

Dr. Stuart Marshall  
Anaesthesia Teaching & Research  
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## Biography

Stuart is a practicing anaesthetist, simulation educator and researcher with interests in Patient Safety and Human Factors / Ergonomics.

His research includes investigation of the effects of cognitive aids (checklists and algorithms) on team functioning during emergencies and on simulation as an educational technique to teach patient safety and improve patient and health worker outcomes. He has been involved in the development of several innovative patient safety courses for both undergraduate and postgraduate students and has been closely associated with the Masters of Perioperative Medicine for which he co-supervises a unit on Human Factors and Patient Safety (POM5005).

Stuart is also the convener of the 8th International Clinical Skills Conference in Prato, Italy in 2019 and Founding director of the charity that runs the conference: The International Clinical Skills Foundation Inc.

He is a member of the International Advisory Panel for 'Anaesthesia' Journal editorial board and Associate editor for the European Society for Simulation 'Advances in Simulation' journal

## Qualifications

Human Factors, PhD, The University of Queensland

Psychology, Masters of Human Factors, The University of Queensland

25 Feb 2006 → ... Fellow of the Australian and New Zealand College of Anaesthetists, FANZCA

May 2002 → ... Member of the Royal College of Anaesthetists, MRCA

## Employment

### Senior Research Fellow

Anaesthesia Teaching & Research

MONASH UNIVERSITY

1 Jan 2017 → present

### Honorary Clinical Associate Professor

The University of Melbourne

Parkville, Australia

1 Apr 2016 → 1 Apr 2021

## Research output

### Decision-centred design in healthcare: the process of identifying a decision support tool for airway management

Schnittker, R., Marshall, S. D., Horberry, T. & Young, K., 1 May 2019, In : Applied Ergonomics. 77, p. 70-82 13 p.

### Multifaceted approaches and PONV: A critical appraisal

Au, J. & Marshall, S. D., 13 Feb 2019, (Accepted/In press) In : Anaesthesia and intensive care. 2 p.

### Anaphylaxis Clinical Care Standard: Improving how we manage adults with anaphylaxis in Victoria

Douglass, J. A., Armstrong, D. S., Burke, J., Eade, A. K., Fennessy, G., Kolawole, H., Marshall, S. D., Storey, S., Summers, I., Sutherland, M. & Voukelatos, S., Feb 2019, Vic Australia: State Government of Victoria, Department of Health. 22 p.

### Medication handling: towards a practical, human-centred approach

Marshall, S. D. & Chrimes, N., Feb 2019, In : Anaesthesia. 74, 3, p. 280-4 5 p.

**User centred development of a smartphone application for wayfinding in a complex hospital environment**

Smolenaers, F., Chestney, T., Walsh, J., Mathieson, S., Thompson, D., Gurkan, M. & Marshall, S., 1 Jan 2019, *Proceedings of the 20th Congress of the International Ergonomics Association (IEA 2018) - Volume I: Volume I: Healthcare Ergonomics*. Bagnara, S., Alexander, T., Tartaglia, R., Fujita, Y. & Albolino, S. (eds.). Springer, p. 383-393 11 p. (Advances in Intelligent Systems and Computing; vol. 818).

**The co-design process of a decision support tool for airway management**

Schnittker, R., Marshall, S., Horberry, T. & Young, K. L., 2019, *Proceedings of the 20th Congress of the International Ergonomics Association (IEA 2018) - Volume I: Healthcare Ergonomics*. Bagnara, S., Alexander, T., Tartaglia, R., Fujita, Y. & Albolino, S. (eds.). Cham Switzerland: Springer, p. 111-120 10 p. (Advances in Intelligent Systems and Computing; vol. 818).

**Attempt XYZ: airway management at the opposite end of the alphabet**

Chrimes, N. & Marshall, S. D., Dec 2018, In : *Anaesthesia*. 73, 12, p. 1464-1468 5 p.

**Decision making in a 'cannot-intubate, cannot-oxygenate' scenario. A reply**

Marshall, S. D. & Schnittker, R., 1 Sep 2018, In : *Anaesthesia*. 73, 9, p. 1172-1173 2 p.

**Human factors enablers and barriers for successful airway management - an in-depth interview study**

Schnittker, R., Marshall, S., Horberry, T. & Young, K. L., Aug 2018, In : *Anaesthesia*. 73, 8, p. 980-989 10 p.

**Shared leadership in healthcare action teams: a systematic review**

Janssens, S., Simon, R., Beckmann, M. & Marshall, S. D., 23 Apr 2018, (Accepted/In press) In : *Journal of Patient Safety*. p. 1-11 11 p.

