The newsworthiness of cancer in Australian television news

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ABSTRACT

Objectives: To test the hypothesis that television news coverage of different cancers reflects their incidence and burden, and to examine the journalistic approaches used in reporting cancer.

Design and setting: Content analysis of all news, current affairs and infotainment reports on cancer broadcast on five free-to-air television channels in Sydney, New South Wales, 2 May 2005 – 6 January 2008.

Main outcome measures: Number of items on specific cancers, relationship with burden of that cancer (disability-adjusted life-years [DALYs]), and category of "story lead" used for the item.

Results: Cancer was the fifth most reported health issue, with 1319 items; 25 different cancers received news coverage. The most reported cancers were breast cancer (42.5% of all items on specific cancers), melanoma (11.9%) and cervical cancer (11.6%). Some cancers were significantly over-reported in relation to their DALYs (eg, cervical cancer was over-reported by a factor of 10.2 compared with the number of reports predicted on the basis of DALYs) while others were under-reported, including colorectal, lung and pancreatic cancers. The most common story leads used in cancer reports were treatment (32% of items) and celebrities with cancer (21%), particularly breast cancer.

Conclusions: The current predominance of reports on breast and cervical cancer and on young women with cancer may be distorting public and political perceptions of the burden of cancer. The success of advocates in raising the news profile of breast cancer may hold lessons for agencies wishing to improve the newsworthiness of other cancers.

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The news media are important sources of public information on health[1] and have a significant influence on health policy[2] and public perceptions of key issues.[3] Media reportage of cancer can disseminate important primary and secondary prevention messages, such as the importance of cancer screening,[4] and can also provide important information to those living with cancer about their condition.

However, media coverage has been criticised for creating gender stereotypes,[5] overrepresenting celebrity diagnoses and claims about scientific "breakthroughs",[6] and presenting messages on screening that are inconsistent with current recommended practice.[7] It may also contribute to an inaccurate sense of cancer risk among the public.[8,9] Television is Australia's most popular mass communication medium.[10] Our previous studies have found television news coverage of cancer to be melodramatic,[11] often inaccurate,[12] and sometimes at odds with scientific consensus.[13]

This study investigated how cancer is presented on Australian television and explored the nature of newsworthiness of cancer. Specifically, we assessed whether the volume of news coverage given to specific cancers reflected their rankings according to incidence, mortality and disability-adjusted life-years (DALYs). We also assessed the dominant journalistic approaches used in reporting cancer.

METHODS

We recorded all news, current affairs and infotainment items broadcast on the main five free-to-air television channels in Sydney, New South Wales, during the hours 06:00–09:00 and 17:00–24:00 between 2 May 2005 and 6 January 2008. Recordings were reviewed for health-related news items, which were classified into 21 broad categories according to topic (eg, health care, medical and surgical advances, nutrition and obesity, tobacco, injury, and cancer). Tobacco-related news items were also reviewed to identify those specifically mentioning cancer. Reports that mentioned cancer were classified according to the specific type. Those about unspecified cancers and childhood cancers were excluded.

For each cancer, we also obtained data on incidence, mortality and DALYs (sum of the years of life lost due to premature mortality in the population and the equivalent "healthy" years lost due to disability for incident cases) for 2003.[14] We tested the null hypothesis that the number of television reports on specific cancers was proportional to the number of DALYs for those cancers, using the χ^2 goodness-of-fit test. We also assessed the correlation between the rank orders of each cancer by number of television items and by DALYs, incidence and mortality using the Spearman rank correlation statistic.

For each cancer, we calculated the predicted number of reports, assuming the number of reports, was proportional to the number of DALYs due to that cancer. We also calculated the over/under-reporting factor ([observed –predicted number of reports]/predicted number).

To explore the journalistic approaches used in reporting cancer, we assessed all items on the 15 cancers that ranked highest in incidence and the 15 that ranked highest in mortality in 2006[15] (a total of 17 cancers because of overlap between the groups). Each item was categorised by one of us (NJ or RM) based on the "story lead" — the first "anchoring" line of the story, structured to alert the audience to the primary focus of the news item[16] (Box 1). For items that discussed more than one cancer-related issue, the dominant focus was determined. A random sample of 30 items was screened by four other coders, and their assignments were compared with those of one of us (NJ) to assess intercoder reliability.

RESULTS

Of 14 023 health-related television items identified over the 31-month study period, 1319 (9.4%) were on cancer. Cancer ranked fifth in frequency among health-related topics, after injury, health care, nutrition and obesity, and medical and surgical advances. Of the 1319 cancer items, 233 on unspecified cancer and 23 on childhood cancer were excluded, leaving 1063 items for analysis.

