CHAPTER 7

Reducing Cancer-Related Health Disparities: What Nurses Can Do to Effect Change

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Introduction

Sustained progress has been made over the past decade related to the prevention and management of cancer. Despite discoveries and advances in the laboratory, the clinic, the community, and public policy, disparities in cancer morbidity and mortality among several population groups distinguished by race and ethnicity, socioeconomic status, sexual orientation, and gender identity persist. Most nurse scientists, educators, clinicians, and advocates know of many factors associated with cancer disparities. However, for nurses to effect positive change, they must incorporate critical practices and strategies deemed to be effective in eliminating disparities among individuals, groups, families, and populations in need and at risk in communities and healthcare systems within their practice and sphere of influence.

Cancer Morbidity and Mortality in the United States

Cancer, a complex group of more than 100 distinct diseases, is characterized by uncontrolled growth, proliferation, and spread of abnormal cells. If the progression of these aggressive, invasive, and metastatic cells is not arrested, it could result in death due to acute complications (e.g., hemorrhage, brain metastasis, respiratory failure), deterioration in the function of vital organs secondary to metastases (e.g., respiratory failure, end-stage liver disease, renal failure), or a long-term degradation of general health (e.g., cachexia) (Lewis, Hendrickson, & Moynihan, 2011).

Cancer is the second leading cause of disease and mortality in the United States (National Center for Health Statistics, 2017; see Table 7-1). Men have a one-in-two lifetime risk of developing cancer. Among women, the lifetime risk for developing cancer is one in three. The American Cancer Society (ACS) estimated 1,735,350 new diagnoses of invasive cancer and 609,640 deaths from cancer in the United States for 2018 (Siegel, Miller, & Jemal, 2018).

Reports disseminated by the National Cancer Institute Surveillance, Epidemiology, and End Results (SEER) Program reveal that the most common type of cancer diagnosed in men in the United States is prostate cancer, followed by cancers of the lung and bronchus, colon and rectum, and bladder; melanoma; and non-Hodgkin lymphoma (Noone et al., 2018; see Table 7-2). Breast cancer is the most common type diagnosed in women in the United States, followed by cancers of the lung and bronchus, colon and rectum, uterus, and thyroid, and melanoma. In men, cancers of the lung and bronchus cause the most deaths, followed by cancers of the prostate, colon and rectum, and pancreas (see Table 7-3). Lung and bronchus cancers also result in the most cancer deaths in women in the United States, followed by cancers of the breast, colon and rectum, and pancreas.

Advances in Cancer Science and Cancer Care

Cancer was once theorized to result from viral and chemical causes (ACS, 2014a, 2014b). Discoveries in the fields of genetics, genomics, and cancer science have broadened the understanding of the genesis of cancer (Cavenee & White, 1995; Cooper, 1995; Doll & Peto, 1981; Levine, 1995; Weinberg, 1996). See Chapters 11 and 12 for more information on genetics. Research has shown that cancer is associated with a host of behavioral, environmental, biologic, and genetic factors (ACS, 2015; Anand et al., 2008; Doll, 1998; Harvard Center for Cancer Prevention, 1996; Wu, Powers, Zhu, & Hannun, 2016). Lifestyle choices, behavioral factors, and environmental factors are reported to account for 70%-90% of all cancers diagnosed; however, 10%-30% of all cancers diagnosed in the United States can be attributed to genetic factors (Wu et al., 2016). Although many cancer risk factors are modifiable and can be prevented, others are not. Age, sex, race and ethnicity, personal history, and genetics are all nonmodifiable cancer risk factors. The modifiable risk factors most strongly associated with lifestyle and environment are tobacco use, poor nutrition, physical inactivity, overweight and obesity, alcohol consumption, sun exposure, environmental pollutants, infections, and stress.

Progress has also been made in the area of effective cancer screening, treatment, and symptom management (Chin, Andersen, & Futreal, 2011; Heymach et al., 2018; Lowy & Collins, 2016; National Cancer Institute, 2017b; Ryerson et al., 2016). When used regularly, screening procedures have been shown to prevent the development of cancer through identification and removal or treatment of premalignant abnormalities and the recognition of cancer at an early stage before symptoms appear. Advances in cancer treatment, which now often include the combined use of surgical interventions, radiation therapy, antineoplastic agents, and immunologic therapies, have led to declines in cancer mortality and improvements in cancer survival (Heymach et al., 2018). With the advent of personalized and precision medicine, a patient's genetic profile influences treatment recommendations

Table 7-1. Leading Causes of Death by Sex and Race/Ethnicity in the United States

Race/Ethnicity	Men	Women
All people	Heart disease Cancer Accidents, unintentional injuries Chronic lower respiratory diseases Cerebrovascular diseases	Heart disease Cancer Chronic lower respiratory diseases Cerebrovascular diseases Alzheimer disease
White	Heart disease Cancer Accidents, unintentional injuries Chronic lower respiratory diseases Cerebrovascular diseases	Heart disease Cancer Chronic lower respiratory diseases Alzheimer disease Cerebrovascular diseases
Black	Heart disease Cancer Accidents, unintentional injuries Cerebrovascular diseases Assault, homicide	Heart disease Cancer Cerebrovascular diseases Diabetes mellitus Alzheimer disease
Asian/Pacific Islander	Cancer Heart disease Cerebrovascular disease Accidents, unintentional injuries Diabetes mellitus	Cancer Heart disease Cerebrovascular diseases Alzheimer disease Diabetes mellitus
American Indian/ Alaska Native	Heart disease Cancer Accidents, unintentional injuries Chronic liver disease and cirrhosis Diabetes mellitus	Cancer Heart disease Accidents, unintentional injuries Diabetes mellitus Chronic liver disease and cirrhosis
Hispanic	Heart disease Cancer Accidents, unintentional injuries Cerebrovascular diseases Diabetes mellitus	Cancer Heart disease Cerebrovascular diseases Alzheimer disease Diabetes mellitus

