

## People with Disabilities as a Health Disparities Population: The Case of Sexual and Reproductive Health Disparities

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### Abstract

Disability has yet to achieve its proper place in the discussion of health disparities. Several major Federal initiatives to remove health disparities have only addressed disability as a consequence of poverty, low education levels, lack of access to health care, and other disparity factors, but fail to acknowledge people with disabilities as a health disparity population. Whereas policymakers and health disparities researchers regard disability as an indicator of reduced quality of life, rehabilitation researchers focus on maximizing health and quality of life in the context of disability. This article discusses the characteristics and possible causes of health disparities experienced by people with disabilities, illustrated with examples from sexuality and reproductive health. The authors offer six pathways for eliminating the health disparities faced by people with disabilities: 1) Include information about wellness in the context of disability in the education of physicians and other health care providers, 2) Offer empowerment opportunities to people with disabilities, 3) Promote compliance with the Americans with Disabilities Act, 4) Remove barriers to participation by people with disabilities in health research and education, 5) Acknowledge people with disabilities as a health disparities population and include their issues in national health care policy, and 6) Encourage media coverage of health issues for people with disabilities and the portrayal of successful, healthy people with disabilities in publicity related to all health topics.

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Disability has yet to achieve its proper place in the discussion of health disparities. If health disparities are to be understood as marked distinctions in the quality or character (Merriam-Webster, Inc., n.d.) of the health of individuals or specific groups, then people with disabilities should be classified as a group experiencing health disparities. As a major national health policy and service focus, issues related to people with disabilities are almost completely ignored unless they happen to fall within the domain of another protected group, such as racial and ethnic minorities, the homeless, migrants, or women. In the 2006 National Health Disparities Report issued by the agency for Health Care Research and Quality (U.S. Department of Health and Human Services, 2006), one page out of 212 is devoted to the health concerns of people with disabilities, and that is limited to oral health only. The Minority Health and

Health Disparities Research and Education Act of 2000 (Kennedy, 2000) requires the National Center on Minority Health and Health Disparities at the National Institutes of Health to issue reports on its plan and budget to reduce and ultimately eliminate health disparities. Although its mission is to address health disparities among minorities and other health disparity populations (defined as population groups who suffer from health disparities when compared to the general population), disability is only mentioned in terms of its detection, diagnosis, prevention, treatment, or efforts to delay its onset or progression as it contributes to health disparities (Zerhouni & Ruffin, 2002) with no mention of people with disabilities as a population of interest. People with disabilities are also not acknowledged as a health disparity population by the Health Disparities Collaboratives under the Health Resources and

Services Administration (Health Resources and Services Administration, 2007).

The absence of attention to disability issues in Federal efforts to eliminate health disparities cannot be explained by a lack of information. Both Healthy People 2000 (U.S. Department of Health and Human Services, 1990) and Healthy People 2010 (U.S. Department of Health and Human Services, 2000) make extensive reference to health disparities between people with and without disabilities. A report on progress toward the 2000 objectives (National Center for Health Statistics, 1997) provides substantial evidence of disparities according to disability status in leisure time activity, obesity, adverse health effects from stress, and less frequent mammograms for women over age 55 years with disabilities.

The fact that this oversight persists may reflect the fact that policymakers, health disparities researchers, and rehabilitation researchers have different priorities and, indeed, do not speak the same language. Healthy People 2010 (U.S. Department of Health and Human Services, 2000), which contains an entire chapter devoted to disability issues (Chapter 6), states that because disability status has been traditionally equated with health status, the health and well-being of people with disabilities has been addressed primarily in a medical care, rehabilitation, and long-term care financing contexts. The authors list four main misconceptions that emerge from this contextual approach: (1) all people with disabilities automatically have poor health, (2) public health should focus only on preventing disabling conditions, (3) a standard definition of “disability” or “people with disabilities” is not needed for public health purposes, and (4) the environment plays no role in the disabling process. They claimed that “these misconceptions have led to an underemphasis of health promotion and disease prevention activities targeting people with disabilities and an increase in the occurrence of secondary conditions (medical, social, emotional, family, or community problems that a person with a primary disabling condition likely experiences).”

