A large, light blue, stylized graphic of a human figure in a dynamic, forward-leaning pose, positioned on the left side of the slide. The figure is composed of thick, rounded shapes for the head, torso, and limbs.

Bowel cancer screening campaign: Precision Public Health ?

Terry Slevin
CEO

Public Health Association of Australia
@terryslevin



Public Health Association
AUSTRALIA

Optimising the expansion of the National Bowel Cancer Screening Program.

[Cenin DR](#)¹, [St John DJ](#)², [Ledger MJ](#)³, [Slevin T](#)⁴, [Lansdorp-Vogelaar I](#)⁵.

+ Author information

Abstract

OBJECTIVES: To estimate the impact of various expansion scenarios of the National Bowel Cancer Screening Program (NBCSP) on the number of bowel cancer deaths prevented; and to investigate the impact of the expansion scenarios on colonoscopy demand.

DESIGN: MISCAN-Colon, a well established, validated computer simulation model for bowel cancer screening, was adjusted to reflect the Australian situation. In July 2013, we simulated the effects of screening over a 50-year period, starting in 2006. The model parameters included rates of participation in screening and follow-up, rates of identification of cancerous and precancerous lesions, bowel cancer incidence, mortality and the outcomes of the NBCSP. Five implementation scenarios, based on biennial screening using an immunochemical faecal occult blood test, were developed and modelled. A sensitivity analysis that increased screening participation to 60% was also conducted.

PARTICIPANTS: Australian residents aged 50 to 74 years.

MAIN OUTCOME MEASURES: Comparison of the impact of five implementation scenarios on the number of bowel cancer deaths prevented and demand for colonoscopy.

RESULTS: MISCAN-Colon calculated that in its current state, the NBCSP should prevent 35 169 bowel cancer deaths in the coming 40 years. Accelerating the expansion of the program to achieve biennial screening by 2020 would prevent more than 70 000 deaths. If complete implementation of biennial screening results in a corresponding increase in participation to 60%, the number of deaths prevented will increase across all scenarios.

CONCLUSIONS: The findings strongly support the need for rapid implementation of the NBCSP. Compared with the current situation, achieving biennial screening by 2020 could result in 100% more bowel cancer deaths (about 35 000) being prevented in the coming 40 years.

Comment in

[A bowel cancer screening plan at last.](#) [Med J Aust. 2014]



Table A1-2: Main natural history assumptions in the MISCAN-Colon model

| Model parameter | Value | Source |
|---|--|---|
| Distribution of risk for adenomas over the general population | Gamma distributed, mean 1, variance gender-dependent | Fit to multiplicity distribution of adenomas in autopsy studies: ²² Age 60: 1 or more 20% 2 or more 6% 3 or more 2% Age 90: 1 or more 37% 2 or more 17% 3 or more 9% |
| Adenoma incidence per year | Age, gender and race dependent varying from 0-26% per year | Fit to adenoma prevalence in autopsy studies ⁹⁻¹⁸ |
| Probability that a new adenoma is progressive | Dependent on age at onset, varying from 0-31% | Fit to adenoma prevalence in autopsy studies ⁹⁻¹⁸ Cancer incidence taken from AIHW ²³ |
| Regression of adenomas | No significant regression of adenomas | Expert opinion |
| Mean duration of development of progressive adenomas to preclinical cancer | 14 years | Estimated from randomized controlled trial of once-only sigmoidoscopy ^{6*} |
| Mean duration of preclinical cancer | 6.7 years | Estimated from large randomised controlled FOBT trials ⁵ |
| Per cent of non-progressive adenomas that stay 6-9mm | 25% | Fit to size distribution of adenomas in colonoscopy study (corrected for lack of sensitivity) ¹⁹ |
| Per cent of non-progressive adenoma that become 10mm or larger | 75% | Fit to size distribution of adenomas in colonoscopy study (corrected for lack of sensitivity) ¹⁹ |
| Per cent of cancers that develops from 6-9mm adenoma and from 10+mm adenoma | 30% of cancer develops from 6-9 mm, 70% from 10+mm | Expert opinion |
| Localisation distribution of adenomas and cancer | | Taken from Australian literature ²⁰ |
| 5-year survival after clinical diagnosis of CRC | | Taken from Australian literature ²¹ |

* To be estimated from randomized controlled endoscopy trials, in progress.

