals and Use of Sealed Radioactive Sources [3].

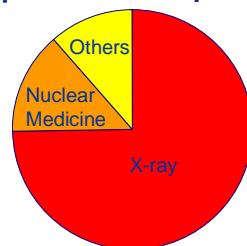
Although risk to the foetus as a result of most diagnostic radiation exposures is small [2], such exposures can cause great distress to pregnant patients. However, guidance provided is vague and as a result there is no universally accepted procedure for asking the 'pregnancy question'.

To investigate this further a questionnaire was created and distributed to diagnostic radiology and nuclear medicine departments across the UK to determine their procedure for asking the 'pregnancy question'.

### Is there a written procedure?

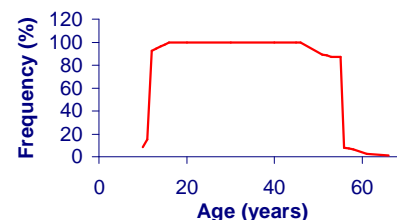


### Departments Responding



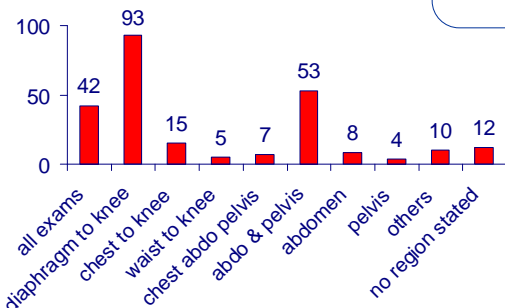
Over 300 responses received from 66 hospitals

### What patient age range do you ask?



99% of responses gave a specific age range, with 30 different age ranges stated. The majority stated an age range of 12-55, as suggested in the ARSAC guidance [2].

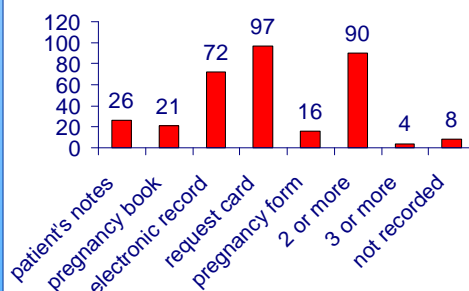
### For which X-Ray procedures do you ask?



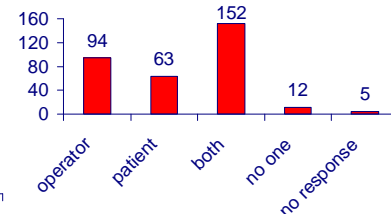
Since this survey was performed, new guidance [1] providing more specific advice, that the 'pregnancy question' should be asked for any exam 'between the diaphragm and knees', has been published.

## 2. Questionnaire Results

### Where do you record that the question has been asked?



### Who signs?



In many cases it was reported that the patient sometimes signed, depending on body region, LMP date, exam dose and if the patient is unsure about pregnancy status and refusing a pregnancy test.

## 3. Discussion and Conclusions

These results demonstrate large variations between individuals in carrying out procedures to check patients' pregnancy status. It was also apparent that there could be significant variation within departments, indicating that procedures are not necessarily being followed. This was particularly evident where recommendations have changed, but individuals have not updated practice in accordance with these changes, for example, in using the 28-day rule.

Notably, departments varied widely in terms of the ages for which they asked the 'pregnancy question'. This issue was reported to be particularly difficult with, for example, females below the age of 16 and for male radiographers.

Finally, interpretation of the 'old' guidance, that female patients should be asked the 'pregnancy question' for 'examinations in which the primary beam irradiates the pelvic area' [4] resulted in a wide range of responses to the question of for what exams the question is asked. Even considering new, more specific, guidelines [2] interpretation could still be variable.

It is clear that there is confusion as to who and when to ask the 'pregnancy question'. This raises concerns of potential distress for patients, reason for future litigation against hospitals, and produces a negative influence on radiation protection culture. Ideally, this could be corrected if the professional bodies were to translate the guidance into a detailed procedure, which could be circulated and adopted by radiography schools.

## References

1. Ionising Radiation (Medical Exposures) Regulations, Statutory Instruments 2000 No. 1059, Department of Health
2. B.F. Wall et al (HPA), R.F. Bury (RCoR), M. Murray (CoR), Protection of Pregnant Patients during Diagnostic Medical Exposures to Ionising Radiation, National Radiological Protection Board, College of Radiographers, and Royal College of Radiologists (2009)
3. Notes for Guidance on the Clinical Administration of Radiopharmaceuticals and Use of Sealed Radioactive Sources, Administration of Radioactive Substances Advisory Committee (2006)
4. C Sharp (NRPB), J.A. Shrimpton (CoR), R.F. Bury (RCoR), Diagnostic Medical Exposures: Advice on Exposure to Ionising Radiation during Pregnancy, National Radiological Protection Board, College of Radiographers, and Royal College of Radiologists (1998).

For further details contact:  
Conneliuslewis@nhs.net

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