Among rehabilitation clinicians and researchers, there has been a focus on secondary health problems that are the result of or co-exist with primary disabling conditions. Examples include skin breakdowns that are common with spinal cord injury, esophageal reflux that accompanies scoliosis, and pregnancy complications for women with severe mobility impairments. Conditions that are less obviously connected to the primary disability but are disproportionately prevalent among people with disabilities include diabetes, hypertension, depression, and sleep disorders. Studies of techniques for preventing and reducing the impact of these secondary conditions are increasing in number, but population-based epidemiological examinations of these disparities in comparison to the general population are few (Lavela, Weaver, Smith, & Chen, 2006; Parish & Saville, 2006; Xie et al., 2006).

On the other side of the discussion are public health researchers who view disability as a consequence of certain conditions or demographic characteristics or the result of disparities in health care (Kelley-Moore, 2006; Koch-Weser, Liang, & Grigg-Saito, 2006; Schoeni, Martin, Andreski, & Freedman, 2005; Tucker, 2005). Absent is an acknowledgement that the population of people with disabilities is a legally defined minority with its own characteristic health disparities.

The failure to recognize health disparities as a serious issue for people with disabilities is the result of a tradition that regards disability only as a medical phenomenon. An example of this is the concept of disability-free life expectancy (Sullivan, 1971), a method for combining mortality and morbidity rates into a single summary measure of a population’s health status. This is recognized as a gold standard in epidemiological research, with the claim that robust estimation of disability-free life expectancy is essential for examining whether additional years of life are spent in good health and whether life expectancy is increasing faster than the decline of disability rates (Imai & Samir, 2007). This calculation is then used to examine the contribution that certain factors, such as educational disparities combined with

specific diseases, make to both death and disability (Nusselder et al., 2005).

Although this concept may be utilitarian for statistical purposes, its philosophical basis is seriously flawed. It assumes that disability is synonymous with poor health and that quality of life is by definition diminished in the presence of disability. Population-based statistics may confirm these associations, but in no way do they give an accurate picture of the reality of living with disability. The disability rights movement has worked for the last few decades to redirect attitudes about disability, to create a disability identity, and frame it in terms of civil rights and cultural context (Galvin, 2005; Hahn, 1984; Hahn & Belt, 2004). The literature is plentiful with documentation of resilience, quality of life, role fulfillment, sexual satisfaction, and social integration among people with disabilities, as will be illustrated below. Modern approaches to disability research give lie to the myth that disability is a reliable indicator of diminished quality of life and end of life.

This article discusses the characteristics and possible causes of health disparities experienced by people with disabilities. After discussing characteristics of the population of people with disabilities, we will use the specific example of sexual and reproductive health and health care to illustrate unfounded assumptions and disparities in the prevalence of common health conditions, access to health care, access to preventive health services, treatment in health care settings, access to health information, and barriers to inclusion in health-related research.

### **Who are People with Disabilities?**

The Americans with Disabilities Act (USDOJ, 1990) offers a three part definition of disability that is useful for discussions of health care policy. According to the Act, a person with a disability is someone with a physical or mental impairment that substantially limits one or more major life activities, a person with a record of such a physical or mental impairment, or a person who is regarded as having such an impairment (USDOJ, 1990). For statistical purposes, however, the U.S. Census Bureau

defines disability in terms of six domains of functional limitations: sensory, physical, mental, self-care, going outside the home, and employment.

Using the functional definition, statistics from 2005 American Community Survey indicate that in the civilian, non-institutionalized population age 5 and over, 15 percent has one or more disability (United States Census Bureau, 2005). This statistic varies substantially by age, going from 6.5 percent in children ages 5 to 15, to 12.1 percent in the 16 to 64 age group, and 40.5 percent in persons age 65 and over. It also varies significantly by sex, with more boys than girls reporting disabilities, about equal distribution among those aged 16 to 64, and significantly more women than men reporting disabilities in the 65 and over age group. Rates of disability among residents of rural areas are estimated to be substantially higher, nearly 20 percent averaged across all age groups (Enders, 2005).