Number of television reports

The numbers of television items, DALYs, and deaths, and the incidences for specific cancers are shown in Box 2. Twenty-five cancer types were reported at least once, with two-thirds of all coverage focusing on three types: breast cancer (42.5%), melanoma (11.9%) and cervical cancer (11.6%). There were sig-

1 Categorisation of "story leads" for television items on cancer

Treatment: breakthroughs, treatments or drug trials; human interest stories of those treated (eg, survivors and families); cancer care in hospitals and other facilities; research initiatives and associated funding announcements; and development of vaccines.

Celebrity diagnoses: celebrity cancer sufferers, their families and treatment.

Causes, risk factors and prevention: causes and lifestyle-related cancer risk factors (eg, smoking, sun exposure and diet);campaigns urging modification of risk factors; and cancer clusters.

Awareness/fundraising: information campaigns aimed at primary prevention and fundraising events and programs.

Screening/early detection: secondary prevention, including government screening policy, and NGO and clinical promotion of screening; genetic testing; and scientific progress in identifying new testing methods.

Cancer incidence and mortality: reports from government agencies and NGOs.

Miscellaneous: unqualified and controversial doctors; awards for researchers; and health insurance issues.

NGO = non-government organisation. ◆

2 Ranking of cancers by burden, incidence and deaths,[14] and by television reports, May 2005 – January 2008

	DALYs		Incidence		Deaths		TV reports			Reporting
Cancer	No.	Rank	No.	Rank	No.	Rank	No.	Rank	Predicted*	factor†
Lung	88 904	1	8 734	5	7549	1	34 (3%)	8	195	–4.7
Colorectal	63 605	2	13 552	1	4871	2	43 (4%)	6	139	–2.2
Breast	60 654	3	12 359	2	2955	4	452 (43%)	1	133	+ 2.4
Prostate	36 547	4	11 899	3	3075	3	56 (5%)	4	80	–0.4
Pancreas	22 680	5	1 967	12	2063	5	5 (0.5%)	16‡	50	–9.0
Lymphoma	22 263	6	4 088	6	1690	6	25 (2%)	11	49	–1.0
Melanoma	20 236	7	9 290	4	1220	10	127 (12%)	2	44	+ 1.9
Leukaemia	19 956	8	2 336	10	1531	7	29 (18%)	9	44	–0.5
Brain	19 792	9	1 404	14	1211	11	49 (5%)	5	43	+ 0.1
Mouth, oro-pharynx, larynx	17 215	10	3 441	7	1006	12	18 (2%)	12	38	–1.1
Stomach	15 218	11	2 008	11	1288	8	6 (0.6%)	14‡	33	–4.5
Oesophagus	14 163	12	1 139	18	1222	9	1 (0.1%)	21‡	31	–30.0
Kidney	12 487	13	2 584	9	954	13	3 (0.3%)	19	27	–8.0
Ovary	11 994	14	1 355	15	869	15	39 (3.7%)	7	26	+ 0.5
Bladder	10 077	15	3 130	8	951	14	0	23‡	22	nc
Multiple myeloma	8 925	16	1 266	16	828	16	1 (0.1%)	21‡	20	–19.0
Bone, CT	5 879	17	731	20	308	20	5 (0.5%)	16‡	13	–1.6
Cervix	5 231	18	760	19	298	21	123 (12%)	3	11	+ 10.2
Liver§	4 716	19	368	24	397	18	6 (0.6%)	14‡	10	–0.6
Uterus	4 663	20	1 622	13	280	22	2 (0.2%)	20	10	–4.0
Gall bladder	3 549	21	626	22	316	19	0	23‡	8	nc
Thyroid	1 762	22	1 218	17	91	23	0	23‡	4	nc
Eye	952	23	244	25	39	24	7 (0.7%)	13	2	+ 2.5
Testicular	862	24	615	23	18	25	4 (0.4%)	18	2	+ 1.0
Mesothelioma	na¶	na¶	633	21	510	17	28 (17%)	10	na¶	na¶
Total							1063		1035	

DALY = disability-adjusted life-year. nc = not calculated (no TV reports). CT = connective tissue. na =not available.
* Predicted number of reports based on proportion of DALYs. † Over/under-reporting factor, calculated as (observed no. of reports –predicted no. of reports)/predicted no. of reports.
‡ Ranked equal with another cancer. § Excludes liver cancers related to hepatitis B and C.
¶ Mesothelioma was not reported in the source[14] from which DALYs were obtained. ◆

nificant correlations between the rank order of cancers by television reports and the rank order by DALYs ($\rho = 0.60$, $P = 0.002$), incidence ($\rho = 0.45$, $P = 0.02$) and mortality ($\rho = 0.48$, $P = 0.02$). However, the χ^2 goodness-of-fit test indicated that some cancers were significantly over-reported, while others were significantly under-reported ($\chi^2 = 2438$, $P < 0.001$).

