Full Title: The conundrum of quality in colonoscopy

Running Head: Quality in Colonoscopy

Authors:

Timothy J Chittleborough, MBBS FRACS^{1,2,3,4}, Andrew Luck MBBS FRACS⁵, Alex Boussioutas, MBBS, PhD, FRACP^{2,4}, Satish Warriar MS FRACS^{1,2,3} and Alexander G Heriot, MD MBA FRACS^{1,2,3}

1. Division of Cancer Surgery, 2. Division of Cancer Research, Peter MacCallum Cancer Centre, Melbourne, Victoria, 3000, Australia

3. Department of Surgery, 4. Sir Peter MacCallum Department of Oncology, The University of Melbourne, Parkville, Victoria, 3010, Australia

5. Department of Colorectal Surgery, Lyell McEwin Hospital, Adelaide, South Australia, Australia

Corresponding Author: Timothy J Chittleborough,

timothy.chittleborough@petermac.org, +61 3 8559 7091

Peter MacCallum Cancer Centre, 305 Grattan St, Melbourne, VIC, 3000

The corresponding author is the recipient of RACS Francis & Phyllis Thornell Shore Memorial Trust for Medical Research for 2017.

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: [10.1111/ans.14265](https://doi.org/10.1111/ans.14265)

This paper is not based on a previous communication to a society or meeting.

Conflicts of Interest and Source of Funding: None declared

Article Word Count: 1037

Key Words: colonoscopy, surveillance, quality, recertification

Whilst there is always interest in evaluating innovative new techniques, there is sometimes apathy for evaluating and improving the quality of standard surgical practice. The introduction of nationwide surgical mortality audits was an advance towards improved quality in surgery through reflection, accountability and continuing improvement.¹ Credentialing of clinicians has *not* been shown to have an impact on quality of care or patient outcomes, and there is controversy over the use of threshold credentials, in which a minimum number of procedures are required for a clinician to obtain a particular scope of clinical practice.² Similarly, the implementation of minimum procedure requirements for revalidation poses ethical considerations given our geographically disperse population. Rural surgeons conduct a broad casemix of procedural work in smaller centres, reducing the inconvenience and cost associated with patients needing to travel to larger centres. Restricting service provision to rural Australia by excluding clinicians based on procedure frequency will threaten the sustainability of rural health services and negatively impact outcomes for rural patients.

An increasing focus on the quality of colonoscopic examination worldwide has lead to closer scrutiny of colonoscopy performance through audit of quality markers such as caecal intubation rate and adenoma detection rate (ADR).³ The focus on quality has formalised into recertification programs in colonoscopy, such as in the UK where clinicians undertaking bowel cancer screening colonoscopies are required to undertake periodic recertification.⁴ These measures have resulted in excellent colonoscopy quality, with a mean ADR of 46.5% and a mean unadjusted caecal intubation rate of 95.2% in colonoscopies performed as part of the UK bowel cancer screening program.⁵ While not yet mandatory, an

Australian recertification program for colonoscopy has been established, providing triennial recertification based on logbook requirements that includes a minimum number of colonoscopies (150), adequate caecal intubation rate (95%) and adenoma detection rate (25%).⁶ The National Bowel Cancer Screening Program(NBCSP) had prompted a renewed focus on quality in colonoscopy in Australia and it is interesting to note that the NBCSP is funding the voluntary recertification program, leading to speculation that mandatory certification may be required to undertake NBCSP colonoscopies in the future.

Questioning the need for recertification in colonoscopy prompted us to carry out a survey to investigate proceduralists' knowledge of quality indicators in colonoscopy and assess attitudes towards recertification. An online questionnaire was distributed to Australian members of the Colorectal Surgical Society of Australia and New Zealand (CSSANZ) and Gastroenterological Society of Australia (GESA), yielding responses mainly from colorectal surgeons. (68%)

Self-awareness of performance in colonoscopy was good. Ninety-four percent of respondents were aware of their caecal intubation rate, and almost all (92%) reported an intubation rate above 95%. Similarly, 72% were aware of their adenoma detection rate, and of these 79% quoted their ADR being above 20%. Conversely, endoscopy unit based audit of outcomes was reported by only 51% of respondents. Among respondents that reported unit-based audit, outcomes recorded commonly were complications such as perforation rate (76%), with fewer units recording quality indicators such as caecal intubation rate (62%) and adenoma detection rate (57%).