Substantially fewer people with disabilities age 18 to 34 are enrolled in college, 13.9 percent versus 21.8 percent of people with no disabilities in the same age group. Half the number of people with disabilities age 16 to 64 is employed, 35.4 percent versus 74.5 percent of people with no disabilities in the same age group. Women with disabilities are less likely to be employed (34.2 percent) than men with disabilities (41.1 percent), and half as likely as women with no disabilities (68.2 percent). People with disabilities are nearly twice as likely to be living in poverty than people with no disabilities (21.1 percent versus 11.3 percent), a problem that disproportionately affects women with disabilities (23.3 percent versus 18.6 percent for men with disabilities). Rural living is associated with fewer opportunities for education and employment, and, combined with a lack of accessible public transportation, telecommunications, health care, and rehabilitation services, make the life situation of rural people with disabilities even more disadvantaged (University of Montana Rural Institute, 2007).

An examination by race and Hispanic origin reveals that rates of disability are about the same

for non-Hispanic whites and blacks (15 percent and 16 percent respectively) (United States Census Bureau, 2003). Hispanics and Asians have lower rates of disability (10 percent and 8 percent, respectively), while American Indians have more than twice this rate of disability (21 percent). The burden of race on employability is especially evident for people with disabilities, with minority men and women with disabilities less likely to be employed than people with disabilities who are white. This burden falls even more heavily on black men with disabilities and Hispanic women with disabilities when compared with their non-disabled peers.

The resulting profile of the population of people with disabilities has substantial common ground with groups commonly associated with health disparities: racial and ethnic minorities; people with low education levels, low employment rates, and extremely high rates of poverty; and residents of rural areas. Examining health disparities faced by people with disabilities involves not only looking at disability within each of these categories, but also looking at the population of people with disabilities as they are characterized in each of these categories.

### **Health Disparities versus Secondary Conditions**

Secondary conditions are defined as medical, physical, cognitive, emotional, or psychosocial complications of a primary disabling condition (Hough, 1999; Simeonsson & Leskinen, 1999). They may be an inherent part of the specific disabling condition and therefore more manageable than preventable, such as pain with arthritis, hypertension with scleroderma, weakness with neuromuscular disorders, or spasticity with spinal cord injury. They may be a preventable consequence of the disabling condition, such as respiratory infections, pressure ulcers, tooth loss, or obesity. They may also possibly be unrelated, but more prevalent among people with the disabling condition, such as diabetes, elevated cholesterol, hypertension, or depression. Some attribute secondary conditions to environmental and attitudinal barriers to health-promoting behaviors and community participation in addition to the natural sequelae of disabling conditions.

Whatever the underlying cause, secondary conditions can result in significant interference with daily activities, reduced levels of functioning, reduced quality of life, increased health care costs, and premature mortality (Nosek et al., 2006). Several studies offer descriptions of secondary conditions and their impact within various segments of the population of people with disabilities (Abraido-Lanza, White, Armbrister, & Link, 2006; Coyle, Santiago, Shank, Ma, & Boyd, 2000; Kinne, Patrick, & Doyle, 2004; Nosek et al., 2006).

The link between secondary conditions and health disparities would be more evident by making comparisons to the general population. Only a few studies have made such comparisons using population-based datasets and, interestingly, most of them examine women's health issues. A study of women veterans with spinal cord injury and dysfunction found that they were more likely to have heart disease and lower health status, and were less likely to receive recommended dental care, colon cancer screening, mammogram, or Pap smears than women veterans with no disabilities (Lavela et al., 2006). The difference seemed to hinge on whether the receipt of services required the use of equipment, body adjustments, and potential discomfort due to disability. Chevarley and colleagues (Chevarley, Thierry, Gill, Ryerson, & Nosek, 2006) identified significant disparities in general health status, smoking, having hypertension, being overweight, and experiencing mental health problems for women with function limitations compared to those with no limitations. They were also less likely to have received Pap smear tests or mammograms, and were more likely to be unable to get general medical care, dental care, prescription medicines, or eyeglasses, regardless of age group, compared with women with no limitations. The main reasons reported for being unable to receive general care were financial problems or limitations in insurance.

