

Letters

Survival, mortality and morbidity outcomes after oesophagogastric cancer surgery in New South Wales, 2001–2008

TO THE EDITOR: Following a retrospective review of New South Wales data, Smith and colleagues concluded that the better long-term survival outcomes following surgery for oesophagogastric cancer at higher-volume centres support surgery only being done at these centres.¹ However, much missing data creates uncertainty about this conclusion.

Survival outcomes directly relate to stage at diagnosis, so variable use of staging laparoscopy, endoscopic ultrasound and/or positron emission tomography, all of which can upstage a significant proportion of patients,² and all more likely to be employed at higher-volume centres, could create considerable variation in recorded stage at diagnosis and in patient selection for surgery. Further, some patients considered surgical candidates at one hospital may be managed with definitive chemoradiation at another hospital.³ Most significantly, there are widely variable approaches to the use of adjuvant radiation and chemotherapy, including the timing and agents used,⁴ which have a significant impact on recurrence risk and survival. As 5-year survival is also confounded by deaths from other causes, this measure cannot be considered a reliable indicator of surgical quality. We note that more direct indicators — length of stay and 30-day mortality — did not differ for lower-volume versus higher-volume centres.

Attempting to compare hospital surgical outcomes where there are no data on the variable approaches to initial staging or multidisciplinary management is likely to end with an “apples versus oranges” comparison. While surgery at higher-volume centres may produce better outcomes,

Smith et al do not have the data to conclusively show this.

Margaret Lee Medical Oncology Registrar¹

Peter Gibbs Medical Oncologist,¹ and Laboratory Head²

¹ Royal Melbourne Hospital, Melbourne, VIC.

² Systems Biology and Personalised Medicine, Walter and Eliza Hall Institute, Melbourne, VIC.

lee.margaret@mh.org.au

Competing interests: No relevant disclosures.
doi: 10.5694/mja14.00870

- 1 Smith RC, Creighton N, Lord RV, et al. Survival, mortality and morbidity outcomes after oesophagogastric cancer surgery in New South Wales, 2001–2008. *Med J Aust* 2014; 200: 408–413.
- 2 Smyth E, Schöder H, Strong VE, et al. A prospective evaluation of the utility of 2-deoxy-2-[¹⁸F]fluoro-D-glucose positron emission topography and computed tomography in staging locally advanced gastric cancer. *Cancer* 2012; 118: 5481–5488.
- 3 Hategan M, Cook N, Prewett S, et al. Trimodality therapy and definitive chemoradiotherapy for esophageal cancer: a single-center experience and review of the literature. *Dis Esophagus* 2014; May 27 [Epub ahead of print].
- 4 Kersten C, Cvancarova M, Mjåland S, Mjåland O. Does in-house availability of multidisciplinary teams increase survival in upper gastrointestinal-cancer? *World J Gastrointest Oncol* 2013; 5: 60–67. □

IN REPLY: International evidence of high-volume institutions having better outcomes for complex cancer surgery is strong.^{1,2} Our analyses confirm the direction and magnitude of this relationship in New South Wales. Should we ignore the international evidence?

Our analyses showed improved 5-year survival for people with oesophagogastric cancer who received surgery in a higher-volume hospital. The difference in survival was not explained by the age, comorbidity, extent of disease or urgency of admission. We used hospital volume as a measure of hospital experience in the surgical and non-surgical management of oesophagogastric cancer patients. More accurate staging and more effective delivery of adjuvant therapy may be part of the reason for the volume–outcome relationships observed. Patient outcomes are determined by more than what happens on the operating table. This is not about the surgeon but about performing complex

“

some patients considered surgical candidates at one hospital may be managed with definitive chemoradiation at another hospital

”

Lee et al

“

Patient outcomes are determined by more than what happens on the operating table

”

Creighton et al

procedures frequently enough in institutions able to provide the range of diagnostics, perioperative support services, multidisciplinary care and expertise that surgeons require and patients need for great outcomes.^{3,4} Can anyone defend institutions performing these procedures at a low volume?

Nicola Creighton Epidemiologist¹

Ross C Smith Emeritus Professor²

David C Currow Chief Cancer Officer and Chief Executive Officer¹

¹ Cancer Institute NSW, Sydney, NSW.

² Northern Clinical School, University of Sydney, Sydney, NSW.