The predicted number of television reports for each cancer based on DALY rankings is shown in Box 2. Breast cancer, melanoma and cervical cancer received more reports than predicted (Pearson residuals > 3). Cervical cancer was over-reported by a factor of 10.2, breast cancer by a factor of 2.4, and melanoma by a factor of 1.9. Eight cancer types were under-reported when compared with predicted values (Pearson residuals < –3), notably lung cancer (under-reported by a factor of 4.7) and colorectal cancer (under-reported by a factor of 2.2). Head and neck, bladder, kidney, uterine, pancreatic, stomach and thyroid cancers were among the 15 highest-ranking cancers in terms of incidence[15] and accounted for 15% of total diagnoses but only around 3% of all cancer-related television items.

Journalistic approaches

We found that categorisation of the story lead of items had high intercoder reliability ($\kappa = 0.87$). Story leads used for cancer reports are shown in Box 3. Most common was treatment (32% of reports), followed by celebrity diagnoses (21%), with almost three-quarters of the latter about breast cancer (including entertainer Kylie Minogue's diagnosis in 2005[4] and actor Belinda Emmett's death in 2006). Other examples of celebrity reports included the death of radio announcer Stan Zemanek (17 of 49 items on brain cancer) and the death of actor Christopher Reeve's wife Dana (over a quarter of lung cancer items). Clare Oliver, who campaigned for regulation of solaria in the weeks before her death from melanoma in 2007,[17] received substantial coverage (24 items) but was not included in the celebrity category as she was not previously known to the public.

There were 147 items on causes and risks, including items on three "cancer clusters":

diagnoses of breast cancer among employees at the Australian Broadcasting Corporation (ABC) offices in Brisbane (15 items) and at a Sydney hospital, 2001–2006[18] (five items); and brain tumours in staff members at a Melbourne university (five items).[19]

The awareness and fundraising category accounted for 15% of all items, including primary prevention campaigns run by government agencies and non-government organisations (NGOs) (mainly warnings about lifestyle-related risks for cancer, such as smoking, diet and sun exposure) and NGO fundraising. Breast cancer dominated this category (78/127 [61%]), with 37 of the 78 items focusing on broad awareness campaigns and NGO events, and 19 on the impact of celebrity diagnoses on public awareness. Breast cancer also accounted for three-quarters of the items in the screening category. Alcohol consumption as a breast cancer risk[20] featured in two items.

Cervical cancer is the 18th most common site-specific cancer and was therefore not included in the story-lead analysis, but was the third most featured cancer (123 items). Most items (71%) were on the papillomavirus vaccine, including an isolated case of schoolgirls who fainted when being vaccinated, and 11% were on screening developments.

3 Number of television reports by "story lead" for top-ranking cancers by incidence or mortality*

Cancer	Treatment	Celebrity diagnoses	Causes, risks	Awareness	Screening	Miscellaneous	Incidence, mortality	Total
Breast	111	124	60	78	60	11	8	452 (54%)
Melanoma	30	4	45	32	5	10	1	127 (15%)
Prostate	35	1	9	6	4	1	0	56 (7%)
Brain	15	19	12	2	0	1	0	49 (6%)
Colorectal	26	2	5	2	7	1	0	43 (5%)
Lung	11	6	9	1	2	2	3	34 (4%)
Leukaemia	18	0	4	5	0	1	1	29 (3%)
Lymphoma	10	7	1	1	0	3	3	25 (3%)
Stomach	1	5	0	0	0	0	0	6 (0.7%)
Liver	5	0	1	0	0	0	0	6 (0.7%)
Pancreas	0	4	0	0	1	0	0	5 (0.6%)
Kidney	2	0	1	0	0	0	0	3 (0.4%)
Head, neck	2	0	0	0	0	0	0	2 (0.2%)
Uterus	2	0	0	0	0	0	0	2 (0.2%)
Oesophagus	0	1	0	0	0	0	0	1 (0.1%)
Bladder	0	0	0	0	0	0	0	0
Thyroid	0	0	0	0	0	0	0	0
Total	268 (32%)	173 (21%)	147 (18%)	127 (15%)	79 (9%)	30 (4%)	16 (2%)	840

* Cancers were selected based on incidence or mortality, as reported by the Australian Institute of Health and Welfare in 2007.[15] ◆

DISCUSSION

We found an imbalance between the reporting of specific cancers and the burden of those cancers in Australia in terms of DALYs, incidence and mortality. The most common story leads were treatment, followed by celebrity diagnoses. These results have implications for public and political perceptions of cancer and for advocates who wish to raise the profile of particular cancers.