Two studies examined disparities in specific disability categories. Working-age women with cognitive disabilities, despite having similar likelihoods of potential access to health care compared to nondisabled women, had markedly

worse rates of receiving cervical cancer and breast cancer screenings, similar rates of routine check-ups, and yet had better rates of receipt of influenza shots. They were also less likely to be satisfied with their medical care than were nondisabled women (Parish & Saville, 2006). Racial and ethnic disparities in health-related quality of life among stroke survivors were found to be more pronounced than in the nonstroke population (Xie et al., 2006). Significant differences were found in mental health, physical health, health utility, and self-rated health.

### **Misconceptions about the Health of People with Disabilities**

We have observed that many of the health disparities experienced by people with disabilities can be traced back to misconceptions held by the general public and medical professionals. Four of these are mentioned in Healthy People 2010. First is the assumption that all people with disabilities, by definition, have poor health. As mentioned above in the discussion of disability free life years, this assumption reflects the traditional tendency to medicalize all aspects of a disabled person's life and deny the parts of their life that are quite normal.

Second, there is a widespread misconception that public health should focus only on preventing disabling conditions. Thanks to the pioneering efforts of Michael Marge (Marge, 1988) and colleagues in the 1980s, the concept of primary, secondary, and tertiary prevention of secondary conditions was introduced as an obligation of public health providers and funders. Despite Federal funding initiatives to investigate secondary conditions and strategies that are effective in preventing and controlling them, far more public health dollars continue to be dedicated to eradicating disabilities than to improving the health of people who have incurable disabling conditions. While both emphases are needed, the balance of funding is far from equitable.

Third, the misconception that a standard definition of "disability" or "people with disabilities" is not needed for public health

purposes has prevented us from conducting scientific inquiry and expanding the body of knowledge about health in the context of disability. The disability literature is plagued with noncomparable findings because, until recently, every study used a different definition of disability to determine the inclusion criteria for their sample. Within the past decade, the U.S. Census Bureau, the Centers for Disease Control and Prevention, and the National Center for Health Statistics have worked with disability researchers to come up with a standardized definition of disability that focuses on functioning as well as impairment. The six pronged definition now in common usage for population based studies distinguishes sensory, physical, mental, or self-care disability or any combination of these, plus limitations in employment or going outside of the home.

Healthy People 2010 also mentions the damaging effects of the misconception that the environment plays no role in the disabling process. The World Health Organization's International Classification of Functioning, Disability, and Health (ICF) (WHO, n.d.) designates the environment as an essential component of the definition of disability. In addition to listing characteristics of the physical body, individual activities, and participation in society that indicate disability, the ICF lists characteristics of the environment that exacerbate functional limitations and inhibit participation in society. In this classification system, the environment includes products and technology, natural environment and human-made changes to environment, support and relationships, attitudes, and services, systems and policies.

Many other misconceptions underlie the health disparities faced by people with disabilities. The serious lack of gender awareness in rehabilitation medicine reflects the assumption that if it's true for disabled men, it's true for disabled women. Because rehabilitation services came about primarily in response to the needs of the injured war veterans, there has been serious neglect of the health concerns of women with disabilities. A classic example that parallels the

general women's health movement is the diagnosis and treatment of cardiovascular disease. Considerable progress has been made in the last decade to identify the unique characteristics of heart disease in women and develop treatments that will be more effective for women. For women with disabilities, however, the dearth of knowledge about heart disease, lack of vigilance for its presence in the midst of other disability related symptoms, and barriers to equipment used to diagnose it (for example, treadmills for stress tests) make it a looming crisis that has yet to reach the attention of researchers or health care providers.

### **Disparities in Sexual and Reproductive Health**

We have identified several root causes for the sexual and reproductive health disparities faced by people with disabilities, including misconceptions and false assumptions, educational barriers, and systems barriers.

**Misconceptions and false assumptions.** The stigma and social isolation associated with disability has led to an assumption that people with disabilities are not sexually active, are asexual, uninterested in sex, or unable to take part in sexual activity, or are sexual "monsters" unable to control their sexual drives and feelings (Anderson & Kitchin, 2000). Many studies have provided evidence that people with disabilities are indeed sexually active in very normal ways (McCabe & Taleporos, 2003; Nosek et al., 1996). When physicians have no knowledge of this and assume that sexuality is not an important issue, they are less likely to offer reproductive health services.