Nicola.Creighton@cancerinstitute.org.au

Competing interests: No relevant disclosures.
doi: 10.5694/mja14.00975

- 1 Wouters MW, Gooiker GA, van Sandick JW, Tollenaar RA. The volume–outcome relation in the surgical treatment of esophageal cancer: a systematic review and meta-analysis. *Cancer* 2012; 118: 1754–1763.
- 2 Pieper D, Mathes T, Neugebauer E, Eikermann M. State of evidence on the relationship between high-volume hospitals and outcomes in surgery: a systematic review of systematic reviews. *J Am Coll Surg* 2013; 216: 1015–1025.
- 3 Australia and New Zealand Gastric and Oesophageal Surgery Association. ANZGOSA guidelines for hospitals and/or health services to assist in credentialing of surgeons performing oesophageal resection in Australia and New Zealand 2013. Adelaide: ANZGOSA, 2013. <http://www.anzgosa.org/pdf/guidelines-to-performing-oesophagea-resection.pdf> (accessed Jul 2014).
- 4 Padbury RTA. Survival from pancreatic cancer: it's not just about the surgical mortality [editorial]. *Med J Aust* 2012; 196: 491–492. □

Evaluating the costs and benefits of using combination therapies

TO THE EDITOR: Clarke and Avery make an important point highlighting the substantial costs arising from a loophole allowing multibrand fixed-dose combinations (FDCs) listed on the Pharmaceutical Benefits Scheme (PBS) to retain price premiums long after premiums on their individual components have eroded.¹

However, we should not throw the baby out with the bathwater. FDCs could reduce costs for the PBS if used instead of more expensive therapies (eg, the Kanyini-GAP polypill trial²) and reduce patient

costs with fewer copayments. Also, FDCs have most benefit when non-adherent patients are “switched up” from partial treatment on single pills to fuller treatment with FDC-based regimens.^{2,3} These benefits were not the focus of Clarke and Avery’s article. Their focus on the costs of combinations versus the separate components is understandable; current regulatory and reimbursement paradigms focus on “straight substitution” (ie, switching people stabilised on specific medications to an FDC containing the same drugs at equivalent doses). However, FDCs are best considered as treatment options to overcome treatment inertia and poor adherence. Defining the eligible population as those already taking recommended drugs at specific doses effectively defines a group with the *least* to benefit from combination therapy.

Currently, the PBS spends around \$3 billion annually on lipid-lowering, blood pressure-lowering, antidiabetic and antiplatelet therapies — yet most Australians at high risk of cardiovascular disease do not receive all recommended medications over the long term.⁴ Appropriate use of combination therapy in chronic disease management potentially contributes to a more sustainable and equitable health system. However, the role of FDCs in closing treatment gaps in a cost-effective way has far to travel from our current situation.

Anthony Rodgers Professor of Global Health

Tracey-Lea Laba Research Fellow, Health Economics

Stephen Jan Senior Health Economist

The George Institute for Global Health, Sydney, NSW.

tlaba@georgeinstitute.org.au

Competing interests: The George Institute for Global Health secured an exclusive global licence in December 2012 for the poly-pills used in recent trials, following a decision by Dr Reddy’s Laboratories Ltd not to proceed with taking the products to market because of existing regulatory requirements.

doi: 10.5694/mja14.00675

- 1 Clarke PM, Avery AB. Evaluating the costs and benefits of using combination therapies. *Med J Aust* 2014; 200: 518-520.
- 2 Patel A, Cass A, Peiris D, et al. A pragmatic randomized trial of a poly-pill-based strategy to improve use of indicated preventive treatments in people at high cardiovascular disease risk. *Eur J Prev Cardiol* 2014; Mar 27 [Epub ahead of print].
- 3 Thom S, Poulter N, Field J, et al. Effects of a fixed-dose combination strategy on adherence and risk factors in patients with

or at high risk of cardiovascular disease: the UMPIRE randomized clinical trial. *JAMA* 2013; 310: 918-929.

- 4 Webster RJ, Heeley EL, Peiris DP, et al. Gaps in cardiovascular disease risk management in Australian general practice. *Med J Aust* 2009; 191: 324-329. □

The cost-effectiveness of primary care for Indigenous Australians with diabetes living in remote Northern Territory communities

TO THE EDITOR: Thomas and colleagues¹ attribute differences in hospital use among patients with diabetes to differences in use of primary care at remote state-run primary care clinics. We believe this conclusion to be unsupported by the evidence presented.

First, the study fails to accurately measure primary care use. Although study participants were restricted to those with remote residences, this ignores the mobility of such a population, and their subsequent access to primary care services not captured by the remote clinics’ primary care information system. Additionally, there are 26 Aboriginal community controlled health services, many of which have primary or satellite locations in remote areas.

Second, there are other known associations, unadjusted for in this study, that may explain differing hospitalisation rates in low and high users of the remote clinics. These include social acceptability,² socioeconomic,³ behaviour of health care providers and patients⁴ and access to health services. It is known that access to hospital drives hospital use.⁵ Differences in social norms between the two groups may drive different choices in site of health care delivery. Stigmatised health problems of a social or spiritual nature may affect a patient’s willingness to see health workers from within their community.