**Asking key questions in the consent process – a reply**

Chrimes, N. & Marshall, S. D., 14 Mar 2018, In : *Anaesthesia*. 73, 4, p. 519-20 2 p.

**The illusion of informed consent**

Chrimes, N. & Marshall, S. D., 1 Jan 2018, In : *Anaesthesia*. 73, 1, p. 9-14 6 p.

**Exploring Decision Pathways in Challenging Airway Management Episodes**

Schnittker, R., Marshall, S., Horberry, T., Young, K. & Lintern, G., 1 Dec 2017, In : *Journal of Cognitive Engineering and Decision Making*. 11, 4, p. 353-370 18 p.

**Lost in translation? Comparing the effectiveness of electronic-based and paper-based cognitive AIDS**

Marshall, S. D., 1 Nov 2017, In : *British Journal of Anaesthesia*. 119, 5, p. 869-871 3 p.

**Failed Vocalis Muscle Monitoring During Thyroid Surgery Resulting From Residual Muscle Relaxation: A Response**

Marshall, S. D. & Serpell, J. W., 19 Jun 2017, In : *A & A Case Reports*. 9, 5, p. 158 1 p.

**Helping experts and expert teams perform under duress: an agenda for cognitive aid research**

Marshall, S. D., 1 Mar 2017, In : *Anaesthesia*. 72, 3, p. 289-295 7 p.

**ANZAAG/ANZCA Perioperative Anaphylaxis Management Guidelines.**

Kolawole, H., Marshall, S. D., Crilly, H., Kerridge, R. & Roessler, P., Feb 2017, In : *Anaesthesia and intensive care*. 45, 2, p. 151-8

**Simulation and mental health outcomes: a scoping review**

Williams, B., Reddy, P., Marshall, S., Beovich, B. & McKarney, L., 28 Jan 2017, In : *Advances in Simulation*. 2, 8 p., 2.

**Coffee, checklists and self-flagellation.**

Marshall, S. D., 2017, *Simulcast podcast: The first year..* Symon, B., Brazil, V. & Spurr, J. (eds.). p. 41-6

**Strategies for managing adverse events in healthcare simulations.**

Marshall, S. D. & McIntosh, C., 2017, *Healthcare Simulation Education: Evidence, Theory & Practice*. Nestel, D., Kelly, M., Jolly, B. & Watson, M. (eds.). John Wiley & Sons, p. 152-7

**The cognitive aids in medicine assessment tool (CMAT) applied to five neonatal resuscitation algorithms**

McLanders, M. L., Marshall, S. D., Sanderson, P. M. & Liley, H. G., 2017, In : *Journal of Perinatology*. 37, 4, p. 387-393 7 p.

**Time for a breath of fresh air: Rethinking training in airway management**

Marshall, S. D. & Chrimes, N., 1 Nov 2016, In : *Anaesthesia*. 71, 11, p. 1259-1264 6 p.

**Evidence Is Important: Safety Considerations for Emergency Catheter Cricothyroidotomy**

Marshall, S. D., 1 Sep 2016, In : *Academic Emergency Medicine*. 23, 9, p. 1074-1076 3 p.

**Junior doctors and nurses' views and experiences of medical error: Moving toward shared learning and responsibility**

Kiegaldie, D., Pryor, E., Marshall, S., Everard, D., Iedema, R., Craig, S. & Gilbee, A., 1 Sep 2016, In : *Journal of Interprofessional Education & Practice*. 4, p. 21-27 7 p.

**An Electronic Task Management (ETM) system for after hours hospital work and subsequent socially mediated effects of task completion**

Marshall, S., Warren, B., Roodenburg, O. & Smolenaers, F., Sep 2016, In : *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. 60, 1, p. 566 - 570 5 p.

**Examination of anesthetic practitioners' decisions for the design of a cognitive tool for airway management**

Schnittker, R., Marshall, S. D., Horberry, T., Young, K. & Lintern, G., Sep 2016, In : *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. 60, 1, p. 1763-1767 5 p.

**The 2015 Difficult Airway Society guidelines: What about the anticipated difficult airway? A reply**

Pandit, J. J. & Marshall, S. D., 1 Apr 2016, In : *Anaesthesia*. 71, 4, p. 468-469 2 p.

**The effect of two cognitive aid designs on team functioning during intra-operative anaphylaxis emergencies: A multi-centre simulation study**

Marshall, S. D., Sanderson, P., McIntosh, C. A. & Kolawole, H., 1 Apr 2016, In : *Anaesthesia*. 71, 4, p. 389-404 16 p.

