

Vasculogeriatrics: embracing shared care with our colleagues in geriatric medicine should not be a threat

Devas and colleagues are credited with pioneering orthogeriatric care in the 1950s in Hastings, United Kingdom.¹ He described the need to carefully consider all the patient's circumstances when planning their care.² This approach remains highly relevant 70 years on.

Shared models of care are now well recognized in specialties like orthopaedics where benefits in mortality, morbidity and reduced length of stay have been shown mainly in hip fracture surgery.^{3–8} Other disciplines have been slow to consider replicating this model, perhaps due to lack of evidence across other procedures, conflicting demands, funding barriers or perhaps, due to a perceived threat of loss of control over perioperative care. Reluctance may also stem from the perceived prying eyes of a physician into our decision making and outcomes, or possibly anticipating delays to surgery from medical incursions. Perhaps it is simply a lack of understanding of possible frameworks and potential gains?

We were offered the chance to emulate the orthopaedic model with a similar initiative at Sir Charles Gairdner Hospital in Perth in 2014, securing funding for a 0.1 FTE consultant in geriatrics with a 0.4 FTE geriatric registrar, equating to one consultant led ward round per week and weekday ward rounds by the registrar.⁸ Over time, this has evolved into a twice-weekly geriatrician round with registrar support 6 days per week. Whilst the geriatric ward round did involve our vascular surgery juniors, it took place after the early morning surgical round so as not to interfere with patient flow, theatre or discharge deadlines. The juniors were quick to express their appreciation of a slower paced round with the opportunity to learn medicine as it pertains to the elderly, frail and co-morbid—a skill base essential for many career pathways. The surprise came from the geriatric team who were astonished that we had been routinely managing some of the highest risk patients in the hospital for many years.

One of our major hurdles prior to the vascular geriatric service, was facilitating transfer of frail, co-morbid patients to an appropriate downstream facility for rehabilitation or ongoing care. We rapidly came to appreciate the expertise of a consultant geriatrician in expediting and facilitating this by patient optimisation when discharges took place in days rather than weeks. Having 'in-house' physician expertise created further benefits and time savings within the patient stay, including a reduction in the number of medical specialty consultations required. With the geriatric team helping to manage the perioperative period, there was a reduced requirement for external advice and consequent delay. This helped reduce our

length of stay further, enabling us to admit higher volumes of patients with urgent problems through a limited number of beds at any one time.⁹ The ability of geriatricians to reduce length of stay for surgical patients is now well documented.^{3,10,11}

In vascular surgery, where catheter-based interventions are the norm and the endovascular possibilities are ever-expanding, we are regularly faced with risk/benefit judgement calls. The involvement of the geriatricians in prognostication for complex patients facing major intervention has become valuable in assisting us in making the best possible decisions for our patients. Although some centres have Physician- assisted input, Geriatricians are expert at managing cognitive impairment and vascular dementia improving quality of care for these patients.^{12,13} Other benefits from geriatric involvement include patient centred care with improvements in the management of geriatric syndromes (such as delirium, frailty and poly-pharmacy), perioperative risk reduction and enhanced communication with patients, relatives and the allied health team outside of a fast-paced surgical ward round.^{10,14–17}

An unexpected gain was the emergence of a productive research group involving vascular surgery, vascular geriatrics, anaesthesia, renal medicine, podiatry and nursing. This group has delivered several QI projects, registrar projects, medical student projects and audits. Outcomes from the group have led to changes in unit practice, for example reduced use of myocardial perfusion scans in pre-operative assessment, increased use of preoperative iron transfusion and measurement of frailty and sarcopenia, many have been presented at major vascular meetings. The understanding of research delivery and engagement of motivated individuals for change can be exponentially beneficial to any unit. It is satisfying to see juniors come away with an enhanced knowledge of medicine as it pertains to surgery through collaborations like this, as well as a presentation and a paper or two.

As our population ages and co-morbid conditions such as diabetes and obesity increase, procedural risk in our patient cohorts will only get higher. By sharing patient centred goals and the perspective of experts in care of the elderly, we can mitigate the perioperative risk and streamline patient flow without compromising our way of work, personal preferences, schedules or control.^{18–20} Although clear to us that we and our patients only benefit by shared care with our geriatricians, patient reported outcomes will strengthen the case for a shared care model aside from cost-effectiveness in a specialty where quality of life may have greater

importance than quantity. The practical implementation of our model could provide a framework for other units who may wish to work together in this way.

Author contributions


Emily Jasper: Writing – review and editing. **Kien Chan:** Conceptualization; supervision; validation; writing – review and editing. **Shirley Jansen:** Conceptualization; project administration; writing – original draft; writing – review and editing. **Christopher Wilson:** Writing – review and editing.

Acknowledgement

Open access publishing facilitated by Curtin University, as part of the Wiley - Curtin University agreement via the Council of Australian University Librarians.