Although men have higher incidence and mortality from all non-sex-specific forms of cancer than women,[15] the public face of cancer in our study was overwhelmingly female. The four cancers that accounted for 70% of all cancer items were either female-specific (cervical, ovarian and breast cancer — with no items on male breast cancer) or were reported with a female focus (melanoma and the Clare Oliver story).

Colorectal cancer in particular, which kills more Australians than any other cancer and is the focus of a national screening campaign, was under-reported. We found that cervical cancer, despite having a DALY burden 11.2 times lower than that of colorectal cancer, was reported 2.9 times more. This corroborates findings of a United States study that participants were poorly informed about colorectal cancer partly because it was generally avoided in the media.[21] Further, screening for colorectal cancer was far less reported in our study than screening for prostate cancer, despite its more established benefits, also reflecting findings from the US.[22]

Lung cancer, which ranks first for both mortality and DALYs, was also under-reported, possibly reflecting a lack of public sympathy based on the predominant public discourse that smokers are culpable for their disease.[23] However, smoking causes many site-specific cancers other than lung cancer, such as oral, pharyngeal, pancreatic and bladder cancer, but was not identified as a risk factor in reports of any of these.

This imbalance in television reportage of cancer may be distorting political and community perceptions about which cancers are most prevalent and tractable, and thereby deserving of government and community support, research investment and individual vigilance. For example, breast cancer attracts unparalleled research funding from individuals and governments, while other cancers with higher DALYs struggle to gain a fraction of such support.[24] As a former Australian health minister commented, "it's not sexy to have testicular or prostate cancer, so you don't get a run".[25]

We speculate that the concentration on breast and cervical cancer and melanoma in the media makes it harder for stories on other cancers to be run. However, news organisations cannot be expected to work to quotas on particular topics. Rather, those who wish to improve the reporting of currently neglected cancers might benefit from studying the advocacy strategies used for cancers that are now seen as more newsworthy.

This analysis needs to confront issues intrinsic to particular cancers, such as social taboos about faeces in the case of colorectal cancer, and the difficulty of explaining the lymphatic system in the case of lymphoma. On the other hand, it is possible to take advantage of issues specific to particular cancers, such as cultural values about women's vulnerability and sexualisation of the breast for gynaecological and breast cancers, and about nurturing and protecting children for childhood cancers.

Themes in news coverage that emerged from our study are relevant for advocates trying to elevate news interest in currently neglected cancers. Celebrities appear central to Australian television news coverage of cancer, underlined by our finding that nearly a quarter of all cancer news stories focused on well known individuals with cancer. This was especially true for breast cancer, the most reported cancer on television news, mirroring trends in other Australian media.[26] Other examples include lung cancer, where reports on the death of the wife of actor Christopher Reeve made up a quarter of all lung cancer items, and pancreatic cancer, where the diagnosis of actor Patrick Swayze featured in seven items in the first week of March 2008 (after our study; unpublished data), compared with a total of four reports on pancreatic cancer during the study period.

However, broad coverage of cancer may not translate into the dissemination of comprehensive information. For example, the reporting of young celebrities with breast cancer has had varying diverse effects on public awareness, increasing mammogram bookings by unscreened women in the target 50–70-year age range,[4] but also by low-risk women aged 25–44 years.[27] The coverage has contributed little to public understanding that breast cancer is far more prevalent in older women, or of age-related policy on mammogram screening. Nor has it raised primary prevention issues such as lifestyle-associated risk factors, including alcohol consumption and obesity.[28]

The mainstream media appear unlikely to radically change the presentation of news to be less ratings-friendly but more educational. However, advocates may be able to increase the attention to cancers currently considered less newsworthy by utilising the ability of high-profile individuals to attract widespread news coverage. The challenge for advocacy groups and researchers is how best to take advantage of this opportunity.

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COMPETING INTERESTS

None identified.

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