Colorectal Screening

NZ Bowel Screening Pilot

Bowel Screening
Check Yourself Out
WHO Screening criteria

- Impt Health condition
- Identifiable Latent or early stage
- Understand natural hx of disease
- Suitable effective test for screening exists
- Test should be safe and acceptable to screened population
- Accepted Rx (early Rx leads to better outcomes)

- Agreed policy as to whom to treat
- Facilities for Dx and Rx should be available
- Cost of case finding should be viable
- Case finding should be a continual process not once and for all.

Colorectal Cancer

- Good understanding of disease process and of early stages
- Polyp to carcinoma sequence
- Long Lag time from early to late stages
- Stage 1 approx 94% 5 year survival
- Stage 4 approx 8% 5 year survival
- Well established treatment protocols
The problem in New Zealand

- 2966 new registrations for c/r cancer 2010
- 1501 male, 1465 female
- 44.8/100000 age standardised
- 49.3/100000 male, 40.9/100000 female
2.9 Age-standardised* incidence rates of colorectal cancer (ICD-O2 C18-C21) per 100,000 by country and sex, 1998-2002

2.10 Age-standardised* mortality rates for colorectal cancer per 100,000 by country and sex, 2002-2005

* standardised to the World Standard Population
NZ Colorectal Cancer Registrations per age and sex 2010

rates colorectal cancer registrations per 100,000 pop 2010

number registered

age

Total:
Male:
Female:
Late presentation
Colorectal screening

- gFOBT
- iFOBT
- Flexible sigmoidoscopy
- CT colonography
- Colonoscopy
- (Faecal biomarkers)
gFOBT

- Guaiac FOBT
- Gum of Guaiacum Officinale (tree)
- Oxidation rxn with hydrogen peroxide leads to colour changes
- catalysed by Haem
- Not human specific
- Hemocult II
gFOBT

- Reduction in C/R cancer mortality by about 15% (11 to 18%)
- Low sensitivity for cancer if used once (around 13 to 38%)
  - Improved by multiple samples and biennial screening (~50%)
- Low uptake around 40 to 50%
  - Multiple samples
  - Dietary restrictions
Immuno-FOBT (iFOBT)

- Antibody to Globin
- Human specific
- No dietary restrictions
- Globin is broken down in small bowel
- Can measure absolute levels therefore can preset the threshold for +ve test
- Can automate the testing
Flexible Sigmoidoscopy

- At least as sensitive as iFOBT for ca and more so for advanced adenoma
- Approx 70% cancers are stage 1 or 2
- Doesn’t look at the right colon (approx 30-40% all malignancies)
- Low participation in true pop based trials (around 30%)
- Needs very large endoscopic capacity
Other technology

- Colonoscopy
- CT colonography
- Capsule endoscopy
- Molecular tests (stool)
  - DNA methylation
  - Genetic markers
  - RNA
- Blood
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- Pilot using iFOB (OC-sensor, Eiken)
- Competitive RFP won by WDHB with support of ADHB and CMDHB
- WDHB residents
- 50 – 74 years of age
- 135,000 eligible population
- Commence October 17th 2011
- Two 2-year screening cycles
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Points of difference
- Register
- Invitation based
- Priority populations
- Men
- Coordination Centre

Invitation
- Primary care endorsement
- Batching
- Opting off

Waitemata District Health Board - Making a Healthy Difference
NZ bowel Screening Pilot

Project Structure
- Steering Group
- Project Management Group
- Working Groups (Primary Care, Colonoscopy, IT, Quality, Awareness Raising)
- Workshops – Equity, Men
- Ministry of Health

Colonoscopy
- Waitakere Hospital
- Dedicated and ring-fenced room
- Histology – LabPlus A
- Referral (surgery/oncology) 5 year recall/surveillance
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- Invitation sent out on birthday
- Test kit – 4 weeks later
- Results to GP/BSP (positive) – within 3 days
- Referrals for colonoscopy – within 10 days
- Colonoscopy – within 50 days
- Results (histology) to BSP within 10 days
- FSA if cancer within 10 days
- MDM within 20 days

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Check Yourself Out
The assumption game

- Prediction of colonoscopy requirement is an imprecise science
- 66,000 per year to be screened in wdhb
- Assume 60% uptake
- Assume that at 75ng/ml we have 6% positivity rate
- Assume 100% uptake colo
- 2376 colos per year
- 950 will have pathology (40% of all scopes)
Colorectal Cancer at WDHB

- 270 new cases in public in 2009/2010
- Increasing by approx 2 to 3% per annum
- 2006 undertook large colorectal service project
- Patient journey was looked at in detail and timelines measured
- Leading laparoscopic centre

- 5 surgeons
- 1.5 fte colorectal nurse specialists
- One fellow (CSSANZ)
- Dedicated ERAS research program
- All active members of gastro unit
- Excellent relationships between smos in gastro and surgery
Bowel Screening

Check Yourself Out