References

- Barton A, Mulley G. History of the development of geriatric medicine in the UK. *Postgrad. Med. J.* 2003; **79**: 229–34.
- Devas MB. Geriatric orthopaedics. *Br. Med. J.* 1974; **1**: 190–2.
- Patel JN, Klein DS, Sreekumar S, Liporace FA, Yoon RS. Outcomes in multidisciplinary team-based approach in geriatric hip fracture care: a systematic review. *J. Am. Acad. Orthop. Surg.* 2020; **28**: 128–33.
- Moyet J, Deschasse G, Marquant B, Mertl P, Bloch F. Which is the optimal orthogeriatric care model to prevent mortality of elderly subjects post hip fractures? A systematic review and meta-analysis based on current clinical practice. *Int. Orthop.* 2019; **43**: 1449–54.
- Grigoryan KV, Javedan H, Rudolph JL. Orthogeriatric care models and outcomes in hip fracture patients: a systematic review and meta-analysis. *J. Orthop. Trauma* 2014; **28**: e49–55.
- Baroni M, Serra R, Boccardi V *et al.* The orthogeriatric comanagement improves clinical outcomes of hip fracture in older adults. *Osteoporos. Int.* 2019; **30**: 907–16.
- Sacks GD, Shannon EM, Dawes AJ *et al.* Teamwork, communication and safety climate: a systematic review of interventions to improve surgical culture. *BMJ Qual. Saf.* 2015; **24**: 458–67.
- Eamer G, Taheri A, Chen SS *et al.* Comprehensive geriatric assessment for older people admitted to a surgical service. *Cochrane Database System. Rev.* 2018; **1**: CD012485.
- Ritter JC, Bharat C, Stopher L, Ponosh S, Jansen S. As the population is aging the surgical care model needs refreshment: implementation of a Vasculogeriatric Service for Vascular Surgical Patients in Australia. *Clin. Surg.* 2016; **1**: 1–5.
- Partridge JS, Harari D, Martin FC *et al.* Randomized clinical trial of comprehensive geriatric assessment and optimization in vascular surgery. *Br. J. Surg.* 2017; **104**: 679–87.
- Mason MC, Crees AL, Dean MR, Bashir N. Establishing a proactive geriatrician led comprehensive geriatric assessment in older emergency surgery patients: outcomes of a pilot study. *Int. J. Clin. Pract.* 2018; **72**: e13096.
- Houghton JSM, Nickinson ATO, Bridgwood B, Gray LJ, Haunton VJ, Sayers RD. Prevalence of cognitive impairment in individuals with vascular surgical pathology: a systematic review and meta-analysis. *Eur. J. Vasc. Endovasc. Surg.* 2021; **61**: 664–74.
- J. Hunter Mehaffey, Hawkins RB, Tracci MC *et al.* Preoperative dementia is associated with increased cost and complications after vascular surgery. *J. Vasc. Surg.* 2018; **68**: 1203–8.
- Thillainadesan J, Aitken SJ, Monaro SR *et al.* Geriatric comanagement of older vascular surgery inpatients reduces hospital-acquired geriatric syndromes. *J. Am. Med. Dir. Assoc.* 2022; **23**: 589–595.
- Aitken SJ, Lujic S, Randall DA, Noguchi N, Naganathan V, Blyth FM. Predicting outcomes in older patients undergoing vascular surgery using the hospital frailty risk score. *Br. J. Surg.* 2021; **108**: 659–66.
- Houghton JSM, Nickinson ATO, Morton AJ *et al.* Frailty factors and outcomes in vascular surgery patients: a systematic review and meta-analysis. *Ann. Surg.* 2020; **272**: 266–76.
- Wang J, Zou Y, Zhao J *et al.* The impact of frailty on outcomes of elderly patients after major vascular surgery: a systematic review and meta-analysis. *Eur. J. Vasc. Endovasc. Surg.* 2018; **56**: 591–602.
- Thillainadesan J, Hilmer SN, Fleury AM, Naganathan V. New horizons in the perioperative care of older adults. *Age Ageing* 2022; **51**: afab245.
- Howie S, Tinker A. Are we on the same page? Exploring the role of the geriatrician in the care of the older surgical patient from the perspective of surgeons and geriatricians. *Clin. Med. (Lond.)* 2018; **18**: 374–9.
- Thillainadesan J, Jansen J, Close J, Hilmer S, Naganathan V. Geriatrician perspectives on perioperative care: a qualitative study. *BMC Geriatr.* 2021; **21**: 68.

Shirley Jansen,*†‡§ Prof 

Christopher Wilson,¶ Dr

Emily Jasper,¶ Dr

Kien Chan,¶ Dr

*Vascular Surgery, Curtin Medical School, Curtin University, Perth, Western Australia, Australia, †Department of Vascular and Endovascular Surgery, Sir Charles Gairdner Hospital, Perth, Western Australia, Australia, ‡Heart and Vascular Research Institute, Harry Perkins Institute of Medical Research, Perth, Western Australia, Australia, §Faculty of Health and Medical Sciences, University of Western Australia, Perth, Western Australia, Australia and ¶Department Geriatric Medicine, Sir Charles Gairdner Hospital, Perth, Western Australia, Australia

doi: 10.1111/ans.17785