Note. Adapted from Health, United States, 2016: With Chartbook on Long-Term Trends in Health (pp. 128–131), by National Center for Health Statistics, 2017. Retrieved from https://www.cdc.gov/nchs/data/hus/hus16.pdf.

more than the cancer type and stage alone. Approaches such as these have shown promise in the treatment of cancers that are aggressive, unresectable, and resistant to traditional therapies, as well as metastatic disease. Agents and interventions designed to minimize cancer pain, fatigue, nausea, vomiting, and other expected side effects of cytotoxic therapy have also improved the treatment experiences and quality of life of patients with cancer.

The number of cancer survivors in the United States has increased fivefold from 3 million in 1971 to an estimated 15.5 million in 2016 as a direct result of the advances in cancer risk management, screening, diagnosis, and treatment (ACS, 2016b). Although cancer affects all population groups, epidemiologic data specific to cancer morbidity and mortality reveal profound disparities among many population groups.

Table 7-2. Age-Adjusted SEER Cancer Incidence Rates per 100,000 for the Top Cancer Sites by Race/Ethnicity, United States, 2011–2015

•			•			•		•				
	All Races	sces	White	te	Black	X	Asian/Pacific Islander	acific der	American Indian. Alaska Native	וndian/ Native	Hispanic	jic
Cancer Site	Σ	ш	Σ	ш	Σ	ш	Σ	L	Σ	ш	Σ	ш
All sites	483.0	409.9	488.5	423.1	535.0	397.8	303.5	298.3	325.5	311.4	362.9	322.9
Brain and nervous system	7.5	5.4	8.3	0.9	4.8	ı	4.3	ı	1	1	5.7	1
Colon and rectum	45.2	34.5	44.4	34.0	52.5	41.9	39.3	28.0	45.1	39.2	39.7	28.6
Esophagus	ı	ı	ı	ı	6.4	ı	3.3	ı	5.1	ı	ı	ı
Female breast	1	126.0	1	128.6	1	126.9	1	100.6	1	82.6	1	93.7
Hodgkin lymphoma	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı
Kidney and renal pelvis	21.7	10.9	22.2	11.3	25.3	12.8	12.2	2.6	22.6	13.0	20.7	11.9
Larynx	ı	1	ı	ı	8.3	ı	ı	ı	ı	ı	ı	ı
Leukemia	17.6	10.8	18.6	11.4	14.0	9.0	9.7	6.4	10.6	6.5	12.8	8.8
Liver and intrahepatic bile duct	13.6	ı	12.2	ı	17.3	ı	20.2	7.4	18.5	8.9	19.8	7.7
Lung and bronchus	63.8	47.8	63.9	50.2	81.2	47.9	45.9	28.0	45.4	31.2	34.1	23.2
Melanoma of the skin	29.8	17.7	35.2	21.5	1	1	1	ı	2.0	ı	ı	ı
Myeloma	8.4	1	7.9	1	15.9	11.6	4.9	1	6.2	5.5	7.6	2.0
Non-Hodgkin lymphoma	23.6	15.9	24.7	16.8	17.5	12.1	16.7	11.1	12.9	10.8	20.2	15.3
Oral cavity and pharynx	17.1	6.3	18.0	6.5	14.0	5.1	11.1	5.1	12.3	6.1	9.6	1
Ovary	ı	11.6	ı	12.1	1	9.3	1	9.6	1	9.0	ı	10.4
Pancreas	14.4	11.2	14.4	11.1	16.9	14.3	11.0	9.5	11.3	7.8	12.0	10.5
Prostate	112.6	1	105.7	ı	178.3	ı	59.1	ı	54.8	ı	91.8	1
Stomach	9.8	1	8.9	1	13.6	7.7	13.6	7.9	13.7	7.3	12.8	8.3
Testis	ı	ı	ı	ı	ı	ı	ı	ı	9.5	ı	5.3	ı
Thyroid	7.3	21.4	7.8	22.8	1	13.4	7.0	20.2	1	14.3	5.3	19.6
Urinary bladder	34.3	8.3	37.6	8.9	20.6	6.7	15.0	3.9	14.7	ı	18.9	4.8
Uterine cervix	1	7.4	1	7.4	1	8.4	1	6.1	1	8.1	1	8.9
Uterine corpus	ı	26.0	I	26.6	I	25.4	I	20.8	I	19.6	1	22.5

Note. From SEER Cancer Statistics Review, 1975–2015, by A.M. Noone, N. Howlader, M. Krapcho, D. Miller, A. Brest, M. Yu, ... K.A. Cronin (Eds.), 2018, Bethesda, MD: National Cancer Institute. Retrieved from https://seer.cancer.gov/csr/1975_2015.