2020 plan for bowel cancer screening

1 Cancer Council Australia, *Cancer Council Australia Pre-Budget Submission*, 2012-13.



The Coalition's Policy to Support Australia's Health System

The Government's proposed roll-out of biennial bowel cancer screening won't be completed until 2034. The Cancer Council has warned that waiting until 2034 could result in thousands of avoidable Australian deaths.

A Coalition government will act on the best available evidence and bring forward the full implementation of biennial bowel cancer screening by 14 years. On available estimates, this will save around 875 lives each year.





THE HON PETER DUTTON MP
Minister for Health
Minister for Sport

MEDIA RELEASE

13 May 2014

MORE BOWEL CANCER SCREENING WILL SAVE LIVES

The Abbott Government is honouring our election commitment to fast track the full implementation of biennial screening in the National Bowel Cancer Screening Programme for all Australians aged 50 to 74.

By 2020, Australians between 50 and 74 years of age will be able to get free screening for bowel cancer every two years.

Around 80 Australians die each week from bowel cancer.

The good news is that, if detected early, it can be treated and cured. Screening is most effective when it's done at regular intervals.

A bowel cancer screening plan at last

Paul B Grogan and Ian N Olver

Med J Aust 2014; 201 (8): 435-436. || doi: 10.5694/mja14.01089


Published online: 20 October 2014

ARTICLE

AUTHORS

REFERENCES

RESPONSES

 DOWNLOAD



More lives will be saved by fully implementing the National Bowel Cancer Screening Program in 2020

The 2014–15 federal Budget included an announcement of \$95.9 million for the long-awaited full implementation of the National Bowel Cancer Screening Program (NBCSP) by 1 July 2020.¹ From that date, all Australians aged 50 to 74 years will finally be invited to screen for bowel cancer every 2 years with a faecal occult blood test (FOBT).

The announcement included a plan to incrementally expand the program, currently offered to people aged 50, 55, 60 and 65 years. The program will include 70-year-olds (through a previous funding commitment in 2012) and 74-year-olds from July 2015; people turning 64 and 72 years from 2016; and those aged 54, 58 and 68 years from 2017. The four remaining age groups (52, 56, 62 and 66 years) will be included from 2018 to 2020.¹



**THE HON. CATHERINE KING
SHADOW MINISTER FOR HEALTH AND MEDICARE
MEMBER FOR BALLARAT**

**JULIAN HILL MP
DEPUTY CHAIR, JOINT COMMITTEE OF
PUBLIC ACCOUNTS AND AUDIT
MEMBER FOR BRUCE**

**BUNGLED \$220 MILLION PRIVATISATION OF NATIONAL CANCER SCREENING
REGISTER SLAMMED BY GOVERNMENT CONTROLLED COMMITTEE**

In a scathing report, the powerful Joint Standing Committee of Public Accounts and Audit (JCPAA) slammed the Government's failure to deliver the lifesaving National Cancer Screening Register for cervical and bowel cancer, and recommends that the Government consider terminating the bungled \$220 million contract with Telstra Health.

The Liberal Government's disastrous handling of their own privatisation of the critical cancer screening register has cost taxpayers millions, and risked the lives of Australian women due to delays with the new cervical cancer screening program replacing the old pap-smear test.

The failings are so serious that the unanimous report recommended:

"The Committee recommends...whether, in the circumstances of such serious under performance by Telstra Health, it may be in the Commonwealth's interest to terminate the contract and pursue other options..."

Recommendation 11, 4.29, Report 472,

Precision Public Health ?

You tell me