Counseling psychology has maintained an historic interest in the well-being of people who live with chronic and disabling health conditions. Indeed, the term counseling psychologist was coined by the Veterans Administration as it formalized psychological services for veterans returning from World War II. Many of these veterans had incurred disabling conditions in service to their country (Whitely, 1984). However, it may be argued that, over subsequent decades, counseling psychology has strayed from its initial concern with research, service, and policy issues associated with disability. This evolution has been partly influenced by federal and state funding agencies that assumed leadership for resolving the health, vocational, and social inequities faced by persons with disabilities. During the golden age of this federal sponsorship (Rusalem, 1976), federal legislation mandated funds to expand health, vocational, and educational services to persons with disabilities; train professionals to provide these services; and increase architectural accessibility (see Elliott & Leung, 2005).

Many counseling psychology training programs benefited from this support. Counseling psychology faculty at the University of Minnesota obtained funds that sponsored the development and refinement of the Minnesota Theory of Work Adjustment (Dawis & Lofquist, 1984). Federal funds obtained by the counseling psychology faculty at the University of Missouri-Columbia resulted in the publication of one of the most influential documents in vocational rehabilitation (McGowan & Porter, 1967). Federal funds also supported graduate students who would eventually assume leadership positions in the Division of Counseling Psychology. Many counseling psychologists (e.g., John McGowan, Cecil Patterson) were also elected to leadership positions of associations representing rehabilitation counseling.

Federal initiatives were responsible for initiating the systematic study of psychological and social issues related to disabilities, helping to spur the growth of counseling psychology. Studies of attitudinal and social factors that impede access to services formed some of the early pioneering work that defined the social-clinical-counseling psychology interface. Federal initiatives also mandated the study of racial and ethnic factors in disability and adjustment, long before multicultural issues were realized.
as the “fourth force” in psychology (Pedersen, 2000). However, much of this work was atheoretical in nature as a clear premium was placed on the refinement of existing medical and vocational services to persons with disability.

Over the past 40 years, studies of disability have become synonymous with the field of vocational rehabilitation. During this time, psychologists in medical settings and comfortable with medical model conceptions of disability have been increasingly likely to study psychological aspects of the disability experience and to provide psychological services to persons with disabilities. Counseling psychology’s involvement in the study of disability has waned during this same period. This decline is reflected in the decreased appearance of disability-related articles in the *Journal of Counseling Psychology*. Disability-related topics (physical, intellectual, and sensory disabilities and associated services) appeared in the titles of 18 articles published in the 10 volumes of the journal published from 1970 through 1979. But it took another 27 volumes of the journal for the next set of 18 articles on disability to accumulate over the years 1980 through 2006 (volumes 27 through 53).

Many factors now compel us to regard disability from a new perspective as counseling psychology enters the twenty-first century. Persons with disabilities constitute one of the largest minority groups in the United States. In addition, an estimated 45% of persons in the United States live with a chronic health condition that has some disabling features (World Health Organization [WHO], 2002). Health care policy and service delivery systems have been overwhelmed by the costs incurred in responding to the acute and long-term needs of these individuals. These changes have ushered in new challenges and unanticipated opportunities for counseling psychologists. This chapter is based on the assumption that it is important to prepare the current and next generation of counseling psychologists for these challenges and opportunities. To aid this process, we review historical conceptions of disability, and in particular, how these conceptions have been altered by a new classification system developed by the World Health Organization—the *International Classification of Functioning, Disability, and Health* (*ICF*; WHO, 2001). The *ICF* is reviewed next and its implications for counseling psychology theory, research, practice, and training is discussed.