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5, 2011–2015
United States
Race/Ethnicity,
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SEER Death Ra
. Age-Adjusted
Table 7-3

							Asian/Pa	acific	American	Indian/		
	All Races	ses	White	е	Black	¥	Islander	ler	Alaska Native	lative	Hispanic	<u>i</u>
Cancer Site	Σ	F	Σ	F	M	щ	Σ	F	V	ш	Σ	ч
All sites	196.7	139.5	196.4	140.0	239.9	159.0	120.4	87.7	181.4	127.6	140.0	2.96
Brain and nervous system	5.3	3.5	5.8	3.9	3.2	2.1	2.5	1.8	3.0	2.0	3.4	2.5
Colon and rectum	17.3	12.2	16.8	11.9	24.4	16.0	12.0	8.6	20.2	13.6	14.6	9.0
Esophagus	7.2	ı	9.7	ı	2.8	ı	2.8	ı	5.9	ı	3.9	ı
Female breast	ı	20.9	ı	20.3	1	28.6	ı	11.3	1	14.3	ı	14.2
Gallbladder	ı	ı	ı	ı	ı	ı	ı	ı	ı	1.7	ı	ı
Hodgkin lymphoma	1	ı	ı	ı	1	1	1	1	ı	1	ı	ī
Kidney and renal pelvis	5.6	2.4	5.8	2.5	5.5	2.4	2.6	1.1	8.4	4.1	2.0	2.3
Larynx	1	1	1	ı	3.3	1	ı	1	1	ı	1.5	ı
Leukemia	9.0	5.0	9.3	5.2	7.4	4.5	4.9	2.9	5.5	3.3	0.9	3.9
Liver and intrahepatic bile duct	9.4	3.8	8.7	3.6	13.2	4.6	14.0	0.9	14.8	7.0	13.0	5.9
Lung and bronchus	53.8	35.4	53.9	36.6	65.1	33.5	31.0	17.7	45.0	30.6	26.4	13.3
Melanoma of the skin	3.9	1	4.5	ı	1	1	1	1	ı	1	ı	ī
Myeloma	4.2	2.7	4.0	2.4	7.5	5.5	2.0	1.3	3.4	2.7	3.4	2.3
Non-Hodgkin lymphoma	7.4	4.5	7.7	4.6	5.4	3.4	2.0	3.2	9.5	3.4	6.1	3.9
Oral cavity and pharynx	3.9	ı	3.8	ı	4.8	1	3.0	1.1	3.7	1	2.4	1
Ovary	1	7.2	1	7.5	ı	6.3	1	4.3	1	6.3	1	5.3
Pancreas	12.6	9.5	12.6	9.4	14.8	12.2	8.3	7.3	9.6	8.0	9.5	7.7
Prostate	19.5	1	18.2	ı	39.9	1	8.7	1	19.7	1	16.1	ı
Soft tissue (including the heart)	ı	ı	ı	ı	ı	ı	1.0	ı	1.5	ı	ı	ı
Stomach	4.3	2.3	3.7	2.0	8.3	3.9	8.9	4.2	7.3	3.5	6.7	4.0
Testis	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	ı	1
Thyroid	1	1	1	ı	1	1	1	1	ı	1	ı	ī
Urinary bladder	7.6	2.2	8.0	2.2	5.3	2.4	2.9	ı	3.6	1	3.9	<u></u>
Uterine cervix	1	2.3	1	2.2	1	3.7	1	1.8	1	2.6	ı	2.6
Uterine corpus	ı	4.6	ı	4.3	ı	8.3	1	2.9	ı	3.6	1	3.8

Note. From SEER Cancer Statistics Review, 1975–2015, by A.M. Noone, N. Howlader, M. Krapcho, D. Miller, A. Brest, M. Yu, ... K.A. Cronin (Eds.), 2018, Bethesda, MD: National Cancer Institute. Retrieved from https://seer.cancer.gov/csr/1975_2015.

Cancer Disparities Among U.S. Population Groups

Cancer disparities have been defined as adverse differences in cancer incidence, prevalence, mortality, and survivorship, as well as burden of cancer or related health conditions that exist among population groups (National Cancer Institute, 2017a). Subset analysis of data collected and reviewed by the National Cancer Institute, the National Center for Health Statistics, the Centers for Disease Control and Prevention, and other entities has helped to identify U.S. population groups at risk for certain disparities (National Center for Health Statistics, 2016):

- Groups more likely to be diagnosed with and die from preventable cancers
- Groups more likely to be diagnosed with late-stage cancers that could be detected through screening
- Groups less likely to receive treatment that meets accepted standards of care
- Groups more likely to die of cancers that are generally curable
- Groups more likely to suffer from terminal cancer without the benefit of hospice care

Cancer disparities such as these have been identified among many groups distinguished by race or ethnicity and socioeconomic status. For example, among U.S. men, for all cancers combined, the cancer incidence rates are highest among Black men, followed by White, Hispanic, American Indian/Alaska Native, and Asian/Pacific Islander men (Noone et al., 2018). Similarly, for all cancers combined, the cancer death rates are highest among Black men, followed by White, American Indian/Alaska Native, Hispanic, and Asian/Pacific Islander men. Black men are more likely than men in other racial or ethnic population groups in the United States to be diagnosed with late-stage cancer, and Black men are less likely to survive five years after diagnosis than men in other racial or ethnic groups.

