Briefing / debriefing in the cardiac theatre. Audit of impact on team performance.





Sotiris C. Papaspyros





- 1979: Crew Resource Management concept produced by NASA in response to commercial aviation mishaps.

Background

- Error in the delivery of health services represents significant cause of inpatient morbidity and mortality[1].
- Root-cause analyses have cited communication failure as a contributing factor in adverse events or close-call reports[2].
- Outcomes of high risk patients depend on a high level of cognitive and technical performance and sophisticated team coordination[3].

1. To err is human: Building a safer Health system. Washington DC, **National Academy press**; 1999
2. Bridging the communication gap in the operating room with medical team training. Awad SS et al. **Am J Surg**. 2005 Nov;190(5):770-4.
3. Errors and the burden of errors: attitudes, perceptions, and the culture of safety in pediatric cardiac surgical teams. Bognar A et al. **Ann Thorac Surg**. 2008 Apr;85(4):1374-81

Audit

- Oct 2008:
  - Formal theatre briefing and debriefing was instituted for all cardiac cases.

- Objective:
  - Analyse impact on performance of cardiac theatre team and patient safety.

- Methods:
  - Prospective collection of data from Oct 2008 to Jun 2009.
  - Analysis of 118 consecutive cases.

Results

Incidents	N=118 (%)
Cases with no problems	**28 (23.7)**
Cases with multiple problems	**38 (32.2)**
Instruments	54 (45.7)
Communication	16 (13.5)
Anaesthetic equipment	14 (11.8)
Theatre traffic	10 (8.4)
Operation timing (delays)	10 (8.4)
Staffing	8 (6.7)
Perfusion equipment	7 (5.9)
Surgical technical (errors)	7 (5.9)

Actions taken

- Instruments: Visited B. Braun unit. Sterilization - transport – storage – maintenance - repair/replacement process was reviewed.
- Communication: Agreement with theatre team to discontinue all conversations during institution and weaning off CPB.
- Traffic: Main theatre doors locked during procedures to avoid ‘casual’ traffic.

Audit loop completion

- Re – audit: Prospective collection and analysis of data from 127 consecutive cases July 2009 – Jan 2010.

Incidents	1st N=118 (%)	2nd N=127 (%)	Difference
Cases with no problems	**28 (23.7)**	**67 (52.8)**	**+29.1%**
Cases with multiple problems	**38 (32.2)**	**17 (13.4)**	**-18.8%**
Instruments	54 (45.7)	41 (32.3)	-13.4%
Communication	16 (13.5)	10 (7.8)	-5.7%
Anaesthetic equipment	14 (11.8)	6 (4.7)	-7.1%
Theatre traffic	10 (8.4)	1 (0.7)	-7.7%
Operation timing (delays)	10 (8.4)	9 (7.1)	-1.3%
Staffing	8 (6.7)	5 (3.9)	-2.8%
Perfusion equipment	7 (5.9)	4 (3.1)	-2.8%
Surgical technical (errors)	7 (5.9)	6 (4.7)	-1.2%

Conclusions

- Briefing promotes real time transfer of information and sets the stage for how everyone will communicate.
- Debriefing captures ‘near-misses’ which are usually not detected by record review at some time remote from the procedure.
- Adverse events were shared and discussed openly within care team and this guided process improvement.

Thank you

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Institutional report - Cardiac general

Briefing and debriefing in the cardiac operating room. Analysis of impact on theatre team attitude and patient safety

Sotiris C. Papaspyros, Kalyana C. Javangula, Rajeshwara Krishna Prasad Adluri, David J. O'Regan*

The Leeds Teaching Hospitals NHS Trust, Leeds General Infirmary, Great George Street, Leeds LS13EX, UK

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Abstract

Error in health services delivery has long been recognised as a significant cause of inpatient morbidity and mortality. Root-cause analyses have cited communication failure as one of the contributing factors in adverse events. The formalised fighter pilot mission brief and debrief formed the basis of the National Aeronautics and Space Administration (NASA) crew resource management (CRM) concept produced in 1979. This is a qualitative analysis of our experience with the briefing–debriefing process applied to cardiac theatres. We instituted a policy of formal operating room (OR) briefing and debriefing in all cardiac theatre sessions. The first 118 cases were reviewed. A trouble-free operation was noted in only 28 (23.7%) cases. We experienced multiple problems in 38 (32.2%) cases. A gap was identified in the second order problem solving in relation to instrument repair and maintenance. Theatre team members were interviewed and their comments were subjected to qualitative analysis. The collaborative feeling is that communication has improved. The health industry may benefit from embracing the briefing–debriefing technique as an adjunct to continuous improvement through reflective learning, deliberate practice and immediate feedback. This may be the initial step toward a substantive and sustainable organizational transformation.
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YORKSHIRE HEART CENTRE - OPERATING ROOM BRIEFING/DEBRIEFING TOOL

Name:	**Unit No:**	**Dob**
Operation:	**Date:**	**Time:**

	General Step Process	**Check**
1.	Does everyone know each other? Anything to celebrate? Anything troubling anybody?	Delete as appropriate Yes / No
2.	Is everyone familiar with theatres/equipment?	Yes / No
3.	Do we anticipate problems?	Yes / No
4.	Does everyone understand the procedure/critical steps?	Yes / No
	Reinforce to stop process "I am not happy' is the trigger	Yes / No

	Briefing - before every procedure	
1.	First names and roles to be written on board	Yes / No
2.	Do the following match:- Patient ID band, Informed Consent (read out loud), Site marking, OR posting, patient's verbalization of procedure (if patient awake), other clinically relevant documentation (H&P, clinic note)	Yes / No
3.	Have antibiotics been given, What are the anticipated times of antibiotic redosing?	Yes / No
4	Is glycaemic control/beta blockers indicated?	Yes / No
5.	Is the patient positioned to minimise injury?	Yes / No
6.	Has the Prep been applied properly, without pooling and allowed to dry?	Yes / No
7.	Is the appropriate amount of blood available?	Yes / No
8.	Is DVT prophylaxis indicated?	Yes / No
9.	Any Special Precautions? If yes, describe	Yes / No
11.	Are warmers on the patient?	Yes / No
12.	Is the time allotted for this procedure an accurate estimate?	Yes / No

	Debriefing - After every procedure	
1.	Are there any concerns - communication/ safety	Yes / No
2.	Could anything have been done to make this case safer or more efficient?	Yes / No
3.	Where can we improve?	
4.	Are the patient's name, history, number and the surgical specimen name and laterality on the paperwork? (Specimen paperwork/labeling to be independently verified by Surgeon)	Yes / No
5.	Did we have problems with instruments?	Yes / No
6	Plan for transition of care to post op unit discussed? To include: Fluid management/ blood (all slips in chart), Antibiotics - continue post-op (dose interval), PACU tests/Xrays, Pain/PCA plan, New meds needed (immediate periop), Beta blockers (as required), Glycaemic control (as required, DVT prophylaxis	Yes / No

Documentation Stop Events: Reasons/Concerns:	**Time:**

Consultant Anaesthetist	**Consultant Surgeon**	**Circulating ODP**	**Perfusionist**