Without adjusting for these variables, differences in hospital use cannot be simply attributed to differences in the use of (some) primary care services. Without such attribution, no realistic



Defining the eligible population as those already taking recommended drugs at specific doses effectively defines a group with the *least* to benefit from combination therapy



Rodgers et al



cost-effectiveness analysis can be undertaken. This study should not be used to guide policy or planning.

David J Whyatt Research Associate Professor

Alistair Vickery Professor

Matthew Yap Research Assistant

School of Primary, Aboriginal and Rural Health Care, University of Western Australia, Perth, WA.

david.whyatt@uwa.edu.au

Acknowledgement: David Whyatt and Matthew Yap's positions at the University of Western Australia are funded by the Department of Health, Western Australia.

Competing interests: No relevant disclosures.

doi: 10.5694/mja14.00843

- 1 Thomas SL, Zhao Y, Guthridge SL, Wakerman J. The cost-effectiveness of primary care for Indigenous Australians with diabetes living in remote Northern Territory communities. *Med J Aust* 2014; 200: 658-662.
- 2 Levesque JF, Harris MF, Russell G. Patient-centred access to health care: conceptualising access at the interface of health systems and populations. *Int J Equity Health* 2013; 12: 18.
- 3 Rosano A, Loha CA, Falvo R, et al. The relationship between avoidable hospitalization and accessibility to primary care: a systematic review. *Eur J Public Health* 2013; 23: 356-360.
- 4 Kane RL. Finding the right level of posthospital care: "We didn't realize there was any other option for him". *JAMA* 2011; 305: 284-293.
- 5 Lin G, Allan DE, Penning MJ. Examining distance effects on hospitalizations using GIS: a study of three health regions in British Columbia, Canada. *Environ Plan A* 2002; 34: 2037-2053. doi: 10.1068/a3528.

IN REPLY: I acknowledged that data from community controlled health services were not included in our study.¹ The high mobility of this population is well recognised and is most common between

related communities.² The bulk of primary care services in remote Northern Territory communities are provided through the 54 government clinics, and we have captured the movement between those services in our dataset. The lesser degree of movement between government and community controlled clinics³ would not have substantively affected our results or our conclusions.

We used propensity score matching⁴ to improve comparability of the low, medium or high primary care use groups. As shown in the Box, we adjusted for key confounders (age, sex, number of chronic diseases) and found no statistically significant differences between groups. All communities in this study were geographically classified as remote or very remote⁵ and were similar in terms of their SEIFA (Socio-Economic Indexes for Areas) score.⁶ Other factors raised by Whyatt and colleagues, including social acceptability and the behaviour of health care providers, may well have significant influence on decisions to use primary care services and, in part, explain the poorer outcomes among the low primary care users.

We are confident that the evidence generated by this study is of use to policymakers and



Modernising the formulary ... would allow patients access to earlier treatment where emergency pharmacy services are restricted



Gill



health planners in their efforts to strengthen primary care in remote areas of Australia.

Susan L Thomas Senior Research Fellow

Centre for Remote Health, Flinders University and Charles Darwin University, Alice Springs, NT.

s.thomas@flinders.edu.au

Competing interests: No relevant disclosures.

doi: 10.5694/mja14.01013

- 1 Thomas SL, Zhao Y, Guthridge SL, Wakerman J. The cost-effectiveness of primary care for Indigenous Australians with diabetes living in remote Northern Territory communities. *Med J Aust* 2014; 200: 658-662.
- 2 Zhao Y, Condon JR, Li SQ, et al. Indigenous patient migration patterns after hospitalisation and the potential impacts on mortality estimates. *Australas J Reg Stud* 2013; 19: 321-341.
- 3 Zhao Y, Paice J, Murtagh D, et al. Population estimates for Indigenous health zones in the Northern Territory. Darwin: Department of Health and Community Services, 2007. http://digitallibrary.health.nt.gov.au/dspace/bitstream/10137/64/1/Health_Zones_Internals.pdf (accessed Aug 2014).
- 4 Rubin DB. Estimating causal effects from large data sets using propensity scores. *Ann Intern Med* 1997; 127 (8 Pt 2): 757-763.
- 5 Australian Bureau of Statistics. Australian statistical geography standard: volume 5 – remoteness structure, July 2011. Canberra: ABS, 2013. (ABS Cat. No. 1270.0.55.005.) <http://www.abs.gov.au/ausstats/abs@nsf/mf/1270.0.55.005> (accessed Aug 2014).
- 6 Australian Bureau of Statistics. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2011. Canberra: ABS, 2013. (ABS Cat. No. 2033.0.55.001.) <http://www.abs.gov.au/ausstats/abs@nsf/mf/2033.0.55.001> (accessed Aug 2014).