The majority of clinicians did not object to mandatory recertification; only 18% disagreed to the prospect of periodic re-certification in order to optimise quality in colonoscopy. Furthermore, respondents indicated that caecal intubation rate (81%), Adenoma detection rate (53%) and logbook submission (51%), would be the preferred criteria for recertification, which are all components of the existing voluntary recertification program.

In stratifying the risk of future adenoma and carcinoma risk the endoscopic surveillance interval is important. Guidelines, such as the Cancer Council Australia (CCA) guidelines⁷ exist to guide interval choice, however adherence has previously been reported to be inadequate.⁸ The Medicare Benefits Schedule (MBS) Review Taskforce has recommended that MBS items for colonoscopy be altered to describe the appropriate indication for colonoscopy and surveillance interval.⁹ In our survey, all clinicians were aware of the CCA guidelines, with 93% following the guidelines “Always” or “Most of the time”. Furthermore, the far majority feel that these surveillance intervals are appropriate, suggesting that such a change to the MBS would not impact the majority of clinicians.

Although a survey has obvious limitations in assessing quality indices, this study has shown that overall knowledge regarding quality indicators and individual performance in colonoscopy is high. Clinicians are not opposed to recertification to maintain high quality of colonoscopic examination. There appear to be inconsistent auditing of colonoscopy performance by endoscopy units, raising the possibility that improved local auditing could negate the need for a future mandated recertification program. Given the apparent high

standard of colonoscopy demonstrated in this study, it could be postulated that changes to the MBS and the implementation of mandatory recertification may only result in incremental gains in quality indicators. Prior to the introduction of a mandatory recertification program in colonoscopy, it is necessary to further consider the impact to low volume proceduralists, including those servicing rural areas.

The Authors acknowledge the support of CSSANZ and GESA in distributing the survey to members of their societies.

References:

-
- [1] Raju RS, Guy GS, Majid AJ, Babidge W, Maddern GJ. The Australian and New Zealand Audit of Surgical Mortality-birth, deaths, and carriage. *Ann Surg*. 2015; 261:304-8.
- [2] Gurgacz SL, Smith JA, Truskett PG, Babidge WJ, Maddern GJ. Credentialing of surgeons: a systematic review across a number of jurisdictions. *ANZ J Surg*. 2012; 82:492-8.
- [3] Kaminski MF, Regula J, Kraszewska E, et al. Quality Indicators for Colonoscopy and the Risk of Interval Cancer. *N Engl J Med*. 2010; 362:1795-803.
- [4] NHS Bowel Cancer Screening Group and Joint Advisory Group on GI Endoscopy. Accreditation of screening colonoscopists Royal College of Physicians, 2013.
- [5] Lee TJ, Rutter MD, Blanks RG, et al. Colonoscopy quality measures: experience from the NHS Bowel Cancer Screening Programme. *Gut*. 2012; 61:1050-7.
- [6] Gastroenterological Society of Australia. *About the GESA Colonoscopy Recertification Program* Edition., cited 5/9/16 2016]. Available from: <http://recert.gesa.org.au/about.php>
- [7] Cancer Council Australia Colonoscopy Surveillance Working Party. Clinical Practice Guidelines for Surveillance Colonoscopy – in adenoma follow-up; following curative resection of colorectal cancer; and for cancer surveillance in inflammatory bowel disease. Cancer Council Australia, 2011.
- [8] Yusoff IF, Hoffman NE, Ee HC. Colonoscopic surveillance after surgery for colorectal cancer. *ANZ J Surg*. 2003; 73:3-7.
- [9] Australian Government Department of Health Medicare Benefits Schedule Review Taskforce. Report from the Gastroenterology Clinical Committee. 2016.

Minerva Access is the Institutional Repository of The University of Melbourne

Author/s:

Chittleborough, TJ;Luck, A;Boussioutas, A;Warrier, S;Heriot, AG

Title:

The conundrum of quality in colonoscopy

Date:

2018-04-01

Citation:

Chittleborough, T. J., Luck, A., Boussioutas, A., Warrier, S. & Heriot, A. G. (2018). The conundrum of quality in colonoscopy. ANZ JOURNAL OF SURGERY, 88 (4), pp.263-264. <https://doi.org/10.1111/ans.14265>.

Persistent Link:

<http://hdl.handle.net/11343/283785>