

Cancer Survivorship among Adults in New Mexico, 2009-2010

Cancer survivors, defined as persons who have ever been diagnosed with cancer, often experience adverse health and economic conditions beyond their diagnosis of cancer¹. National reports indicate that the prevalence of these adverse conditions among survivors varies by state². The objective of this report is to 1) describe cancer survivors in New Mexico (NM) and 2) compare selected health status indicators between cancer survivors and adults who have never been diagnosed with cancer.

Methods

We used data from the 2009 and 2010 NM Behavioral Risk Factor Surveillance System (BRFSS), a telephone based health survey among non-institutionalized adults. Responses to the BRFSS are weighted to reflect the general adult population in NM. In 2009 and 2010, respondents were asked if they had ever been told by a health professional that they had cancer. If so, they were asked how old they were when first diagnosed with cancer, how many different types of cancer they had been diagnosed with, and what type of cancer they had been diagnosed with most recently. Responses to these questions and selected demographic variables were used to describe cancer survivors compared to all BRFSS respondents. Crude rates were used to produce a NM specific depiction of survivors compared to a proxy for the actual NM adult population. In 2010, survivors were also asked about their cancer treatment, insurance, clinical trial participation and cancer-related pain. We used combined 2009-2010 data (except where otherwise noted) to calculate crude and age-adjusted prevalence rates of health risk and protective factors, chronic conditions, and receipt of clinical preventive services for survivors compared to adults who had never been diagnosed with cancer. We used this approach to identify potential disparities specifically related to being a cancer survivor, while adjusting for the older age distribution of survivors. To be consistent with most survivorship literature, data for

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survivors of non-melanoma skin cancer was excluded except where otherwise noted.

Results

Demographics of cancer survivors compared to BRFSS respondents overall. We estimated that in 2010, 7% of NM adults (about 110,000) were cancer survivors [when including non-melanoma skin cancer, the estimate was 10% of adults (148,000)]³. In 2009-2010, a total of 2% of survivors were American Indian, less than 1% were Asian, 2% were Black, 24% were Hispanic, and 70% were White (Figure). By comparison, 8% of all NM BRFSS respondents were American Indian, 1% were Asian, 2% were Black, 39% were Hispanic, and 50% were White. Compared to respondents in general, survivors were disproportionately female and ages 65 years or older. We also found that although survivors were more likely to have graduated college than respondents overall, they were also more likely to be unemployed (unemployed, retired, or unable to work). After restricting the analysis to working age (18-64 years) respondents, survivors were still more likely to be unemployed than BRFSS respondents overall. The inclusion of non-melanoma skin cancer did not change these estimates, with the exception of increasing the percentage of White cancer survivors to 76%.

Cancer Diagnosis Description. Non-melanoma skin cancer was the most common type of cancer (26%) among survivors in 2009-2010. When non-melanoma skin cancer was excluded, the five most common types of cancer among survivors were: breast (22%), prostate (14%), melanoma (14%), cervical (12%), and colon (5%). 11% of survivors had been diagnosed with two different types of cancer and 3% of survivors had been diagnosed with three or more different types. More

than a third (37%) of survivors were diagnosed ≤ 5 years ago, 19% were diagnosed 6-10 years ago, and 44% of survivors were diagnosed more than 10 years ago. In 2010, among the 88% of cancer survivors who were not currently receiving treatment, 12% received the majority of their health care from a cancer specialist, whereas the remaining survivors received the majority of the healthcare from a family practice doctor (66%), an internist (9%), or other non-cancer specialist (13%). We found that 44% of survivors received a written summary of their cancer treatment and 70% received instructions about follow-up for routine cancer check-ups after their treatment was completed. Of the 70% who received instructions, about three fourths (74%) received instructions that were written or printed. Approximately one in ten (11%) survivors reported that their treatment had not been covered at all by health insurance, and 13% had been denied life or health insurance because of their cancer diagnosis. 8% of survivors participated in a clinical trial as a part of their treatment. Among survivors, 3% were currently experiencing inadequately controlled physical pain related to their cancer or cancer treatment.

Clinical preventive service and health status among cancer survivors. Age-adjusted prevalence of being up-to-date for mammography (mammography in the past 2 years among women aged ≥ 40 , excluding breast cancer survivors) and Pap smears (Pap smear in the past 3 years among women, excluding those who have

had cervical cancer or a hysterectomy) were similar between survivors and adults never diagnosed with cancer. But survivors were more likely to be up-to-date with colorectal cancer screening (fecal occult blood test in the past year or lower endoscopy in the past 10 years among adults aged 50-75, excluding colorectal cancer survivors) (Table). Survivors were more likely to be vaccinated for pneumococcal disease than adults never diagnosed with cancer, but influenza vaccination did not differ after adjustment. Age-adjusted rates of hypertension were similar between the two groups, but survivors were more likely to have high cholesterol than adults never diagnosed with cancer. After age-adjustment, survivors were more likely to have ever been diagnosed with diabetes, asthma, arthritis, anxiety or depression than adults never diagnosed with cancer. Additionally, cancer survivors were more likely to report being in fair or poor health (vs. excellent, very good, or good health) or being disabled. Survivors were as likely to have had cardiovascular disease or to be overweight or obese as adults who had never had cancer. Although crude smoking rates were similar, age-adjusted smoking rates for survivors were almost twice as high as for adults never diagnosed with cancer. Lack of exercise participation and problem drinking did not significantly differ between the two groups.

