Is bowel cancer screening important for Māori?

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In this edition of the Journal, Dickson et al report lower prevalence of colorectal adenomas in Māori compared with NZ European patients undergoing colonoscopy at Middlemore Hospital in Auckland, New Zealand (NZ).\(^1\)

Compared with European patients, Māori were approximately half as likely to be diagnosed with colorectal adenomas (commonly regarded as a risk factor or precursor to colorectal cancer). While this study is based on a symptomatic population and may therefore be subject to selection bias, the findings are consistent with the lower incidence of colorectal cancer observed in the Māori population overall.\(^2\)–\(^4\)

Following the recent announcement of a pilot bowel cancer screening programme (to be introduced in late 2011), the study by Dickson et al is a salient reminder of the need to consider cancer control measures in terms of their impact on both total cancer burden and inequalities in cancer.

Given their lower incidence of colorectal cancer, it may be tempting to conclude that bowel cancer is less of a problem for Māori than for non-Māori in New Zealand. A closer look at the evidence shows this is not the case: bowel cancer screening is just as important for Māori as for non-Māori New Zealanders.

Putting aside the background of consistently large health inequalities between Māori and non-Māori, the increasing contribution of cancer to these inequalities\(^5\) and the fact that the national screening programmes for breast and cervical cancer have yet to achieve equitable coverage for Māori women, there are other important reasons for considering that a bowel cancer screening programme must focus on delivering screening in a way that is acceptable to Māori.

First, while Māori currently have lower incidence of colorectal cancer compared with NZ Europeans, their rates are increasing more rapidly. The recent CancerTrends study indicates that rates of colorectal cancer are converging for Māori and non-Māori population groups.\(^2\) Dickson et al note the potential for under-reporting to contribute to reports of lower cancer incidence in Māori\(^1\) —a problem which previously led to substantial underestimates of mortality among Māori New Zealanders.\(^6\) By linking census and Cancer Registry data and using the former to categorise self-identified ethnicity, CancerTrends overcomes problems of incomplete ethnicity recording at the time of diagnosis to generate robust time-trend information on cancer incidence by ethnicity from 1981 to 2004.

Results from the CancerTrends study confirm around 40% lower incidence of colorectal cancer among Māori over the time studied, with pooled standardised rate ratios (SRR) of 0.61 (95% CI 0.56–0.66) for Māori compared with NZ Europeans.\(^2\) The ethnic gap in colorectal cancer incidence appears to have narrowed during the study period, however, with the Māori / European SRR among men increasing from
0.48 in 1981 to 0.73 in 2001 (p for trend=0.04). A similar but less marked trend is also seen among women.2

Second, as Dickson et al note, Māori and NZ Europeans have similar mortality from colorectal cancer despite Māori having lower incidence.3 4 7 In other words, colorectal cancer imposes a similar mortality burden on both Māori and European New Zealanders.

As with incidence trends, the pattern of high colorectal cancer mortality in Māori is a relatively recent phenomenon. In the early 1980s, colorectal cancer mortality rates were lower for Māori compared with NZ Europeans by 39% and 62% in men and women respectively. Since then, colorectal cancer mortality rates have generally increased among Māori while remaining stable or declining among NZ Europeans.2

Third, as Dickson et al note there is considerable evidence that survival among Māori with colorectal cancer is lower than that for non-Māori.3,4,8,9 Part of this survival disparity may relate to colorectal cancer being diagnosed at a later stage among Māori,3 9 but other factors—including health care—are also implicated. A detailed study by Hill et al (2010) concluded that the most important factors contributing to poorer survival in Māori were patient comorbidity and markers of health care access.8

Based on a cohort of Māori and non-Māori patients diagnosed with colon cancer between 1996 and 2003, the study found Māori patients were around 30% more likely to die from their cancer compared with non-Māori with patient comorbidity and markers of health care access each accounting for around a third of this survival disparity.

It can be tempting to attribute differences in cancer incidence and survival to inherited characteristics, but there is currently little evidence that they play an important role for ethnic differences in colorectal cancer.10 The rapid increase over the last 25 years in colorectal cancer incidence among Māori is supportive of a change in exposure to environmental factors.7 Environmental factors—including health services—are also likely to have a far greater influence on survival, and are also amenable to change.

The study by Hill et al found no evidence of more aggressive tumours in Māori compared with non-Māori patients, but did find evidence of poorer access and quality of care, contributing to poorer survival.8 11 Evidence from the USA shows a similar picture in relation to poorer colorectal cancer outcomes in African American compared with White patients.12 These findings highlight the need to consider the differential effectiveness of health service provision for patients from different ethnic groups. While health services have the potential to reduce the burden of cancer, they also have the potential to increase cancer inequalities.

Planning is now well underway for a pilot bowel cancer screening programme. There are several reasons why it will be important to pay attention to the effectiveness of this programme for Māori as well as European New Zealanders. First, while Māori currently have lower rates of colorectal adenoma and cancer these are increasing rapidly and are likely to converge with European rates in the near future. Second, early detection of colorectal cancer offers particular benefit to Māori patients, who are currently more likely to have their cancer diagnosed at a later stage.3 And third, introduction of a screening programme has the potential to either reduce or increase
ethnic disparities in colorectal cancer survival depending on the accompanying investment in management of colon cancer.  

Māori patients currently receive less access to high-quality colorectal cancer care compared with non-Māori patients. The introduction of a screening programme is likely to place greater pressure on diagnostic and treatment services (such as colonoscopy); without accompanying investment in these services, existing vulnerabilities in service provision are likely to be exacerbated with the risk that the access gap for Māori becomes even more pronounced.

On the other hand, if screening is accompanied by renewed investment in cancer services, better auditing of cancer care pathways and careful attention to cancer outcomes, there is potential for it to strengthen the pathway of colorectal cancer care. Such strengthening will offer particular benefit to those populations currently underserved—not only Māori, but all individuals and population groups who do yet receive benchmark treatment and care.

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