THE MISSING LINK:
the role of the cardiac surgical care practitioner in bridging the service training gap

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Difficulties balancing service provision with surgical training have been further compounded by:

- Mandatory publication of surgeon-specific results (April 2002)
Objective

Surgical Care Practitioners have become widely used in the provision of Cardiac Surgery.

This study explores our centre’s use of surgical care practitioners (SCPs) over the past decade.
I have changed this paragraph - as the Missing link bit is a conclusion not a starting point.

UHL NHS Trust, 02/03/2011
Hypotheses

1. The use of Surgical Care Practitioners has no effect on cardiac surgical trainees’ operative experience.

2. The use of Surgical Care Practitioners has no influence on the short term outcomes following cardiac surgical procedures.
Methods

• Retrospective analysis of prospective data collected between January 2000 January 2010

• 11658 eligible cases divided into 2 groups:
  – Group I (n=10201) performed by a consultant and ST
  – Group II (n=1457) performed by consultant and SCP

• Analysis undertaken by a single observer; $p$ values <0.05 taken as significant.
Results

• In any 6-month period there were more cases per ST (132) than per SCP (20), $p<0.001$
Distribution of Cases

Series 1 - Consultant Surgeon + Surgical Trainee
Series 2 - Consultant Surgeon + Surgical Care Practitioner
Results

• In any 6-month period there were more cases per ST (132) than per SCP (20), $p<0.001$
• Number of STs declining
• Number of SCPs constant
Number of STs and SCPs

![Graph showing the number of STs and SCPs over time periods. The graph depicts fluctuations in the number of trainees and SCPs across different time periods, with peaks and troughs in their values.](image-url)
Results

- In any 6-month period there were more cases per ST (132) than per SCP (20), $p<0.001$
- Number of STs declining
- Number of SCPs constant
- STs first assistant activity remains constant
- ST activity increases with increasing case complexity
Results – Surgeon Specific Data

• Group II accounted for 8.3% of cases prior to publication of outcome data and 13.3% ($p=0.033$) following its introduction.
Results – Surgeon Specific Data

Controlled for number of trainees, total unit activity, complexity of cases
Results – Surgeon Specific Data
Results – EWTD

• Group II accounted for 11.5% of cases prior to and 14.4% ($p<0.001$) following the implementation of the EWTD
Results – EWTD

Controlled for number of trainees, total unit activity, complexity of cases
Results – EWTD
## Results – Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Group I</th>
<th>Group II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean CBP</td>
<td>94 mins</td>
<td>90 mins*</td>
</tr>
<tr>
<td>Mean cross clamp</td>
<td>58 mins</td>
<td>54 mins*</td>
</tr>
<tr>
<td>ITU stay</td>
<td>2.3 days</td>
<td>2.2 days</td>
</tr>
<tr>
<td>Length of Inpatient stay</td>
<td>11.2 days</td>
<td>11.1 days</td>
</tr>
<tr>
<td>ITU readmission rate</td>
<td>3.4%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Re-exploration</td>
<td>12.6%</td>
<td>12.2%</td>
</tr>
<tr>
<td>Infective Complication</td>
<td>12.7%</td>
<td>12.0%</td>
</tr>
<tr>
<td>In-hospital mortality</td>
<td>4.2%</td>
<td>4.0%</td>
</tr>
</tbody>
</table>
Discussion

- Trainees still do significantly more cases as 1st assistant than SCPs
- Trainees assist more frequently with complex cases
- SCP activity has increased following both SSD and EWTD implementation
- ST assisted procedures have longer CPB and XC times
  - This is not associated with poorer short-term outcomes
Conclusion

This study demonstrates use of SCPs to be a safe and effective way to sustain departmental activity within the constraints of modern surgical practice, whilst allowing the maintenance of surgical training.