Do rural cancer patients present later than those in the city?

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Acknowledgements: Prof. J. Emery, V. Gray, D. Howting

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BACKGROUND

Cancer is a leading causes of death in Australia

In 2009 cancer accounted for 29.8% of all registered deaths (Australian Bureau Statistics - http://www.abs.gov.au/)

Most common cancers in Australia (excluding non-melanoma skin cancer) are prostate, colorectal, breast, melanoma and lung cancer. (http://www.cancer.org.au/Newsmedia/factsfigures.htm)

Mortality statistics from Australian Bureau of statistics 2009
• Colorectal cancer 7th leading cause
• Prostate 11th leading cause
• Breast 12th leading cause
Growing evidence that delays in cancer presentation result in poorer outcomes!

Influence of delay on survival in patients with breast cancer: a systematic review (Lancet 1999)
Time to diagnosis and mortality in colorectal cancer: a cohort study in primary care
(British Journal of cancer 2011)
Well established rural cancer patients in Australia have worse outcomes

Rural patients with cancer have 20-30% greater mortality than metropolitan patients

Rural Patients are less likely to receive

- Radiotherapy or hormonal treatment in breast cancer
- Radical surgery for colorectal cancer
- Radical prostatectomy

Poorer outcomes for Aboriginal patients

Inequalities in rural health care: differences in surgical intervention between metropolitan and rural WA. (2005)
Colorectal cancer surgical care and survival: do private health insurance, socioeconomic and local status make a difference? (2005)
Prostate cancer: socioeconomic, geographic and private health insurance effects on care and survival. (2005)
Assumption that Differences in rural and metropolitan outcomes are thought to be related to access and treatment options.
It is unknown how much of this is due to late presentation

Or how much time to diagnosis matters?
Part of a larger study….
- Improving Rural Cancer Outcomes Project -

- Breast, Colorectal, Lung, Prostate
- Great Southern, Mid-west, Wheatbelt, Goldfields and South-west regions of WA and Perth Metropolitan Area
- Over 5 years
- 850 patient for each cohort
- Funded by Cancer Council, NH&MRC & Department of Health WA
Measuring components of delay to diagnosis and treatment...

MODEL OF PATIENT PATHWAYS TO TREATMENT
FM Walter, A Webster, S Scott, J Emery in press Journal of Health Service Research and Policy
Adapted from original by Richard Neil
Surveys looking at Appraisal Interval + Help-seeking interval
Looking back...

1. Did you have any symptoms that you feel were due to your cancer before you were diagnosed? 

   ..............................................................

   Please continue with question 2.

2. What was the first symptom that made you think something might be wrong? ..............................................................

   Please complete A then B or C below

Section 2

If asked, please give an exact date if you can. Otherwise give your best estimate. (for example: approximately how long ago, the month or the season). You may wish to refer to your diary or calendar if you have it with you.

Did you have any of the following?

1. Decrease in appetite

   Did you have this? ..............................................

   Yes

   No

   Please go to next question

   Please complete A then B or C below

   A. When did you first notice this? ......................

      Exact date dd/mm/yyyy OR Estimate

   B. When did you first tell your GP or nurse? ..........

      Exact date dd/mm/yyyy OR Estimate

   OR

   C. Put a cross here if you didn’t tell your GP or nurse ..............................................................

2. Unexplained weight loss

   Did you have this? ..............................................

   Yes

   No

   Please go to next question

   Please complete A then B or C below

   A. When did you first notice this? ......................

      Exact date dd/mm/yyyy OR Estimate

   B. When did you first tell your GP or nurse? ..........

      Exact date dd/mm/yyyy OR Estimate

   OR

   C. Put a cross here if you didn’t tell your GP or nurse ..............................................................

3. Problems with your waterworks

   (For example: difficulty passing, going more often, getting up more at

   Yes
Recruitment Process

- Nurse Cancer co-ordinators
- Multi-discipline Meetings
- Consultants
# Number of Patients recruited

<table>
<thead>
<tr>
<th>Number of Patients</th>
<th>Total</th>
<th>Breast Cancer</th>
<th>Colorectal Cancer</th>
<th>Lung Cancer</th>
<th>Prostate Cancer</th>
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<tbody>
<tr>
<td>Rural</td>
<td>65</td>
<td>24</td>
<td>14</td>
<td>15</td>
<td>12</td>
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<tr>
<td>Metropolitan</td>
<td>15</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>2</td>
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</table>
Symptom Appraisal Interval - Rural Data -

