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WEB PAPER

'Losing my touch': decline in self-reported confidence in performing practical procedures in consultant oncologists

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ABSTRACT *This study aimed to compare the confidence of oncology consultants and specialist registrars (SpRs) in the performance of practical procedures, to contrast this with confidence in other areas of practice and to determine at what grade they felt most confident. Questionnaires were sent to all 57 oncology consultants and SpRs in the South-West region. Respondents scored confidence on a five-point Likert scale. The response rate was 70%. SpRs were significantly more confident in cardiopulmonary resuscitation ($p=0.003$) and central line insertion ($p=0.006$). Consultants were significantly more confident in developing management plans ($p=0.001$) and performing committee work ($p=0.002$). Only 6% of consultants felt most confident performing practical procedures as a consultant, and were less confident about these than other tasks ($p=0.001$). Some 86% of SpRs considered they were more confident performing practical procedures as senior house officers (SHOs). In conclusion, self-reported confidence in performing practical procedures declines during career progression in oncology. This raises questions about the teaching and supervision of these procedures. If there is a greater emphasis on a consultant-provided service, their educational needs will need to be recognized and retraining or outsourcing of these procedures to other specialties may be necessary.*

Introduction

Many competences will be acquired at medical school and during early postgraduate years (Marel *et al.*, 2000; Liddell *et al.*, 2002). Continuing professional development is an ongoing process and is concerned with not only the acquisition but also the maintenance of competences. The General Medical Council state the importance of this ongoing developmental and maintenance process in the *Good Medical Practice* guide (General Medical Council, 2001). More specifically for oncologists, a similar message is described in the Royal College of Radiologists' publication *Continuing Professional Development* (2001). There is, however, a lack of published evidence regarding the maintenance of competences over the long term (Macnab & Macnab, 1999; Hammond *et al.*, 2003).

In the UK there are calls for a consultant-provided service as an integral part of the multidisciplinary team delivering patient care, and for consultants to be involved in training and assessing junior doctors and medical students

Practice points

- There are calls for a consultant provided service in the NHS.
- Consultants in oncology lose confidence in performing practical procedures, which are performed frequently on oncology wards.
- Questions arise regarding assessment, teaching and supervision of junior doctors by consultants lacking confidence in certain tasks.
- The learning needs of consultants must be recognised.

(<http://www.dh.gov.uk>, 2005). One of the authors (KB) identified that she would require retraining in some practical procedures currently undertaken on oncology wards if this were to be the case.

The aims of the study were:

- (1) to determine if there was a significant difference between the confidence of oncology consultants and SpRs in performing practical procedures;
- (2) to identify at which grade consultants and SpRs felt most confident;
- (3) to determine whether differences in confidence were related to time since graduation;
- (4) to compare the confidence of consultants and SpRs in performing practical procedures with their confidence in performing other aspects of their role.

It is important to note that confidence is not competence. Incompetent individuals may be inappropriately confident, with more modest but competent people lacking confidence. However, there is evidence to suggest that medical practitioners do have insight into their level of competence. For example, Evans *et al.* (2005) demonstrated that a group of surgeons had reliable insight into their surgical performance, and Mattheos *et al.* (2004) found that a group of students did not overestimate their own abilities in treatment skills.

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We considered that loss of confidence in performing practical procedures by a group of consultants, particularly if their loss of confidence was not apparent in other aspects of their role, might identify an educational need.

Methods

The number and type of practical procedures performed in an adult cancer centre serving a population of approximately 1,000,000 were ascertained from April 2003 to March 2004 inclusive. Data were obtained retrospectively from hospital records using codes from the OPCS classification for the relevant procedures. During this time, a practical procedure (other than intravenous infusions) was performed on 8% of the 2674 discharged cases. There were 84 ascitic drains, 77 pleural taps, 27 chest drains and 13 lumbar punctures. Cardiopulmonary resuscitation and central line insertion were not coded. This information was used to design a questionnaire that was sent to all oncology consultants and SpRs in the South-West Region. The questionnaires were anonymous and included questions about year of medical qualification and grade. Respondents scored on a five-point Likert scale (five being most confident) their confidence in a number of tasks. The Likert scale was used as an ordinal measure of the attitude of respondents, ensuring that median values were used as a measure of central tendency and non-parametric statistics in data analysis (Jamieson, 2004).

The tasks investigated were:

- Group 1 tasks: commonly undertaken by trainees—i.e. cardiopulmonary resuscitation, draining ascites, tapping pleural effusions, inserting chest drains and performing lumbar punctures.
- Group 2 tasks: procedures undertaken on oncology patients but usually by an anaesthetist—e.g. central line

insertion. These are, however, performed by SHOs in other posts on a medical rotation.

- Group 3 tasks: regularly undertaken by consultants—e.g. formulating radiotherapy plans, developing management plans and non-clinical tasks of teaching and committee work.

The stage of career when the respondent felt most confident was also requested.

The confidence ratings for each item were compared between consultants and SpRs using Mann–Whitney U-tests. Within each grade, a division was made into those that had qualified earlier and later than the median year of qualification. Confidence ratings were then compared between those qualified earlier and later, for each grade separately, using Mann–Whitney U-tests. Confidence ratings for all the clinical and non-clinical items were compared with one another using Wilcoxon matched pairs signed-rank tests for consultants and for SpRs. Since multiple comparisons were being made between groups, a significance level of $p < 0.01$ was used. All statistical analysis was performed using SPSS version 12.0.

