

# **A focussed ethnographic study of Diagnostic Radiographer problem solving in the trauma setting**

## **Abstract**

### **Aim**

When imaging patients for x-ray examinations Diagnostic Radiographers should position the patient so that bones, joints and soft tissues can be clearly visualised. In order to achieve this a widely accepted set of positioning criteria have been developed for each anatomical region. In the trauma setting the radiographer must either move the injured body part sufficiently to meet the criteria or manipulate the imaging equipment to achieve a similar representation of the anatomy. This difference between the presenting position of the patient and the imaging position required presents the radiographer with an ill-defined problem which employs careful management to minimise patient discomfort, avoid risk of injury and optimise image quality for diagnosis. Little is known of radiographer problem solving in the clinical setting. This research uses focussed ethnography to investigate how the radiographer achieves appropriate positioning of the patient through the application of problem solving.

### **Method**

A focussed ethnographic study was undertaken in the clinical setting at two hospital sites. Sixty three observations of trauma imaging examinations were undertaken followed by semi structured interviews with the practitioners. The data was analysed thematically following a structure recommended for focussed ethnography.

### **Results**

The findings of this unique study demonstrated a multi-stage assessment process used to evaluate the patient's injury and ability to co-operate with the examination. In light of the assessment the conduct of the examination varied with the degree of complexity of the examination and a measure of complexity was developed to illustrate this. Findings demonstrated that in agreement with known models of practice the level of cognition required moved from subconscious to conscious as the complexity of the examination increased and that radiographers recognised the importance of experience in managing imaging

examinations. Opportunities for re-design of the examination request card were also identified to aid communication between the referrer and the radiographer and assist in the radiographers' assessment of the patient. Areas for further research are also suggested.