The hidden issues of anticipatory medications in community palliative care

TO THE EDITOR: I support reform for providing anticipatory palliative care medication under Pharmaceutical Benefits Scheme (PBS) arrangements, as identified by O'Connor et al.¹ There is merit in providing emergency and anticipatory medications under PBS prescriber bag supply arrangements to community-based palliative care.

There has been a decline in the provision of after-hours care and home visits by general practitioners.² Many GPs, fearful of assault by drug-dependent individuals, no longer carry potentially dangerous injectable medications such as narcotics and benzodiazepines.³ As it is illegal for unused medications to be returned to pharmacies for resupply, supplies

Proportion of patients in each primary care use group before and after propensity score matching, by age, sex and number of chronic diseases

	Low-use (n = 6987)		Medium-use (n = 5926)		High-use (n = 1271)		χ^2 significance (P)	
	Before	After	Before	After	Before	After	Before	After
Age (years)								
15-29	48%	20%	47%	19%	20%	20%	523.3*	2.04†
30-39	24%	23%	25%	25%	23%	23%		
40-49	14%	26%	15%	27%	27%	27%		
50-59	7%	18%	8%	17%	17%	17%		
60-69	7%	13%	5%	12%	13%	13%		
Sex								
Male	50%	35%	39%	35%	33%	33%	523.3*	2.07†
Female	50%	65%	61%	65%	67%	67%		
Number of chronic diseases								
0	63%	10%	43%	10%	10%	10%	2004.8*	11.12†
1	17%	16%	22%	16%	16%	16%		
2	9%	22%	17%	23%	23%	23%		
3	7%	28%	13%	30%	31%	31%		
4	4%	20%	5%	17%	16%	16%		
5	1%	4%	1%	5%	5%	5%		

*P < 0.01. †P > 0.05.

currently provided to terminally ill patients by GPs, to assist community palliative care teams, often remain unused on the patient's death and must be destroyed.

Prescriber bag supplies allow medical and nurse practitioners to provide essential drugs to patients at public expense.⁴ However, the current formulary mostly includes injectable drugs and few oral medications.⁵ Modernising the formulary to include small quantities of oral antibiotics, antipsychotics and benzodiazepines would allow patients access to earlier treatment where emergency pharmacy services are restricted. Currently supplied emergency medications have an excessive pack size and often a short therapeutic life. By using smaller pack sizes, the pharmaceutical industry could help to reduce wastage and the risk of diversion.

By limiting the costs to taxpayers and patients of unused PBS medication while increasing community access, these measures are more likely to deliver savings and appeal to GPs and the community.

Gerard F Gill Alfred Felton Chair in General Practice in Rural and Regional Victoria

Deakin University, Geelong, VIC.

gerard.gill@deakin.edu.au

Competing interests: Margaret O'Connor is my sister-in-law. She retired in June 2014 and gains no benefit from my endorsement of her letter to the Journal.¹

doi: 10.5694/mja14.00805

- 1 O'Connor M, Gatens S, Le BH. The hidden issues of anticipatory medications in community palliative care [letter]. *Med J Aust* 2014; 200: 578-580.
- 2 Joyce C, Piterman L. Trends in GP home visits. *Aust Fam Physician* 2008; 37: 1039-1042.
- 3 Magin PJ, Adams J, Sibbritt DW, et al. Effects of occupational violence on Australian general practitioners' provision of home visits and after-hours care: a cross-sectional study. *J Eval Clin Pract* 2008; 14: 336-342.
- 4 Department of Health. Schedule of Pharmaceutical Benefits. Effective 1 June 2014 – 30 June 2014. Canberra: Commonwealth of Australia, 2014. <http://www.pbs.gov.au/publication/schedule/2014/06/2014-06-01-general-schedule.pdf> (accessed Aug 2014).
- 5 Holmes JL. Time to restock the doctor's bag. *Aust Prescr* 2012; 35: 7-9. <http://www.australianprescriber.com/magazine/35/1/7/9> (accessed Aug 2014). □

Correction

Data errors: In "Hepatitis B notifications in a vaccinated cohort of Aboriginal people in the Kimberley region" in the 15 September 2014 issue of the Journal (*Med J Aust* 2014; 201: 343-346), there were data errors in the flowchart in Box 1 on page 344. The text in the second box down on the right-hand side of the chart should read:

- 17 children were identified on the hepatitis B vaccination program records as having known chronic infections and therefore were deliberately not vaccinated
- 79 had no file on the Kimberley Population Health Unit electronic record system and were unlikely to be Kimberley residents
- 87 were not on the hepatitis B vaccination program records, and had no recorded hepatitis B vaccines on the electronic record system, and were therefore assumed to have been missed by the adolescent vaccination campaign. □