The assumption that childbirth is not a concern for women with disabilities denies their normal desires (Jackson & Wadley, 1999). It also underlies the serious lack of consumer and clinical information about risks and precautions of pregnancy, labor, and delivery for women with various disabilities. The specific gynecological and obstetrical needs of women with disabilities have only recently reached the attention of medical education programs (S. Welner, 1999; S. L. Welner & Haseltine, 2004).

**Educational Barriers.** A large segment of the disabled population has not had the same opportunity to pursue educational goals as the population in general and, therefore, they are at a disadvantage in understanding health information and pursuing health services. Those who were excluded from public education may have missed out on opportunities to learn about sexuality and reproduction while growing up. The normal avenue of learning about sexuality from social interactions may also not have been available to them due to the social isolation that accompanies childhood disability. Many women, however, report learning about sexuality from their disabled peers (Walter, Nosek, & Langdon, 2001).

Those who acquire disability later in life also face barriers to understanding how their disability affects their sexuality. People with new injuries who are able to access comprehensive rehabilitation may or may not receive counseling about sexuality depending on their length of stay and the quality of the program available to them. What sexuality and reproductive counseling services may be available through comprehensive rehabilitation will most likely be more relevant to men than women. People with progressive disabilities are less likely to access comprehensive rehabilitation and have even less opportunity to receive information about sexuality and disability.

People with spinal cord injury and other disabilities are in dire need of information and role models that can educate and encourage them to realize that it is possible to enjoy healthy, happy, sexual relationships and parenthood after the onset of disability. Impressive progress has been made over the past 10 years in the increasing fertility options for men with SCI (Heruti et al., 2001; Linsenmeyer, 2000; Monga, Bernie, & Rajasekaran, 1999). Within the past decade, investigators have begun studying sexuality in women with disabilities (Nosek, Howland, Rintala, Young, & Chanpong, 2001), including sexual response and women with SCI (Sipski, 2001; Sipski & Arenas, 2006). While most professionals in rehabilitation medicine are aware of these advances, we are a

long way from having this information reach the primary care providers who will have most immediate contact with the majority of people with disabilities.

The wellness needs of people with disabilities are rarely, if ever, addressed in medical training, resulting in a healthcare work force that is unequipped to deal with ordinary health needs in the context of disability. Medical providers have little or no opportunity to learn about sexual and reproductive health in the context of disability, either in pre-service training or continuing education. The often heard remark, "I treat all my patients the same" illustrates the lack of familiarity most physicians have with secondary conditions and other specific health maintenance needs of people with disabilities. There is widespread agreement among people with disabilities that they experience substantial difficulty finding physicians and other medical providers who have the knowledge about disability necessary to provide them with quality health care.

**Systems Barriers.** Systems barriers generate from several sources, including the built environment, health care coverage programs, and policies governing the delivery of medical services. Barriers in the built environment include not only inaccessible medical facilities and services, but also equipment that is not usable by people with certain disability-related limitations. The lack of elevating examination tables and mammography equipment that can only accommodate women in a standing position have been cited as serious barriers for women with physical disabilities who are trying to get breast and cervical cancer screening (Centers for Disease Control and Prevention, 1998; Nosek & Howland, 1997).

Limitations in the coverage of health services under Medicaid, Medicare, and private health insurance plans severely limit the ability of people with disabilities to access quality health care services (Iezzoni & O'Day, 2006). Many times the equipment and medications needed by people with disabilities are simply not covered under these plans; other times coverage is so minimal as to make obtaining them unfeasible.

A study by the Kaiser Family Foundation showed that many people with disabilities report having postponed care (37 percent) or gone without necessary items such as equipment and eyeglasses (46 percent) because of cost. In addition, 36 percent of the overall sample reported having skipped medication doses, split pills, or gone without filling a prescription altogether to save money (Hanson, Neuman, Dutwin, & Kasper, 2003).