Among U.S. women, for all cancers combined, the cancer incidence rates are highest among White women, followed by Black, Hispanic, American Indian/Alaska Native, and Asian/Pacific Islander women (Noone et al., 2018). For all cancers combined, the cancer death rates are highest among Black women, followed by White, American Indian/Alaska Native, Hispanic, and Asian/Pacific Islander women. Although White women are more likely than women in other U.S. racial or ethnic groups to be diagnosed with breast cancer, Black women suffer the highest breast cancer death rates. Black women are more likely than women in other racial or ethnic groups to be diagnosed at later stages. Regardless of disease stage at the time of diagnosis, the five-year survival rate is lower for Black women than for women in other racial or ethnic groups.

According to estimates from the U.S. Census Bureau, 55 million Americans identify themselves as Hispanic or Latino. The majority of U.S. Hispanics are of Mexican origin, followed by Puerto Rican, Salvadoran, Cuban, and Dominican. Cancer is the leading cause of death among Hispanics, accounting for 22% of deaths (ACS, 2015). Hispanic men and women have higher rates of infection-related cancers compared to other racial or ethnic groups in the United States (ACS, 2015). Increased exposure to infectious agents, such as *Helicobacter* and hepatitis C, is associated with the incidence of gastric and liver cancer noted among Hispanic populations. The incidence rate of cervical cancer (associated with human papillomavirus infection) among Hispanic women is about 44% higher than in non-Hispanic Whites (ACS, 2015).

American Indians and Alaska Natives are reported to have lower rates of cancer than some other racial or ethnic groups in the United States (Noone et al., 2018).

However, the death rates among those who have cancer are reported to be generally higher than those of other racial or ethnic groups. The most common types of cancer reported for American Indian and Alaska Native women are cancers of the breast, colon and rectum, lung, uterus, and thyroid. For cancer deaths, the most common causes reported for American Indian and Alaska Native women are cancers of the lung, breast, colon and rectum, pancreas, and liver. The most common types of cancer reported for American Indian and Alaska Native men are cancers of the prostate, lung, colon and rectum, kidney, and liver. Of cancer deaths in American Indian and Alaska Native men, cancers of the lung, colon and rectum, prostate, liver, and pancreas are the most common causes. Data also suggest that American Indians and Alaska Natives have higher incidence and death rates for cancers of the kidney, stomach, liver, and gallbladder compared to White populations in the United States. However, leaders in the Native community suggest that these data be reviewed with care, given that the magnitude of the cancer burden experienced by Native Americans and Alaska Natives is incomplete and often compromised by racial misclassification, underreporting of cancer cases, or the reluctance of many Native Americans to provide personal information for research and cancer surveillance.

Cancer is a leading cause of death for Asian Americans (National Center for Health Statistics, 2017). Cancer affects Asian American populations differentially depending on their country of origin (ACS, 2016a; Simon, 2016). Asian American populations are those who report having origins in the Far East, Southeast Asia, or the Indian subcontinent. This population group includes but is not limited to Asian Indians, Cambodians, Chinese, Filipinos, Hmong, Japanese, Koreans, Pakistanis, and Vietnamese. The most commonly diagnosed cancers among Asian American men are prostate, lung, and colorectal (Noone et al., 2018). Cancers of the lung, liver, and colon and rectum are reported to be the leading cause of cancer death among Asian American men. Breast, lung and bronchus, and colon and rectum cancers are the most commonly diagnosed among Asian American women. For cancer deaths of Asian American women, the leading causes are cancers of the lung, breast, and colon and rectum. Cancer trends have been shown to significantly vary among the Asian American subpopulations. For example, the colorectal cancer incidence is highest among Chinese Americans; prostate cancer incidence rate is highest among Filipino men; and cervical cancer incidence and mortality rates are highest among Vietnamese women.

Adverse differences in cancer prevalence, incidence, morbidity, mortality, and survivorship, as well as the burden of cancer and related health conditions, have been identified among people affected by untoward socioeconomic factors, such as poverty, inadequate education, lack of health insurance, limited access to quality health care, and geographic isolation (ACS, 2017a; ACS Cancer Action Network, 2009; Boscoe et al., 2014; Elk & Landrine, 2012; Lichtenfeld, 2011). Of the three cancer types for which screening is widely recommended or practiced—colorectal cancer, female breast cancer, and cervical cancer—in areas of high poverty rates, the proportion of cases diagnosed at a localized stage is lower and the proportion diagnosed at a distant stage is higher, compared with areas with lower levels of poverty. Mammography, Pap screening, and colorectal screening rates are listed in Tables 7-4, 7-5, and 7-6. For all cancers combined, men and women in the United States who reside in counties with a 20% or greater poverty rate have higher death rates from cancer than those who reside in more affluent counties. Simi-

lar trends are noted among men and women who reside in impoverished and affluent counties relative to cancer survival.