Screen detected results removed and 3 breast and 2 prostate outliers removed
Symptom Appraisal Interval
- Rural Data -
<table>
<thead>
<tr>
<th>Symptom Appraisal Delay</th>
<th>Valid N</th>
<th>Median (Days)</th>
<th>Min. (Days)</th>
<th>Max. (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>24</td>
<td>6</td>
<td>0</td>
<td>1461</td>
</tr>
<tr>
<td>Colorectal</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>92</td>
</tr>
<tr>
<td>Lung</td>
<td>15</td>
<td>24</td>
<td>0</td>
<td>12524</td>
</tr>
<tr>
<td>Prostate</td>
<td>12</td>
<td>3</td>
<td>0</td>
<td>550</td>
</tr>
</tbody>
</table>
Symptom Appraisal Interval
- Metropolitan Data -
Comparison of Symptom Appraisal Interval
- Rural -

- Metropolitan -
<table>
<thead>
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<th>Median (Days)</th>
<th>Min. (Days)</th>
<th>Max. (Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>4</td>
<td>53</td>
<td>4</td>
<td>365</td>
</tr>
<tr>
<td>Colorectal</td>
<td>5</td>
<td>151</td>
<td>0</td>
<td>233</td>
</tr>
<tr>
<td>Lung</td>
<td>4</td>
<td>244</td>
<td>0</td>
<td>692</td>
</tr>
<tr>
<td>Prostate</td>
<td>2</td>
<td>83</td>
<td>0</td>
<td>167</td>
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</tbody>
</table>
Symptom appraisal and Help Seeking - Themes in Pilot Study Interviews -

Competing priorities
• Significant life events
• Holidays
• Seasonal demands
• Work or family demands

Alternative explanations
• Work pressure
• Age “getting older”
• Physical and mental stress
• Tired
• Previous experience of similar symptoms – previous benign cause
• Co-morbidities
Symptom appraisal and Help Seeking - Themes in Pilot Study Interviews

Fear
- Fear of mammogram
- Fear of rectal exam

Stoic
- Hero bloke…don’t go to the doctor
- Downplay of severity
- Adjust lifestyle to suit symptoms

Beliefs about cancer
- Assumption that there needs to be pain to react, severe pain as a prompt

Temporal nature
- Intermittent symptoms

http://www.clipartoday.com/clipart/cartoons/cartoon/cartoon492.html
Colorectal Patient #8
“Being a real hero bloke, you know, you don’t go to the doctor about that [bowel symptoms]. I’m not going there ... going where they wanna go [rectal exam], nup.”

Colorectal Patient #31
“Well, I had a bit of diarrhoea... And it just didn't want to seem to go away... really I’d had it for about three months before I went and seen the doctor... And, yeah ... and then I just um ... I just put up with it and just um ... thought oh it'll go away soon.... then I just got sick of it. [Laughs]. Yeah, because I had to - I finished up wearing um ... [incontinence] pads and things you know.”
Future

- Understand if there are differences in symptom appraisal analysis between rural and metropolitan patients.

- Compare how components of delay differ between each of the four cancers studied (breast, colorectal, lung and prostate).

- More questionnaires to be collected.

- Interventions to improve symptom appraisal analysis time.
INTERVENTION

- Community symptom awareness campaign in parts of regional Western Australia -

How's the ute? How's the Mrs? How's the prostate?

Be a man. Check your prostate

Signs of prostate cancer to look out for:
- A need to urinate frequently, especially at night
- Difficulty starting urination or holding back urine
- Weak or interrupted flow of urine
- Painful or burning urination
- Difficulty in having an erection
- Painful ejaculation
- Blood in urine or semen
- Frequent pain or stiffness in the lower back, hips or upper thighs

If you have any of these symptoms, you should make an appointment to see your GP. Most of these symptoms won't be due to prostate cancer but it's better to be on the safe side.

Contact your nurse, doctor or local health worker for an appointment.
Call the Cancer Helpline 13 11 20 for more information
For each of the four cancers:

Listen to the wife...

... visit your doctor if you don’t feel right

Signs of bowel cancer to look out for:
- bleeding from the back passage without a reason
- a persistent change in your bowel habit towards looser or more frequent bowel motions
- bloating, swelling, pain or an unexplained lump in the tummy
- tiredness or looking pale

If you have any of these symptoms for more than 4 or so weeks, you should make an appointment to see your GP. Most of these symptoms won’t be due to bowel cancer but it’s better to be on the safe side. If they are signs of bowel cancer, the earlier they are picked up, the greater the chance of successful treatment.