## Prevalence of Disability

Approximately 49.7 million people in the United States live with some type of long-lasting health condition or disability (U. S. Census Bureau, 2003). Of this number, 9.3 million (almost 4%) have a sensory disability involving sight or hearing; 2.2 million (over 8%) have a condition limiting basic physical activities, such as walking, climbing stairs, reaching, lifting, or carrying; 12.4 million (almost 5%) live with a physical, mental, or emotional condition causing difficulty in learning, remembering, or concentrating; 6.8 million (2.6%) live with a physical, mental, or emotional condition
causing difficulty in dressing, bathing, or getting around inside the home; 18.2 million people aged 16 and older live with conditions that make it difficult to go outside the home to shop or visit a doctor; and 21.3 million of those age 16 to 64 live with a condition that affects their ability to work at a job or business. Disability rates escalate with age for both men and women, and over 46% of people with a disability report having more than one disabling condition. Persons between the ages of 16 and 64 are less likely to be employed if they are disabled and 8.7 million people with disabilities experience low socioeconomic status (U.S. Census Bureau, 2003). These data are based on reports from only those persons who responded to the Census 2000 form and, thus, may significantly under-represent persons living with chronic disabilities in the United States.

**Increases in Disability Rates**

Chronic health and disabling conditions are increasing throughout the world (WHO, 2002). In the next 15 years, it is estimated that chronic, disabling conditions and mental disorders will account for 78% of the global disease burden in developing countries (WHO, 2002, p. 13). The disability experience can be influenced by access to rehabilitative services, cultural stereotypes among service providers, national differences in approaches to treating disabilities, service utilization and health care costs in different countries and cultures, disparities in the epidemiology of various disabilities at the international level, differences in governmental policies, collaborative efforts between health care providers and grassroots leaders, and differences in values and views of disability in various societies (WHO, 2002). Differences may also exist in cultural meanings attached to disability and quality of life, in attitudes and perceptions of disability, and in the role of the family and society relative to disability management (Murdick, Shore, Chittooran, & Gartin, 2004).

**Causes and Costs**

Advancements in medical technology have resulted in improved treatment of acute medical conditions and longer life expectancy for people with disabilities (Peterson & Aguiar, 2004; Tarvydas, Peterson, & Michaelson, 2005). Many disabilities result from lifestyle factors that include unhealthy behaviors and consumption patterns, inadequate prevention of disease and injuries, or from improper management of other chronic health conditions (WHO, 2002). Well-known health problems associated with disability include diabetes (American Diabetes Association, 2003), obesity (National Task Force on the Prevention and Treatment of Obesity, 2000), cardiovascular disease (Keil et al., 1989), and multiple visual impairments (Rudberg, Furner, Dunn, & Cassel, 1993).

Disability imposes serious economic consequences (WHO, 2002). Direct and indirect costs associated with disability are expected to escalate with the increasing
number of persons who will live with a disability over the next several decades (U.S. Department of Health & Human Services, 2000). On average, persons with disabilities spend more than four times as much on medical care, services, and equipment as their nondisabled counterparts (Max, Rice, & Trupin, 1995). In general, higher health care costs are associated with chronic physical disability and its secondary complications. These costs include loss in employment productivity, impaired quality of life, problems with psychosocial functioning, and management of chronic disease and disability, along with the acute episodes of care associated with such conditions (Hansen, Fink, Frydenberg, & Oxhoj, 2002; Kessler, Greenberg, Mickelson, Meneades, & Wang, 2001).

**Challenge of Defining Disability**

Disability has usually been defined by the prevailing medical and legal systems in particular cultures. Less attention has been given to contextual factors (e.g., social and technological contributions) and subjective attributes that substantially affect a person’s experience of disability. Although consensus as to what is or is not disability has not been easy to achieve, it is critically important to agree how disability is identified. In doing so, those who are disadvantaged by their experience of disability can be identified, their life experiences compared with those who are not disabled, and disparities in life experiences can be noted so that inequalities can be observed, measured, and ultimately remedied (Leonardi, Bickenbach, Üstün, Kostanjsek, & Chatterji, 2006).

The various and multidisciplinary definitions of disability in clinical, legal, and academic circles have complicated efforts to develop, sponsor, and enact effective policy and service for persons who live with disabling conditions (Walkup, 2000). We next discuss several models of disability, including the impact of the WHO’s (2001) latest health classification system (the *ICF*) on how disability is defined and classified today.