Cancer Disparities Among Lesbian, Gay, Bisexual, and Transgender Populations

While data reflective of sexual orientation and gender identity are not systematically collected or reported in the U.S. census and national cancer registries, multiple published reports cite evidence suggesting that lesbian, gay, bisexual, and transgender (LGBT) populations experience significant cancer-related disparities across the continuum of care (Burkhalter et al., 2016; Wender, Sharpe, Westmaas, & Patel, 2016). For example, data cited by scientists, clinicians, and advocates assert that LGBT populations are at a greater risk for lung, breast, cervical, anal, and liver cancers compared to non-LGBT populations. Evidence suggests that gay and bisexual men, particularly those who engage in receptive anal intercourse,

Table 7-4. U.S. Mammography Screening Rates of Women Aged 40 Years and Older, 2015

Demographic Information	Mammography Within Past 2 Years (%)
Age	
• 40–49	58.3
• 50-64	71.6
• 65–74	72.2
• ≥ 75	51.5
Race/Ethnicity	
• White	65.3
• Black	69.8
Hispanic	60.9
• American Indian/ Alaska Native	51.5
• Asian	59.7
Insurance Status	
• Insured	69.7
– Private	72.2
– Medicaid	57.7
Uninsured	30.0

Note. Adapted from Health, United States, 2016: With Chartbook on Long-Term Trends in Health (p. 267), by National Center for Health Statistics, 2017. Retrieved from https://www.cdc.gov/nchs/data/hus/hus16.pdf.

have a high prevalence of human papillomavirus, which can result in anal cancer. Gay men are at increased risk for contracting hepatitis and for developing liver cancer. Reports suggest that lesbian and bisexual women have higher rates of alcohol consumption, higher rates of obesity, and lower rates of childbirth, which increase their risk for developing breast, cervical, and gynecologic cancers. Data suggest that gay men and lesbians are more likely to smoke than men and women who do not identify as gay or lesbian, which increases their risk of lung, bronchial, and bladder cancer. Evidence suggests that men who have sex with men have higher rates of alcohol consumption and smoking, heightening their risk for developing oral, esophageal, and other head and neck cancers.

Similar reports disseminated by researchers, clinicians, and cancer advocacy groups show that people in the LGBT community often experience social, economic, and systemic barriers that affect cancer screening and diagnosis (ACS, 2017b; Lindsey, 2014; Margolies & Scout, 2013; National LGBT Cancer Network, n.d.-a, n.d.-b; Tontonoz, 2016). Many reports indicate that men and women in same-sex relationships are less likely than men and women in heterosexual relationships to visit a doctor or have a regular source of health care and are more likely to

report experiencing unmet medical needs. LGBT people are less likely to have health insurance than their heterosexual counterparts. Studies suggest that LGBT individuals face discrimination by healthcare staff and providers when attempting to access health care, and this prevents many from seeking routine care and cancer screening. Likewise, multiple reports of studies conducted with the LGBT community indicate that negative experiences with healthcare providers adversely affect their use of primary cancer care (Kelsall, 2016; Quinn et al., 2015).

Access to preventive cancer care has been identified as a special problem among transgender men and women (Buchmueller & Carpenter, 2010; Edmiston et al., 2016). Experts agree that transgender men should be offered screening for breast and cervical cancer, and transgender women should be offered screening for prostate cancer. However, surveys reflect that nurses and other healthcare providers lack education and training in issues specific to the care of transgender men and women and their unique healthcare needs in a culturally appropriate and sensitive manner.

Table 7-5. U.S. Pap Screening Rates of Women Aged 18 Years and Older, 2015

Demographic Information	Pap Screening Within Past 3 Years (%)
Age	
• 18–20	34.0
• 21–44	81.1
• 45–54	79.7
• 55–64	71.1
• 65–74	52.9
• ≥ 75	28.1
Race/Ethnicity	
• White	68.4
• Black	74.6
Hispanic	68.6
• American Indian/ Alaska Native	60.9
• Asian	64.9
Insurance Status	
• Insured	78.2
– Private	79.6
– Medicaid	72.6
 Uninsured 	57.3

Note. Adapted from Health, United States, 2016: With Chartbook on Long-Term Trends in Health (p. 270), by National Center for Health Statistics, 2017. Retrieved from https://www.cdc.gov/nchs/data/hus/hus16.pdf.

What Nurses Can Do to Effect Change

Many of the reasons for the staggering disparities experienced among population groups distinguished by race or ethnicity, socioeconomic status, geography, sexual orientation, and gender identity have been well described and broadly documented. Research suggests that the disparities in cancer morbidity and mortality are the result of complex interactions among individual factors (e.g., genetic endowment, lifestyle choices, health behaviors), social and economic inequalities (e.g., racism, discrimination, education, economic status), the physical environment (e.g., neighborhood conditions, exposure to toxic environments), and healthcare quality (e.g., access to care, utilization of care, provision of quality health care) (Brawley & Berger, 2008; Freeman, 2004; Freeman & Chu, 2005; Kagawa-Singer, Dadia, Yu, & Surbone, 2010; Ward et al., 2004). In addition to attending to these social determinants of cancer disparities, the healthcare field must acknowledge

the role and impact of enacted attitudes, biases, and prejudices of nurses and other providers on cancer prevention, detection, and control in individuals and groups distinguished by race or ethnicity, socioeconomic status, geography, sexual orientation, and gender identity. Given what is currently known about cancer prevention, risk management, screening, treatment, and symptom management, it has been asserted that cancer morbidity and mortality among these individuals and groups could be significantly reduced. Research indicates that more than half of all cancer diagnoses could be averted if personalized, tailored, and population-based interventions designed to reduce tobacco use, increase physical activity, control overweight and obesity, improve nutritional practices, and increase the use of routine can-

Table 7-6. U.S. Colorectal Screening Rates Among Adults Aged 50-75 Years, 2015

Demographic Information	Colonoscopy (%)	Any Colorectal Screening (%)
Gender		
• Male	58.4	61.6
• Female	60.0	63.1
Race/Ethnicity		
• White	60.7	63.7
• Black	56.3	59.6
• Hispanic	44.0	47.4
• Ameri- can Indian/ Alaska Native	45.3	48.9
• Asian	45.8	52.3

Note. Adapted from Health, United States, 2016: With Chartbook on Long-Term Trends in Health (p. 275), by National Center for Health Statistics, 2017. Retrieved from https://www.cdc.gov/nchs/data/hus/hus16.pdf.

cer screening tests were more effectively and consistently incorporated in every-day clinical practice (ACS, 2015, 2017a). Deaths from cancer could also be averted through early detection and access to and utilization of evidence-based treatments.