Policies that require screening by a primary care provider before accessing specialists and the ensuing delays in treatment can result in the unnecessary worsening of secondary conditions that people with disabilities must deal with on a regular basis. These limitations in coverage cross the spectrum of health care insurance, but are more severe in publicly funded programs. Many physicians will not accept government payment for services and government funded clinics are characterized by excessive demand and extreme delays in delivering services. Although many assume that all people with disabilities receive government income support and health coverage, there is a large and growing segment of the population that is not disabled enough or not poor enough to qualify for these benefits.

Some systems barriers stem from policies that are created by individual practices. Some physicians refuse outright to see people with disabilities, claiming they are not equipped to handle their special needs and that they would be better served by seeing specialists (Nosek & Howland, 1997). The Americans with Disabilities Act (USDOJ, 1990) requires that all providers of health care offer services to people with disabilities that are equally accessible and equal in quality compared to services provided to others. Furthermore, specialists are even less likely to have knowledge or experience related to the ordinary health needs of people with disabilities. While many people with disabilities claim that they receive all the health care they need from their disability-related specialist, it is wholly inappropriate to expect, for example, a rheumatologist to provide well woman checkups.

There are many serious consequences of these barriers to sexual and reproductive health care for people with disabilities. The greatest is the failure to detect many potentially life threatening health problems, including sexually transmitted infections, HIV/AIDS, pelvic inflammatory disease, and ectopic pregnancy, as well as the failure to prevent problems with infertility, pregnancy, labor, delivery, and post-partum care. Lower levels of cancer screening result in diagnosis at later stages and higher mortality rates compared to women without disabilities (Caban, Nosek, Graves, Esteva, & McNeese, 2002).

### **Pathways to Change**

In conclusion, we offer six pathways for bringing attention to and removing health disparities faced by people with disabilities:

1. Include information about wellness in the context of disability in the education of physicians and other health care providers.

Disability must be treated as a life context rather than merely as a pathology. Providers who understand and consider how the spectrum of personal and environmental factors can alter the effectiveness and appropriateness of traditional medical practices will be able to deliver higher quality health care to this population. We endorse an expansion of funding for the development of continuing medical education programs, live and via the Internet, to disseminate information about health care for people with disabilities and encourage health care professionals to incorporate it into their practice. Until such programs are generally available, we encourage medical professionals to take advantage of the availability of new information resources about health and disability on the Internet. Communication and collaboration with disability specialist can provide useful information for the treatment of individual patients.

2. Offer empowerment opportunities to people with disabilities so they may obtain the information they need to take control of and actively participate in their health care.

Self-advocacy training is available at many independent living centers and other disability related service providers nationwide. Encouraging involvement in these disability advocacy organizations can help people with disabilities improve both their self-advocacy skills and social connectedness. Much can be learned by interacting with individuals who have dealt with similar disability-related health problems and come up with their own solutions.

There is a growing body of information about how people with disabilities can remove or deal with barriers in their health care environment and work more effectively with their health care providers. Many materials have been developed in recent years to inform and advise people with disabilities and local officials on strategies for implementing appropriate emergency response measures in response to natural disasters and other social crises. See, for example, the materials produced by the Center for Disability Issues in the Health Professions (2004).

Although health promotion programs and facilities abound in most localities, few are accessible to people with disabilities or equipped to deal with their special needs. Information about removing these barriers to programs that enhance physical, psychological, and social health is available at the National Center for Physical Activity and Disability (2006).

3. Promote compliance with the Americans with Disabilities Act (USDOJ, 1990).

Considerable information is available on the Internet about the specific requirements under the Americans with Disabilities Act (USDOJ, 1990). Ten regional Disability and Business Technical Assistance Centers (DBTAC) offer online access to technical assistance, training, and materials dissemination on topics related to the Americans with Disabilities Act and other disability-related legislation. See, for example, the Disability and Business Technical Assistance Center (DBTAC) for the southwest region at Independent Living Research Utilization (ILRU) (DBTAC, n.d.).



Compliance with the Americans with Disabilities Act requires not only familiarity with the regulations that implement the law, but also the interest, willingness to change, and most of all, the initiative and creativity of staff at individual programs. There are various means for accommodating special needs in order to make programs and services equally beneficial to all. In the final analysis, compliance is a matter of setting priorities.