Contact your nurse, doctor or local health worker for an appointment.
Call the Cancer Helpline 13 11 20 for more information
QUESTIONS
References (Slide 2)
- Delays in cancer presentation affects outcome -

• Influence of delay on survival in patients with breast cancer: a systematic review (Lancet 1999)
• Time to diagnosis and mortality in colorectal cancer: a cohort study in primary care (British Journal of Cancer 2011)
• The influence on survival of delay in the presentation and treatment of symptomatic breast cancer (1999 British Journal of Cancer)
• Retrospective study of reasons for improved survival in patients with breast cancer in East Anglia: earlier diagnosis or better treatment (BMJ 1997)
• Trends in breast cancer incidence, survival, and mortality (Lancet 2000)
• A short diagnostic delay is more important for rectal than for colonic cancer (European Journal of Surgery 1997)
• Delays in managing lung cancer (Thorax 2004)
• Impact on delay on diagnosis and treatment of primary lung cancer.
• Radical prostatectomy versus watchful waiting in early prostate cancer (New England Journal of medicine 2002)
• Urban – rural differences in prostate cancer outcomes in Australia: What has changed? (MJA 2011)
References (Slide 4)

- Poorer outcomes in rural compared with metropolitan patients -

1) The influence of socio-economic and location disadvantage on survival after a diagnosis of lung or breast cancer in Western Australia (2004)
4) Colorectal cancer surgical care and survival: do private health insurance, socioeconomic and local status make a difference? (2005)
5) Prostate cancer: socioeconomic, geographic and private health insurance effects on care and survival. (2005)
7) Inequalities in rural health care: differences in surgical intervention between metropolitan and rural Western Australia. (2005)
8) Mapping Rural and Regional Oncology Services in Australia (2006) – clinical oncology society of Australia
Other results

◆ Getting to see a General Practitioner is not generally a problem
◆ Christmas effect
◆ Other masking symptoms / false reassurance
◆ Indigenous, communication breakdowns
◆ Lung and breast have good access to investigation and treatment and short waiting lists
◆ Colorectal and prostate have long delays to see specialist, get prostate biopsy and receive treatment
Other interventions

- GP education around diagnostic and referral pathways
- Aims to make GP more aware of referral pathways and new referral pathways
- Streamlining diagnosis – “fast track diagnosis”
- One stop prostate clinic
3. Fatigue or tiredness that is unusual for you

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<tr>
<th>Yes</th>
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<td>No</td>
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Please complete A then B or C below

A. When did you first notice this?.............

- Exact date dd/mm/yyyy
- Estimate

B. When did you first tell your GP or nurse?.............

- Exact date dd/mm/yyyy
- Estimate

**OR**

C. Put a cross here if you didn't tell your GP or nurse.............

**Please go to next question**

4. Feeling different 'in yourself' from usual

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<th>Yes</th>
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<tbody>
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<td>No</td>
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Please complete A then B or C below

A. When did you first notice this?.............

- Exact date dd/mm/yyyy
- Estimate

B. When did you first tell your GP or nurse?.............

- Exact date dd/mm/yyyy
- Estimate

**OR**

C. Put a cross here if you didn't tell your GP or nurse.............

**Please go to next question**

---

**Please describe the symptom here and complete A then B or C below**

**A. When did you first notice this?**

- Exact date dd/mm/yyyy
- Estimate

**B. When did you first tell your GP or nurse?**

- Exact date dd/mm/yyyy
- Estimate

**OR**

**C. Put a cross here if you didn't tell your GP or nurse.**

**If you had another symptom you feel is relevant, please write it below.**

**Please describe the symptom here and complete A then B or C below**

**A. When did you first notice this?**

- Exact date dd/mm/yyyy
- Estimate

**B. When did you first tell your GP or nurse?**

- Exact date dd/mm/yyyy
- Estimate

**OR**

**C. Put a cross here if you didn't tell your GP or nurse.**

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**Thank You!**

This is the end of the questionnaire.

Please give your questionnaire to your Cancer Nurse Coordinator, who will ensure that it is given to the research team.

OR

You can place your questionnaire in the reply paid envelope and post it to the Project Coordinator, Vicky Gray. (M431, UWA, 35 Stirling Highway Crawley WA 6009)

Your contribution to helping to improve cancer services in Western Australia is gratefully appreciated.