Disparities in cancer morbidity and mortality and cancer care have long been a concern of leaders in the cancer nursing community. Well before the U.S. Department of Health and Human Services designated reducing health disparities as a national priority, nurses engaged in cancer practice noted and discussed variations in access to care and health outcomes among diverse population groups (Gillmer & Hassels, 1964; Strayer, 1945). These reports, along with others highlighting the lived experience of individuals and groups unduly affected by cancer, benefited nurses' understanding of the national cancer burden and their awareness of inequities in cancer care experienced by varied population groups. Decades later, despite advances in science, medical technology, medicine, and nursing, disparities in cancer morbidity, cancer mortality, and cancer care continue to be reported as a cause of great concern for clinicians, educators, and researchers throughout the nursing community.

Research suggests that there is much that nurses could do to address the cancer-related disparities experienced among U.S. population groups. In keeping with the precepts and principles of the social determinants of health, personalized medicine, and precision medicine, nurses should be even more deliberate in their efforts to monitor local, regional, and national trends in cancer incidence, mortality, survival, and control among specific population groups described in this chapter, so they can account for individual variability in genes, environment, culture, values, and lifestyles as they attempt to identify people who are at increased risk for developing a preventable cancer, people undergoing cancer treatment who are

at risk for adverse symptoms and conditions, and people who are at increased risk of dying from a treatable cancer or sequelae. To hold to the precepts and principles of evidence-based practice, nurses should renew their efforts to incorporate promising and proven approaches designed to address cancer disparities related to cancer risk management, early detection, treatment, and follow-up in the plan of care of at-risk, lesser-resourced, and underserved individuals, families, communities, and populations. Nurses should actively seek opportunities to increase their awareness and understanding of the consequences of enacted bias, prejudice, and discrimination on the provision of cancer care among the aforementioned population groups and initiate efforts to address and counteract implicit and explicit bias, prejudice, and discrimination whenever and wherever they manifest in a clinical encounter. Likewise, nurse generalists and specialists, individually and collectively, should reaffirm their commitment to the goal of eliminating cancer-related health disparities by redoubling efforts to address root causes of these disparities that are associated with the delivery of health care.

Summary

Building on the foundation laid by experts in the clinical, academic, research, and public policy arena, nurses have been encouraged to expand their efforts to enhance the knowledge and understanding of prevention and control in individuals, families, and groups at increased risk for developing or dying from cancer; to address the cancer care needs of people at risk for being underserved within the community and within the healthcare system; and to incorporate evidence-based cancer control strategies that are efficient and effective in reducing cancer morbidity and mortality and in improving cancer survival in practice and sphere of influence. Independently and collectively, nurses across the country are redoubling their efforts in pursuit of these goals. The public and private sectors have launched many evidence-based programs, campaigns, and initiatives that emphasize health promotion, self-awareness, cancer risk reduction, prevention, early detection, access to quality cancer care, and cancer survivorship. Working collaboratively with consumers, community leaders, policy makers, healthcare providers, and healthcare systems, nurses have focused their attention upstream and down. As a direct consequence, nurses in the United States are effecting change in their labors to reduce cancer-related health disparities among at-risk, underserved, and vulnerable population groups.

References

American Cancer Society. (2014a). Development of modern knowledge about cancer causes. Retrieved from https://www.cancer.org/cancer/cancer-basics/history-of-cancer/modern-knowledge-and-cancer-causes.html

American Cancer Society. (2014b). Early theories about the causes of cancer. Retrieved from http://www.cancer.org/cancer/cancerbasics/thehistoryofcancer/the-history-of-cancer-cancer-causes-theories-throughout-history

American Cancer Society. (2015). Cancer facts and figures for Hispanics/Latinos 2015–2017. Retrieved from https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/cancer-facts-and-figures-for-hispanics-and-latinos/cancer-facts-and-figures-for-hispanics-and-latinos-2015-2017.pdf American Cancer Society. (2016a). Cancer facts and figures: Special section: Cancer in Asian Americans, Native Hawaiians, and Pacific Islanders. Retrieved from https://www.cancer.org/content/dam/cancer-org