**A radical evolution: the 2015 Difficult Airway Society Guidelines for managing unanticipated difficult or failed intubation**

Marshall, S. D. & Pandit, J., Jan 2016, In : *Anaesthesia*. 71, 1, p. 131-7 7 p., doi: 10.1111/anae.13354.

**The effect of routine reversal of neuromuscular blockade on adequacy of recurrent laryngeal nerve stimulation during thyroid surgery**

Marshall, S. D., Boden, E. & Serpell, J., 1 Jul 2015, In : *Anaesthesia and intensive care*. 43, 4, p. 485-489 5 p.

**Appendix B: Basic airway management and basic and advanced cardiac life support algorithms**

Marshall, S., 2015, *Perioperative Medicine for the Junior Clinician*. Symons, J., Myles, P., Mehra, R. & Ball, C. (eds.). 1 ed. West Sussex UK: Wiley-Blackwell, p. 596-599 4 p.

**Getting more efficient Rapid Response System (RRS) utilization by the use of a general ward based deteriorating patient contract**

Buist, M. D., Marshall, S. D., Shearer, W., Fininigan, M. A., Hore, T., Sturgess, T. R. & Wilson, S. J., 2015, In : *Safety in Health*. 1, 8, p. 1 - 7 7 p.

### **Quality Improvement and patient safety**

Marshall, S. D., 2015, *Perioperative Medicine for the Junior Clinician*. Symons, J., Myles, P., Mehra, R. & Ball, C. (eds.). 1 ed. West Sussex, United Kingdom: Wiley-Blackwell, p. 18 - 21 4 p.

### **Rapid response systems and collective (in)competence: an exploratory analysis of intraprofessional and interprofessional activation factors**

Kitto, S. C., Marshall, S. D., McMillan, S. E., Shearer, W., Buist, M. D., Grant, R., Finnigan, M. A. & Wilson, S. J., 2015, In : *Journal of Interprofessional Care*. 29, 4, p. 340 - 346 7 p.

### **Safe anaesthetic care: Further improvements require a focus on resilience**

Schnittker, R. & Marshall, S. D., 2015, In : *British Journal of Anaesthesia*. 115, 5, p. 643 - 645 3 p.

### **Simulation, patient outcomes, and mental health review: Part 1: A focused review of simulation to improve patient outcomes – January 2015**

McKarney, L., Marshall, S. & Simulation Expert Advisory Group Research Subcommittee, 2015, Melbourne Victoria Australia: Department of Health and Human Services, Victoria. 9 p.

### **Simulation, patient outcomes, and mental health review: Part 2: Simulation and mental health outcomes: a scoping review – June 2015**

Williams, B., Reddy, P., Edlington, T. & Marshall, S., 2015, Melbourne Victoria Australia: Department of Health and Human Services, Victoria. 28 p.

### **Sink or swim? the difficulty of finding the correct level of independence and support for trainees**

Marshall, S. D., 2015, In : *British Journal of Anaesthesia*. 114, 5, p. 724 - 725 2 p.

### **Transition from supraglottic to infraglottic rescue in the “can't intubate can't oxygenate”(CICO) scenario**

Watterson, L., Rehak, A., Heard, A. & Marshall, S., 1 Nov 2014, Australian and New Zealand College of Anaesthetists. 70 p.

### **A national research agenda for healthcare simulation: Preliminary report**

Nestel, D., Watson, M., Marshall, S. D., Arora, S. & Bearman, M., Aug 2014, p. 1-8. 8 p.

### **In: Response**

Marshall, S. D., 2014, In : *Anesthesia and Analgesia*. 118, 6, p. 1388-1389 2 p.

### **The effects of a displayed cognitive aid on non-technical skills in a simulated 'can't intubate, can't oxygenate' crisis**

Marshall, S. D. & Mehra, R., 2014, In : *Anaesthesia*. 69, 7, p. 669 - 677 9 p.

### **The use of cognitive aids during emergencies in anesthesia: a review of the literature**

Marshall, S. D., 2013, In : *Anesthesia and Analgesia*. 117, 5, p. 1162 - 1171 10 p.

### **Simulation in clinical teaching and learning**

Weller, J. M., Nestel, D. F., Marshall, S. D., Brooks, P. & Conn, J., 21 May 2012, In : *Medical Journal of Australia*. 196, 9, 5 p., 594.

### **Telephone referral education, and evidence of retention and transfer after six-months**

Marshall, S. D., Harrison, J. C. & Flanagan, B. T., 2012, In : *BMC Medical Education*. 12, 38, p. 1 - 7 7 p.