Discussion

Our results that NM survivors are predominantly older, White and women are similar to national data². These

Table. Crude and age-adjusted* prevalence of health indicators that significantly differ between cancer survivors and adults never diagnosed with cancer, New Mexico, 2009-2010

	Crude		Age-adjusted	
	Survivors	Never diagnosed	Survivors	Never diagnosed
Current smoker [†]	17%	18%	30%	18%
Colorectal cancer screening, 2010 only	71%	57%	69%	59%
Pneumococcal vaccine, 2010 only	78%	66%	74%	64%
High cholesterol, 2009 only	49%	32%	47%	29%
Diabetes	15%	8%	12%	8%
Asthma [†]	17%	14%	24%	14%
Arthritis, 2009 only	49%	23%	43%	24%
Disability, 2010 only	46%	23%	51%	24%
Fair/poor health	34%	16%	40%	16%
Anxiety [†] , 2010 only	20%	14%	40%	14%
Depression, 2010 only	25%	17%	39%	16%

*Age-adjusted to the standard 2000 U.S. population

[†] Differences are significant for age-adjusted rates only.

findings make sense given that age is a primary risk factor for most cancers, the White population in NM has an older age-distribution than other racial/ethnic groups, and several common cancers, such as breast cancer, have a higher age-adjusted incidence among White women⁴. Cancer treatment and management of subsequent conditions can affect survivorship. Therefore, our findings that a substantial percentage of NM survivors did not have health insurance coverage for any part of their treatment and that many survivors have been denied insurance because of their cancer are concerning. Although the Institute of Medicine recommended in a 2006 report that survivors should be provided with a summary of their treatment and written instructions for follow-up at treatment completion¹, we found that the majority of survivors have not received treatment summaries and that only about half have received written follow-up instructions.

Cancer survivors in NM are more than twice as likely to report fair/poor health or disability as adults never diagnosed with cancer. Survivors are also more likely to report having ever been diagnosed with depression, anxiety, and a broad range of chronic diseases than adults never diagnosed with cancer. The increased likelihood of diagnosed chronic conditions may be due in part to a greater interface with the healthcare system. However, there may be missed opportunities to provide survivors with important health services, such as tobacco cessation⁵. Despite a higher risk for future cancer through recurrence or a new primary site, survivors are almost twice as likely to smoke as adults never diagnosed with cancer.

This information can be used to emphasize the need for mental health, emotional support, and rehabilitation services for survivors. It can also be used to encourage health system enhancements for developing follow-up instructions and treatment summaries, and to expand proactive and targeted tobacco cessation services to cancer survivors.

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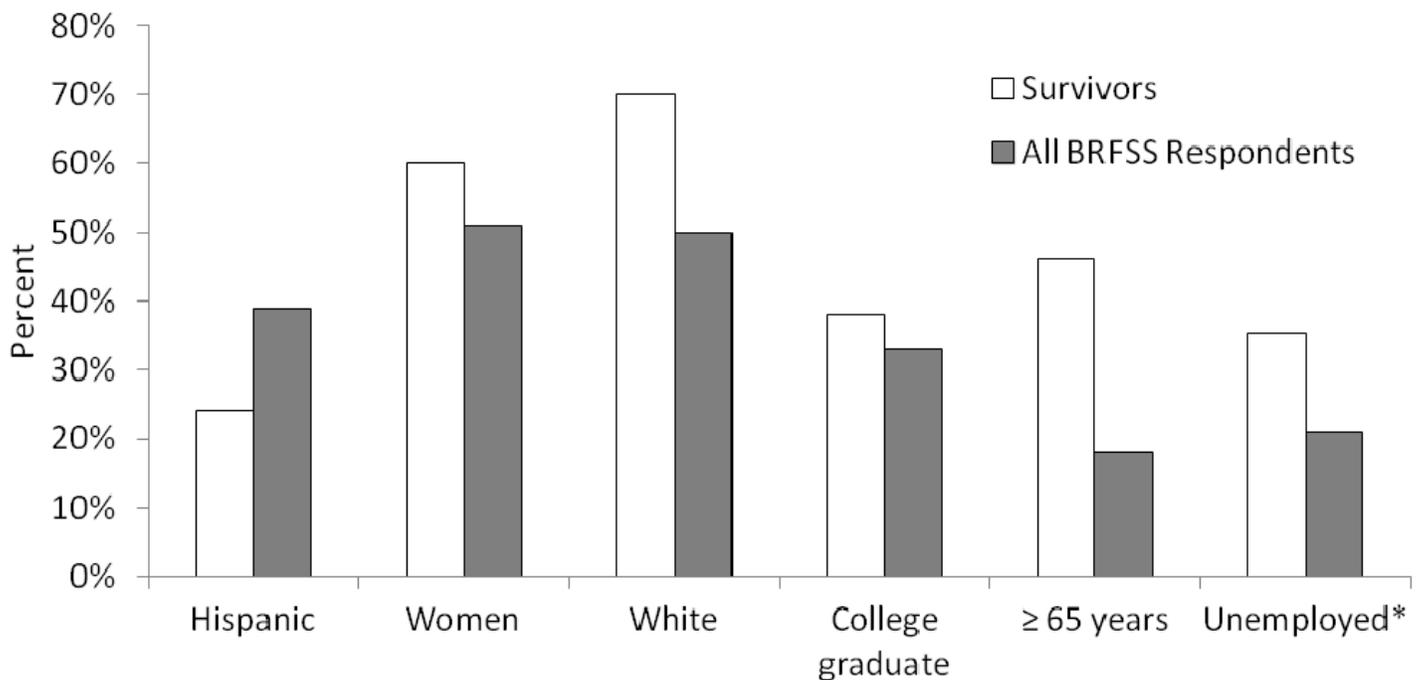
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Figure. Crude prevalence rates of demographics that significantly differ between cancer survivors and BRFSS respondents overall, New Mexico, 2009-2010



*Among working age (18-64 years), unemployed = unemployed, retired, unable to work