- /research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2016/special-section-cancer-in-asian-americans-native-hawaiians-and-pacific-islanders-cancer-facts-and-figures-2016.pdf
- American Cancer Society. (2016b). Cancer treatment and survivorship facts and figures 2016–2017. Retrieved from https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/cancer-treatment-and-survivorship-facts-and-figures/cancer-treatment-and-survivorship-facts-and-figures-2016-2017.pdf
- American Cancer Society. (2017a). Cancer facts and figures 2017. Retrieved from https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2017/cancer-facts-and-figures-2017.pdf
- American Cancer Society. (2017b). Cancer facts for lesbians and bisexual women. Retrieved from http://www.cancer.org/healthy/findcancerearly/womenshealth/cancer-facts-for-lesbians-and-bisexual-women
- American Cancer Society Cancer Action Network. (2009). *Cancer disparities: A chartbook.* Retrieved from http://action.acscan.org/site/DocServer/cancer-disparities-chartbook.pdf
- Anand, P., Kunnumakara, A.B., Sundaram, C., Harikumar, K.B., Tharakan, S.T., Lai, O.S., ... Aggarwal, B.B. (2008). Cancer is a preventable disease that requires major lifestyle changes. *Pharmaceutical Research*, 25, 2097–2116. https://doi.org/10.1007/s11095-008-9661-9
- Boscoe, F.P., Johnson, C.J., Sherman, R.L., Stinchcomb, D.G., Lin, G., & Henry, K.A. (2014). The relationship between area poverty rate and site-specific cancer incidence in the United States. *Cancer*, 120, 2191–2198. https://doi.org/10.1002/cncr.28632
- Brawley, O.W., & Berger, M.Z. (2008). Cancer and disparities in health: Perspectives on health statistics and research questions. *Cancer*, 113, 1744–1754. https://doi.org/10.1002/cncr.23800
- Buchmueller, T., & Carpenter, C.S. (2010). Disparities in health insurance coverage, access, and outcomes for individuals in same-sex versus different-sex relationships, 2000–2007. *American Journal of Public Health*, 100, 489–495. https://doi.org/10.2105/AJPH.2009.160804
- Burkhalter, J.E., Margolies, L., Sigurdsson, H.O., Walland, J., Radix, A., Rice, D., ... Maingi, S. (2016). The national LGBT cancer action plan: A white paper of the 2014 national summit on cancer in the LGBT communities. *LGBT Health*, *3*, 19–31. Retrieved from https://www.liebertpub.com/doi/10.1089/lgbt.2015.0118
- Cavenee, W.K., & White, R.L. (1995). The genetic basis of cancer. Scientific American, 272(3), 72–79. https://doi.org/10.1038/scientificamerican0395-72
- Chin, L., Andersen, J.N., & Futreal, P.A. (2011). Cancer genomics: From discovery science to personalized medicine. Nature Medicine, 17, 297–303. https://doi.org/10.1038/nm.2323
- Cooper, G. (1995). Oncogenes (2nd ed.). Burlington, MA: Jones & Bartlett Learning.
- Doll, R. (1998). Epidemiological evidence of the effects of behavior and the environment on the risk of cancer. In M. Schwab, H.M. Rabes, K. Munk, & H.P. Hofschneider (Eds.), Recent Results in Cancer Research: Vol. 154. Genes and environment in cancer (pp. 3–21). https://doi.org/10.1007/978-3-642-46870-4_1
- Doll, R., & Peto, R. (1981). The causes of cancer: Quantitative estimates of avoidable risks of cancer in the United States today. *Journal of the National Cancer Institute, 66,* 1192–1308. https://doi.org/10.1093/jnci/66.6.1192
- Edmiston, E.K., Donald, C.A., Sattler, A.R., Peebles, J.K., Ehrenfeld, J.M., & Eckstrand, K.L. (2016). Opportunities and gaps in primary care preventative health services for transgender patients: A systematic review. *Transgender Health*, 1(1), 216–230. https://doi.org/10.1089/trgh.2016.0019
- Elk, R., & Landrine, H. (Eds.). (2012). Cancer disparities: Causes and evidence-based solutions. Atlanta, GA: American Cancer Society.
- Freeman, H.P. (2004). Poverty, culture, and social injustice: Determinants of cancer disparities. CA: A Cancer Journal for Clinicians, 54, 72–77. https://doi.org/10.3322/canjclin.54.2.72
- Freeman, H.P., & Chu, K.C. (2005). Determinants of cancer disparities: Barriers to cancer screening, diagnosis, and treatment. Surgical Oncology Clinics of North America, 14, 655–669. https://doi.org/10.1016/j.soc.2005.06.002
- Gillmer, R., & Hassels, A. (1964). Nurses' practices and attitudes toward cancer. *American Journal of Nursing*, 64(4), 84–85. https://doi.org/10.2307/3419058
- Harvard Center for Cancer Prevention. (1996). Harvard report on cancer prevention: Vol. 1. Causes of human cancer. Cancer Causes and Control, 7(Suppl. 1), S3–S4. https://doi.org/10.1007/BF02352719
- Heymach, J., Krilov, L., Alberg, A., Baxter, N., Chang, S.M., Corcoran, R., ... Burstein, H. (2018). Clinical cancer advances 2018: Annual report on progress against cancer from the American Society of Clinical Oncology. *Journal of Clinical Oncology*, 36, 1020–1044. https://doi.org/10.1200/JCO.2017.77.0446
- Kagawa-Singer, M., Dadia, A.V., Yu, M.C., & Surbone, A. (2010). Cancer, culture, and health disparities: Time to chart a new course? CA: A Cancer Journal for Clinicians, 60, 12–39. https://doi.org/10.3322/caac.20051
- Kelsall, C. (2016, April 10). 'Negative experiences,' lack of research impede cancer care in LGBTQ community. *HemOnc Today*. Retrieved from http://www.healio.com/hematology-oncology/practice-management/news/print/hemonc-today/%7B4a6f9773-4c72-4a98-bed9-8caf46c40ac6%7D/negative-experiences-lack-of-research-impede-cancer-care-in-lgbtq-community
- Levine, A.J. (1995). Tumor suppressor genes. Science and Medicine, 2(1), 28-37.