**Foundational Models of Disability**

Several different models of disability have dominated professional thinking over the years, including the medical model, the social model, and the biopsychosocial model. Although it continues to be influential, the medical model’s shortcomings, the ascendance of the civil rights movement in the United States, and related disability activism gave rise to an opposing social model of disability. Given a growing population of people with disabilities and a related increase in stakeholders, more recent models of disability acknowledge the central role of social factors in understanding the causes and consequences of disability, supporting a more integrative biopsychosocial model of disability. In this section, we describe and critique three major models of disability, and compare their development to the evolution of the *ICF*. 
Medical Model

Early efforts to describe population health originally focused on the prevalence of medical diagnoses and causes of death (see Peterson, 2005). The medical model of disability grew out of this focus, which emphasized the diagnosis and treatment of disease, disorder, or injury (WHO, 2001); health problems are diagnosed and specialized services are prescribed to cure the problem (Kaplan, 2002). This perspective has been relatively effective in the detection and treatment of acute health problems.

Over time, advances in science, directed largely by the medical model, have allowed researchers to describe disease processes and their related etiologies more accurately. Thus, the medical model is responsible for the rapid and effective response to the acute needs of persons with physical disabilities and other chronic health conditions, and the first initiatives to address issues of improved care, survival, and quality of life can be attributed to professions that embraced the medical model. In the United States, medical definitions of disability provide the cornerstone for determining disability for legal and occupational purposes, and for determining eligibility for financial assistance (Chan & Leahy, 1999; Tarvydas et al., 2005). The International Statistical Classification of Diseases and Related Health Problems, tenth revision (ICD-10; WHO, 1992) was first formalized in 1893 as the Bertillon Classification or the International List of Causes of Death (the ICD acronym persists to this day). The ICD provides an etiological classification of health conditions (e.g., diseases, disorders, injuries) related to mortality (death) and morbidity (illness). The ICD is a good example of the medical model’s influence on the classification of health and disability.

The value of the medical model is clearly apparent in several areas, such as in the design of triage services that preserve life and allay acute problems following the onset of physical disability, and in serving the acute care needs of those living with disability. However, the model has difficulty accommodating the types of permanent and chronic long-term care needs that would promote optimal health and life quality in persons living with a disability. The needs of increasing numbers of persons with chronic health conditions are also not adequately addressed by institutions that are committed to the delivery of services for acute, short-term conditions.

The medical model relies heavily on measures and tests of the disease process. Consequently, the model places a limited value on subjective reports of quality of life and well-being. Adherence to the medical model can also lead health providers to undervalue patient input concerning treatment options and recommendations for prescribed regimens. From the medical model perspective, the successful diagnosis and treatment of acute conditions does not hinge substantially on the accuracy or quality of patient input.

A growing body of research suggests that diagnostic information alone, without functional data, may not adequately reflect an individual’s health condition. Disease or impairment may manifest differently across individuals; similar functioning does not imply similar health conditions. Diagnoses alone do not sufficiently predict length
(McCrone & Phelan, 1994) or outcome (Rabinowitz Modai, & Inbar-Saban, 1994) of hospitalization, level of necessary care (Burns, 1991), service needs (National Advisory Mental Health Council, 1993), work performance (Gatchel, Polatin, Mayer, & Garcy, 1994), receipt of disability benefits (Basset, Chase, Folstein, & Regier, 1998; Massel, Liberman, Mintz, & Jacobs, 1990; Segal & Choi, 1991), or social integration (Ormel, Oldehinkel, Brillman, & vanden Brink, 1993). Leonardi et al. (2006) note that it is important to distinguish between objective descriptions of the “disability experience” and an individual’s satisfaction with that experience: “. . . data about quality of life, well-being, and personal satisfaction with life are useful for health and policy planning; but these data are not necessarily predicted by the presence or extent of disability” (p. 1220).