### **The use of medical simulation to improve patient safety**

Marshall, S. D. & Hogan, J., 2012, *E-Health Technologies and Improving Patient Safety: Exploring Organizational Factors*. Moutzoglou, A. & Kastania, A. (eds.). Hershey, PA United States: Medical Information Science Reference, p. 155 - 172 18 p.

**What stops hospital clinical staff from following protocols? An analysis of the incidence and factors behind the failure of bedside clinical staff to activate the rapid response system in a multi-campus Australian metropolitan healthcare service**  
Shearer, W., Marshall, S. D., Buist, M. D., Finnigan, M. A., Kitto, S., Hore, T., Sturgess, T., Wilson, S. J. & Ramsay, W., 2012, In : *BMJ: British Medical Journal*. 21, 7, p. 569 - 575 7 p.

**Examining the challenges of intra-professional communication for international medical graduates using simulation**  
Pryor, E., O'Brien, R. (ed.), Marshall, S., Woodward-Kron, R. & McNamara, T., 2011, p. 55 - 55. 1 p.

**Why don't hospital staff activate the rapid response system (RRS)? How frequently is it needed and can the process be improved?**  
Marshall, S., Kitto, S., Shearer, W., Wilson, S., Finnigan, M., Sturgess, T., Hore, T. & Buist, M., 2011, In : *Implementation Science*. 6, 39, p. 1 - 7 7 p.

**ISBAR for clear communication: One hospital's experience spreading the message**  
Finnigan, M. A., Marshall, S. D. & Flanagan, B. T., 7 Dec 2010, In : *Australian Health Review*. 34, 4, p. 400-404 5 p.

**Measurement of jugular venous pressure**  
Marshall, S. D., 1 Nov 2010, In : *Medical Journal of Australia*. 193, 9, p. 558-559 2 p.

**Simulation-based education for building clinical teams**  
Marshall, S. D. & Flanagan, B., 1 Oct 2010, In : *Journal of Emergencies, Trauma and Shock*. 3, 4, p. 360-368 9 p.

**The teaching of a structured tool improves the clarity and content of interprofessional clinical communication**  
Marshall, S., Harrison, J. C. & Flanagan, B. T., 2009, In : *Quality and Safety in Health Care*. 18, 2, p. 137 - 140 4 p.

**The evaluation of structured communication tools in healthcare**  
Marshall, S., Harrison, J. & Flanagan, B., 1 Dec 2008, *52nd Human Factors and Ergonomics Society Annual Meeting, HFES 2008*. Vol. 2. p. 860-864 5 p.

**Development of team coordination and performance measures in a trauma setting**  
Marshall, S., Miller, A. & Xiao, Y., 1 Dec 2007, *51st Annual Meeting of the Human Factors and Ergonomics Society, HFES 2007*. Vol. 2. p. 717-721 5 p.

**Cognitive aids in a simulated anesthetic crisis [2]**  
Marshall, S. & Flanagan, B., 1 May 2007, In : *Anesthesia and Analgesia*. 104, 5, p. 1292-1293 2 p.

**Attitudes to safety and teamwork in the operating theatre, and the effects of a program of simulation-based team training**  
Flanagan, B., Joseph, M., Bujor, M. & Marshall, S., 1 Jan 2007, *Multimodal Safety Management and Human Factors: Crossing the Borders of Medical, Aviation, Road and Rail Industries*. Anca Jr, J. M. (ed.). Ashgate Publishing Limited, p. 211-220 10 p.

**Anaesthetists' knowledge of the QT interval in a teaching hospital**  
Marshall, S. D. & Myles, P. S., Dec 2005, In : *Anaesthesia and intensive care*. 33, 6, p. 773-776 4 p.

## Awards

**Crisis management cognitive aid to improve team coordination: A multi-centre simulation study**  
Marshall, S., Burian, B. K. & Clebone, A.  
Australian and New Zealand College of Anaesthetists: AUD61,891.00  
1/01/19 → 31/12/19

## Projects

**Crisis management cognitive aid to improve team coordination: A multi-centre simulation study**  
Marshall, S., Burian, B. K. & Clebone, A.

1/01/19 → 31/12/19

**Effective cognitive aids for clinical emergencies**

Marshall, S.

National Health & Medical Research Council (NHMRC), Australian and New Zealand College of Anaesthetists

1/01/17 → 31/12/20

**Investigation and prevention of fixation errors during airway management**

Marshall, S. & Lenne, M.

Australian and New Zealand College of Anaesthetists

1/01/15 → 31/12/16