- Lewis, M.A., Hendrickson, A.W., & Moynihan, T.J. (2011). Oncologic emergencies: Pathophysiology, presentation, diagnosis, and treatment. CA: A Cancer Journal for Clinicians, 61, 287–314. https://doi.org/10.3322/caac.20124
- Lichtenfeld, J.L. (2011). Cancer facts and figures 2011: Poverty is a carcinogen. Does anyone care? Retrieved from http://blogs.cancer.org/drlen/2011/06/17/cancer-facts-and-figures-2011-poverty-is -a-carcinogen-does-anyone-care
- Lindsey, H. (2014). Overcoming barriers to cancer care for LGBT patients. Oncology Times, 36(10), 95–96. https://doi.org/10.1097/01.COT.0000450344.88617.87
- Lowy, D.R., & Collins, F.C. (2016). Aiming high—Changing the trajectory for cancer. New England Journal of Medicine, 374, 1901–1904. https://doi.org/10.1056/NEJMp1600894
- Margolies, J., & Scout. (2013). LGBT patient-centered outcomes: Cancer survivors teach us how to improve care for all. Retrieved from https://cancer-network.org/wp-content/uploads/2017/02/lgbt-patient-centered-outcomes.pdf
- National Cancer Institute. (2017a). Tackling cancer health disparities: Small steps, big hopes. Retrieved from http://www.cancer.gov/research/areas/disparities/health-disparity-studies
- National Cancer Institute. (2017b). Why genomics research is critical to progress against cancer. Retrieved from http://www.cancer.gov/research/areas/genomics
- National Center for Health Statistics. (2016). *Health, United States, 2015: With special feature on racial and ethnic health disparities* (DHHS Publication No. 2016-1232). Retrieved from http://www.cdc.gov/nchs/data/hus/hus/5.pdf
- National Center for Health Statistics. (2017). Health, United States, 2016: With chartbook on long-term trends in health (DHHS Publication No. 2017-1232). Retrieved from https://www.cdc.gov/nchs/data/hus/hus/16.pdf
- National LGBT Cancer Network. (n.d.-a). Barriers to health care. Retrieved from https://cancer-network.org/cancer-information/cancer-and-the-lgbt-community/barriers-to-health-care
- National LGBT Cancer Network. (n.d.-b). The LGBT community's disproportionate cancer burden. Retrieved from https://cancer-network.org/cancer-information/cancer-and-the-lgbt-community/the-lgbt-communitys-disproportionate-cancer-burden
- Noone, A.M., Howlader, N., Krapcho, M., Miller, D., Brest, A., Yu, M., ... Cronin, K.A. (Eds.). (2018, April). SEER cancer statistics review, 1975–2015. Retrieved from https://seer.cancer.gov/csr/1975_2015
- Quinn, G.P., Sanchez, J.A., Sutton, S.K., Vadaparampil, S.T., Nguyen, G.T., Green, B.L., ... Schabath, M.B. (2015). Cancer and lesbian, gay, bisexual, transgender/transsexual, and queer/questioning (LGBTQ) populations. *CA: A Cancer Journal for Clinicians*, *65*, 384–400. https://doi.org/10.3322/caac.21288
- Ryerson, A.B., Eheman, C.R., Altekruse, S.F., Ward, J.W., Jemal, A., Sherman, R.L., ... Kohler, B.A. (2016). Annual report to the nation on the status of cancer, 1975–2012. Cancer, 122, 1312–1337. https://doi.org/10.1002/cncr.29936
- Siegel, R.L., Miller, K.D., & Jemal, A. (2018). Cancer statistics, 2018. CA: A Cancer Journal for Clinicians, 68, 7–30. https://doi.org/10.3322/caac.21442
- Simon, S. (2016). Facts and figures report: Cancer rates vary widely among Asian Americans, Native Hawaiians, and Pacific Islanders. Retrieved from https://www.cancer.org/latest-news/facts-figures -report-cancer-rates-vary-widely-among-asian-americans-native-hawaiians-and-pacific-islanders.html
- Strayer, M. (1945). Every nurse has a share in the war on cancer. *Trained Nurse and Hospital Review, 115*, 321–323.
- Tontonoz, M. (2016). Out in front: Scientists and activists call for recognition of LGBT cancer risks. Retrieved from https://www.mskcc.org/blog/out-front-scientists-and-activists-call-recognition-lgbt -cancer-risks
- Ward, E., Jemal, A., Cokkinides, V., Singh, G.K., Cardinez, C., Ghafoor, A., & Thun, M. (2004). Cancer disparities by race/ethnicity and socioeconomic status. CA: A Cancer Journal for Clinicians, 54, 78–93. https://doi.org/10.3322/canjclin.54.2.78
- Weinberg, R.A. (1996). How cancer arises. *Scientific American*, 275(3), 62–70. https://doi.org/10.1038/scientificamerican0996-62
- Wender, R., Sharpe, K.B., Westmaas, J.L., & Patel, A.V. (2016). The American Cancer Society's approach to addressing the cancer burden in the LGBT community. *LGBT Health*, *3*, 15–18. https://doi.org/10.1089/lgbt.2015.0089
- Wu, S., Powers, S., Zhu, W., & Hannun, Y.A. (2016). Substantial contribution of extrinsic risk factors to cancer development. *Nature*, 529, 43–47. https://doi.org/10.1038/nature16166