The course of chronic disease and disability over the life span is substantially influenced by behavioral and social mechanisms. The medical model and related diagnostic information have been shown to have limited capacity for assessing and making changes in these important domains. Further, health care services provided in the medical model paradigm are contingent on third-party reimbursement and the ability of specific programs and administrative systems to absorb financial losses not covered by third-party payers. Financial costs associated with chronic and disabling conditions have strained health care delivery systems grounded in the medical model; cost-containment efforts have often involved cuts in disability services and insurance coverage.

**Social Model**

In contrast to the medical model, the social model of disability considers the role of environmental facilitators and barriers in health and functioning (Hurst, 2003; Smart, 2005). In this paradigm, disability is not just a personal attribute, but a complex social construct reflecting the interaction between the individual and environment (WHO, 2001). The social model focuses on the barriers and facilitators to daily activities, life skills, social relations, life satisfaction, and participation in society. This model suggests that any problem related to disability is not just due to the person with the disability, but rather is also influenced by societal attitudes and barriers in the environment.

The social model, favored by advocates for the civil rights of persons with disability, highlights the need for increased access and opportunities for people with disabilities; it disapproves of the medical model as a template for policy decisions concerning disability. Variations of the social model have appeared in the “new paradigm” of disability (National Institute of Disability Research & Rehabilitation, 1999—2003) and as a social-constructionist model in the disability studies literature (Olkin, 1999). In this paradigm, the individual is seen as the organizing core, but impairments are defined by the environment. The environment is typically construed as the “major determinant of individual functioning” (Pledger, 2003, p. 281).
Despite underscoring the social conditions that affect the quality of life of persons living with a disability, the social model does not clearly distinguish who qualifies as a person with a disability (or how disability is measured or determined). Researchers in this tradition have yet to establish a distinct body of scholarship that systematically posits empirically testable and potentially falsifiable hypotheses. Moreover, some proponents appear to regard psychological theory and scholarship as a continuation of a medical model that equates disability with person-based pathology that is largely independent of environmental and social factors (see Olkin & Pledger, 2003).

**Biopsychosocial Model**

The biopsychosocial model integrates useful aspects of both the medical and social models (Peterson & Rosenthal, 2005; Simeonsson, et al., 2003; Ueda & Okawa, 2003). This perspective permeates the psychological literature and is consistent with contemporary rehabilitation processes and practice (Frank & Elliott, 2000; Parker, Szymanski, & Patterson, 2005). The biopsychosocial model of disability considers the interactive effects of disease (disability parameters), psychosocial stressors, and personal and environmental factors that account for varying degrees of adaptation. Rehabilitation professionals have long acknowledged the role of environmental and attitudinal barriers in society, and advocated for their mitigation to improve life conditions for persons with disabilities (Scherer et al., 2004).

Biopsychosocial models—usually developed to study adjustment associated with specific disability diagnoses (e.g., spinal cord injury, traumatic brain injury, multiple sclerosis)—have proliferated in the rehabilitation psychology literature (e.g., see Frank & Elliott, 2000). These models typically attempt to integrate medical aspects of a given diagnostic condition with important psychological (e.g., personality traits, coping abilities) and social (e.g., stress, social support) variables and their various interactions in the prediction of optimal adjustment. More recent variants of this model emphasize the primacy of subjective, phenomenological appraisals of resources, stressors, and contextual issues across diagnostic conditions (Elliott, Rivera, & Kurylo, [AU: Order is Elliott, Kurylo, & Rivera in refs, please correct there or here.] 2002). This shift is based partly on evidence that (a) individual differences and other psychological characteristics usually account for greater variance in the prediction of adjustment among persons with disability than does any condition-specific variable, and that (b) stressors appear to vary as a function of psychological and social characteristics rather than being due to specific diagnostic conditions (with a few exceptions occurring among conditions that impose severe disruptions in brain-behavior relations).

Emanating from the biopsychosocial approach, the ICF is based on an integration of the medical and social models of disability and addresses biological, individual, and societal perspectives on health (Peterson, 2005). The ICF’s interactive conceptual framework illustrates how facilitators and barriers in the environment are key factors in
understanding disability and how advocacy occurs through social change (Hurst, 2003). Most important, the individual’s appraisals of environmental assets and liabilities, personal body functions, and his or her ability to participate in desired personal and social activities, are important considerations in classifying functioning, disability, and health with the ICF (see Peterson & Threats, 2005, for a discussion of the 11 provisions for ethical use of the ICF). We next turn to a discussion of the ICF.