4. Remove barriers to participation by people with disabilities in health research and education.

It is an unfortunately widespread practice to exclude people with disabilities from participation in scientific and clinical research. Eligibility criteria often include such items as being able to come to a certain location, having the ability to stand in order to be weighed, and taking certain medications that may be contraindicated in some types of disabilities. A classic example is the NIH Women's Health Initiative, where platform scales were not required in any of the participating clinical sites, individuals had to be able to walk in order to be eligible, and one arm of this study required taking calcium supplements, which is not recommended for individuals with advanced joint and connective tissue disorders. Some of these restricted eligibility criteria are necessary for the scientific integrity of the study design; however, applicants for funding should be required to justify all such restrictions that would serve to systematically excluded people with disabilities.

The state of the art of research on health promotion for people with disabilities is embryonic. Occasional requests for applications have been issued by the National Institutes of Health, Centers for Disease Control and Prevention, and the National Institute on Disability and Rehabilitation Research. The amount of money dedicated to these funding opportunities, however, has been minimal, and its availability is very short term.

Section 508 of the Rehabilitation Act amendments of 1998 (US General Services

Administration, 2006) requires that web sites be accessible to and usable by people with disabilities, particularly those who use assistive devices such as screen readers to interface with their computers. Information is available on how to make web sites accessible in this way. See, for example, the website by Accessible Webdesign LLC (2006). Nowhere in these requirements for information resources is there advice on how to make the content of the web site disability relevant. Health-oriented web sites should include information on the effect of disability on wellness.

Educational curricula for health care and rehabilitation providers should include the development of disability, cultural, and linguistic competence. Materials are readily available for teaching competence in delivering services to members of minority and certain income groups; however, parallel information about people with disabilities is very difficult to find. There is an urgent need to increase funding for the development of these materials and their dissemination through appropriate venues.

5. Acknowledge people with disabilities as a health disparities population and include their issues in national health care policy.

Advocacy is needed for increased federal and private funding for research on the health and wellness of people with disabilities and strategies for removing the disparities they face in achieving good health and accessing health care services. A first step may be the formal recognition of people with disabilities as a health disparities population under the Minority Health and Health Disparities Research and Education Act of 2000 with a requirement that the National Center on Minority Health and Health Disparities at the National Institutes of Health include the population of people with disabilities in its planning and reporting activities.

Attention also needs to be paid to the disproportionate negative effect on people with disabilities of our current national health care crisis. People with disabilities are far more likely to be denied health care coverage due to preexisting conditions or offered insurance

policies that severely restrict their access to needed services and medication. Advocacy is needed to address health coverage disparities through legislation to provide some means of access to health care regardless of employment status or pre-existing conditions. There is an urgent need to revise definitions of medical necessity and decision-making processes so that they are more inclusive of services that address the long term needs of people with disabilities.

Boards and organizations that set the content and levels of minimum competencies for medical certification must include topics related to wellness in the context of disability. Only in this way will medical education institutions have the incentive to expand their curricula to include these topics.

6. Encourage media coverage of health issues for people with disabilities and the portrayal of successful, healthy people with disabilities in publicity related to all health topics.

Creating a public interest in the serious inequities and gaps in health care for people with disabilities will be the force behind the

ultimate removal of these disparities. Just as it is now common practice to include diversity in the racial and ethnic representation of people portrayed in health promotion materials and publicity, people with disabilities must also be represented. By whatever means necessary, the generation of new knowledge that will contribute to better health for people with disabilities must reach the print and broadcast media so it can be disseminated to both people with disabilities and their physicians. By the generating media coverage of these issues we can increase the demand for information and excellence in health care.

One of the most enduring roots of the health disparities faced by people with disabilities is social isolation. Even individuals surrounded by loving families and involved in progressive education programs may perceive that they are the only ones dealing with their particular health problems. We have seen considerable progress in recent years in the visibility of people with disabilities in the public and media. By continuing and reinforcing this trend, we can promote images of healthy and vibrant people with disabilities that will serve as role models for individuals in all segments of our society.

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