

Adequacy of publicly funded colonoscopy services in New Zealand

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Colonoscopy for the investigation of patients with colorectal disease has had a chequered history in New Zealand. In the 1980s, as endoscopic technology became more advanced and equipment more widely available, it was increasingly accepted as the investigation of choice for symptomatic patients, often through open access clinics. Colonoscopy rates and quality of clinical practice varied widely around the country.¹ These issues were subsequently improved by the introduction of training and credentialing standards.² However, the issue of adequacy of resourcing to meet the need for satisfactory colonoscopy training and service has never been comprehensively addressed by the Ministry of Health and has been left to individual DHBs.

In order to improve clinical referral for the relatively scarce and costly resource of colonoscopy, national clinical guidelines for its use in the diagnosis of symptomatic cases and for those at increased risk of colorectal cancer (CRC) were introduced in 2011.³ The guidelines were listed as clinical practice recommendations for patients presenting with symptoms of CRC and were specified to only apply to patients referred by GPs and non-gastrointestinal specialists.³ A fundamental feature of clinical guidelines is that they should be evidence-based indicators of medical practice to assist clinical decision-making. They are not intended to be management protocols that definitively restrict medical practice.⁴ Because of the specific knowledge about an individual patient, the clinical judgement of the treating clinician must be considered capable of expanding the criteria for active investigation.

The need for colonoscopy continued to grow; reasons for this included: an increasing and ageing population;

increasing frequency of some serious colorectal diseases; advances in endoscopic techniques for prevention, diagnosis, treatment and follow-up of colorectal pathologies, particularly CRC; establishment of a familial CRC register; and raised public concerns and expectations.^{5,6} Colonoscopy is a common investigation for the diagnosis and management of patients with symptoms suggestive of a range of colorectal diseases; it is not solely for the detection of CRC. Other colorectal pathology can be fatal if untreated. Unfortunately, many basic necessary resources, such as the upgrading of colonoscopy facilities, a suitably trained workforce and necessary support services did not keep pace with increasing need.

In response to the deficiency, and to avoid costly outsourcing to the private sector, most DHBs started using the national clinical guidelines as necessary requirements, or access protocols, (with and without local modifications) for colonoscopy from all sources, including those from physicians and surgeons with specialist gastrointestinal training and interests.⁷ This development raises three concerns: (i) the clinical guidelines were largely based on overseas data about the positive predictive value for the detection of CRC; they did not take account of the likelihood of the presence of other serious colorectal diseases: (ii) in spite of their widespread use, their effectiveness has only been quantified in terms of DHB compliance rates with clinical categories of urgency of need; they have not been formally assessed in relation to clinical or economic outcomes: (iii) local modification can produce inequitable regional variability in access to colonoscopy and the impact on CRC mortality from restricted access has not been sufficiently evaluated. Therefore, the use of the clinical guidelines to restrict

access to colonoscopy was applied inappropriately and not adequately monitored for efficacy or harm.

Given the very high incidence, morbidity and mortality from CRC in New Zealand, the introduction of a national screening programme was essential and should have been pursued much sooner.⁸ Since the first reports on the feasibility of a population-based screening programme in 1998, concerns were raised repeatedly about the adequacy of available resources and the need to increase endoscopy training in anticipation of the added clinical workload required for an effective programme.^{9–12} The pilot study of the screening programme started in 2012, with plenty of time to train sufficient staff for the national programme that was bound to eventuate in a country with such a high incidence of CRC. This did not happen. Significantly, the pilot programme had to undergo considerable modification before transforming into a slow regional roll out of a national programme among the country's DHBs from 2017 onwards. Calculated compromises included reducing the sensitivity of the screening test and narrowing the age range for whom the test would be made available^{13,14} and an incapacity to include proposals for screening Māori and Pasifika 50–59 years of age.¹⁵ Furthermore, the screening programme is provided with a separate funding stream, which should ensure that its introduction does not interfere with the provision of other services, including surgery for the added load of cancers needing operations. Unfortunately, this is not being achieved and the considerable temptation to use screening resources to subsidise usual clinical care has become too evident.