Results

In total, 40 of 57 (70%) questionnaires were returned: 27 of the 37 (73%) consultants responded and 13 of the 20 SpRs replied (65%). Median, 25th and 75th quartiles for the confidence scores of consultants and SpRs for the tasks are illustrated in Figure 1. In the figure, where the quartile value is equal to the median value, there is no extension of the interquartile line beyond the median point.

There were significant differences between SpRs and consultants, with the junior doctors being more confident in cardiopulmonary resuscitation ($p = 0.003$) and central line insertion ($p = 0.006$). Consultants were more confident in

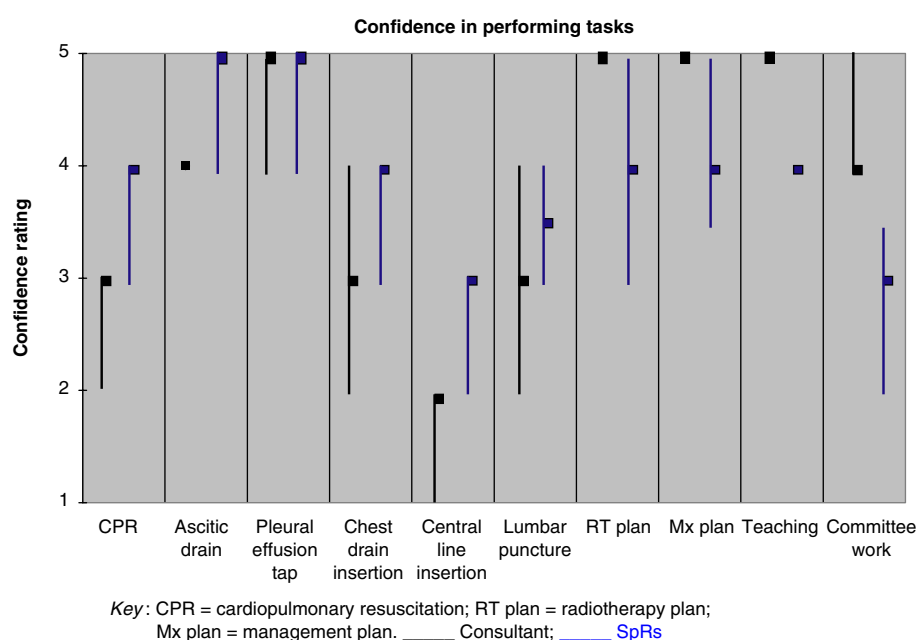


Figure 1. Median and inter-quartile range for self-assessed confidence in tasks by consultants and specialist registrars in oncology.

developing a management plan ($p=0.001$) and radiotherapy plan ($p=0.001$), as well as in performing committee work ($p=0.002$).

Consultants felt most confident in performing tasks in Groups 1 and 2 at SHO (41%) and SpR (53%) level, with only 6% feeling most confident as a consultant. In comparison, 86% of the SpRs were most confident at these tasks as an SHO. When the date of medical qualification was taken into account for consultants, there was significantly less confidence in inserting a central line ($p=0.002$) for those who had been qualified longer. However, 90% of consultant replies revealed superior confidence at consultant grade for the tasks in Group 3. Overall, consultants were more confident in the non-clinical skill of committee work when compared with clinical tasks ($p=0.001$).

Discussion

Self-reported confidence in performing tasks in Groups 1 and 2 declines in the consultant grade. One possible explanation is that doctors become more self-critical with age. For example, more time spent in a clinical setting may include greater awareness and personal experience of recognized complications from practical procedures. The consequence of this may be that confidence is eroded. However, confidence was higher in the consultant group for tasks in Group 3, which argues against this possibility.

Another explanation is due to the recognized association between frequency of performing practical procedures and degree of self-assessed confidence (Hicks *et al.*, 2000); it may be that consultants are not performing some of the clinical tasks regularly. The number of practical procedures required for competence has been examined in surgical series. Wibe *et al.* (2005) discovered an overall survival difference in favour of the individual surgeons operating on more than 30 cases of rectal cancer per year compared with a group with experience of less than 10 per year. Similar findings were reported by Ingram *et al.* (2005) for breast cancer patients for an individual caseload of greater compared with less than 20 in a year. However, there was no survival difference in centres treating more than 60 cases compared with less than 60 cases of prostate cancer by radical prostatectomy in a year, although the less experienced centres did have an increased complication rate (Hu *et al.*, 2003). It is not clear from the literature how many of the procedures in our groups are required to maintain competence.

The model of oncology training as the acquisition of competences as the trainee progresses to become a consultant who then maintains these competences is challenged by this study. The expertise in some competences was seen by both SpRs and consultants as being held at SHO grade, despite the fact that these procedures are undertaken ostensibly under the supervision of the consultants. Further work is required to investigate how these competences are learnt by the present SHOs.

This study also has implications for implementing work-based competence assessments of F1 and F2 (first- and second-year doctors) as envisaged in *Modernizing Medical Careers* (<http://www.mmc.nhs.uk/pages/assessment>, 2005).

If consultants are not confident to undertake procedures, they may be less able to assess their trainee's competence, for example in a direct observation of procedural skills (DOPS). Possible solutions include the increased availability of skills laboratories, although this may not address the problem of clinical supervision of trainees on the wards. The training needs of consultants should be recognized and transfer of some of the procedures to other departments, e.g. anaesthetics or radiology, may be indicated.

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