Emerging evidence increasingly indicates that the predicted conflicts¹⁶ have occurred in some regions between access to colonoscopy for symptomatic cases versus access for screening purposes, as happened for example at the Southern DHB.^{7,17} Underlying causes for this conflict might include failure of the DHB 'readiness assessment', adjudged by the Ministry of Health,¹⁸ to adequately predict the requirements of the complex additional burden of screening, insufficient funding for screening to prevent interference with other clinical care, or failure

of the Ministry of Health to implement the guidelines of the Health Quality and Safety Commission.¹⁶

Efforts have been applied by the New Zealand Society of Gastroenterology, among others, to attract the additional resources needed to expand workforce numbers, and in advocating for more financial and infra-structural support from government. Detailed workforce assessments using recognised international standards have shown there is longstanding under-resourcing of gastroenterology services nationally, with inadequate numbers of gastroenterologists, inequitably spread across the country.^{19,20} The result has been that some DHBs have traded-off colonoscopy availability for the investigation of symptomatic cases with the colonoscopy needs of population screening. This is harmful as both are essential, and they should not be required to compete in this way. To this situation has been added the effects of the Covid-19 pandemic, which has resulted in further rationing of endoscopy services. Recent management guidance from the Cancer Control Agency of the Ministry of Health has recommended that access to colonoscopy for the assessment of screen-positive patients should take precedence over access for many symptomatic patients except those graded in the urgent category.²¹ The recommendation was argued on the basis that colonoscopies for screening would detect more CRCs than in most patients with symptoms.

Prioritising colonoscopy for screen-positive patients rests on the assumption, which could only apply to those 60–74 years of age, that other patients with gastrointestinal diseases will receive greater access to colonoscopy than is warranted. However, screening should only be provided if sufficient resources are available to ensure it does not impinge on the assessment of symptomatic patients. It is unethical to do otherwise. The prevalence of CRC in symptomatic patients investigated by colonoscopy can be expected to be: at least 4%,²² higher in men than women,²³ higher in those undergoing surveillance,²⁴ and to vary considerably by region and age.

The incidence of cancer in women 60–64 years of age in New Zealand is about 127 per

100,000. The prevalence of CRC found by FIT screening is about twice the incidence rate. For a screening programme with a high FIT cut-off and 0.5% of participants positive on screening, the proportion of women 60–64 years of age referred for colonoscopy for whom CRC is found can be expected to be about $(2 \times 127) / (0.05 \times 100,000) = 0.051$, or 5.1%. This is slightly higher than in Newcastle, Australia,²⁵ and similar to the prevalence of CRC in symptomatic patients. In New Zealand, the risk of CRC for a man 75–79 years of age is about four times higher than that of a 60–64-year-old woman. Paradoxically, in a screening programme aiming to reduce CRC mortality, prioritisation of screen-positive women 60–64 years of age for colonoscopy over 75–79-year-old men with symptoms may result in sufficient delay in diagnosis to increase CRC mortality in the older age group. To avoid competition of resources with usual clinical care, the appropriate management is to limit the invitations to screening, thus controlling the demand for colonoscopy from screening, and to ensure adequate resources for the equitable availability of colonoscopy.

In summary, the workforce and other resources for colonoscopy have not kept

up with need and many DHBs are inappropriately using clinical guidelines to restrict colonoscopy referrals from all sources. Resolution requires a rapid increase in the number of physicians, surgeons and nurses with an interest in gastroenterology, training in the practice of colonoscopy, as well as an increase in available endoscopy facilities and follow-up resources. The national bowel cancer screening programme has been insufficiently planned or resourced to meet the expected demand. As a result, competition for colonoscopy access between symptomatic and screening cases is occurring in some DHBs. Virtually all the problems with colonoscopy access are ultimately due to inadequate planning, training and resourcing. Despite more than 10 years knowing the considerable increase in gastroenterology workforce and resources required for screening, work to increase the staff resources has been too little, too late, and largely left to DHBs. The medical profession must call for sufficient funding to be put in place to effectively support both the symptomatic investigation and population CRC screening functions of colonoscopy services.

Competing interests:

Nil.

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