Disability and the International Classification of Functioning, Disability and Health

The paradigm shift from the medical to social and biopsychosocial models of disability is reflected in the evolution of the ICF (WHO, 2001). The ICF has enjoyed support from professions and consumer advocacy groups throughout the international community. The promise of the ICF is that it can be a stimulus for significant developments in theory, research, policy, and practice applications (Bruyère & Peterson, 2005), the results of which can be used to help identify, mitigate, or remove societal hindrances to the full participation of people with disabilities in mainstream society (Peterson & Rosenthal, 2005).

A variety of literature reviews have discussed and critiqued the ICF (see volume 50 of Rehabilitation Psychology, 2005; volume 19 of Rehabilitation Education, 2005; and volume 25 of Disability & Rehabilitation, 2003). Although the ICF is described briefly in the next section, such an overview is not an adequate substitute for reviewing the ICF itself in its entirety, the related literature, or for attending training provided by those who are expert in its use.

The ICF is “a classification of human functioning and disability” (WHO, 2001, p. 21). Initially drafted as the International Classification of Impairments, Disabilities, and Handicaps (ICIDH) by the World Health Organization (WHO, 1980), the ICF was intended to complement its sister classification system, the ICD (WHO, 1992), currently in its tenth revision. The ICD classifies mortality and morbidity, whereas the ICF classifies functioning, disability, and health, and they are designed to be used together.

The ICF was endorsed for international use by the 54th World Health Assembly in 2001, and was subsequently accepted by 191 countries as the international standard to classify health and health-related states (Bruyère & Peterson, 2005). The ICF provides a new way to talk about health that avoids the use of diagnostic labels exclusively and promotes a complementary use of universal classifications of function. The ICF uses a culturally sensitive, integrative, and interactive model of health and functioning that is
sensitive to social and environmental aspects of health and disability (Üstün, Chaterji, Bickenbach, Kostanjsek, & Schneider, 2003).

The ICF definitions have a noticeably positive, health-oriented focus. Impairments are no longer defined as problems, but as:

*a loss or abnormality in body structure or physiological function (including mental functions). Abnormality here is used strictly to refer to a significant variation form established statistical norms (i.e., as a deviation from a population mean within measured standard norms) and should be used only in this sense. (WHO, 2001, p. 213)*

The ICF codes classify a variety of functional data that enhance our ability to target appropriate interventions and effectively measure their outcomes (Leonardi et al., 2006; Peterson, 2005).

### Disability Defined by the International Classification of Functioning, Disability and Health

The ICF conceptualizes disability as an overarching term that refers to any impairments, activity limitations, or participation restrictions, or “the outcome or result of a complex relationship between an individual’s health condition and personal factors, and of the external factors that represent the circumstances in which the individual lives” (WHO, 2001, p. 17). The term disability emphasizes the interaction between individual, societal, and body-related aspects of impairments, activity limitations, and participation restrictions in the environment that can be used to describe both how environmental factors are key to understanding disability, and how disability advocacy occurs through social change (Hurst, 2003). Although disability is defined in the ICF proper, it is operationalized by “activity limitations” (p. 213). The antiquated term handicap is replaced by participation restriction: “Impairments are interactions affecting the body; activity limitations are interactions affecting [an] individual’s actions or behavior; participation restrictions are interactions affecting [a] person’s experience of life” (Leonardi et al., 2006, p. 1220).

### International Classification of Functioning, Disability and Health Conceptual Framework

The ICF conceptual framework is depicted in Figure 13.1 (WHO, 2001, p. 18). The ICF uses labels complementary to the biopsychosocial model of disability, and permits separate ratings along dimensions of body structure and function or impairment.
at the organ level, activity (versus activity limitation) and participation (versus participation restriction) at the person level, and environmental facilitators or barriers at the societal level. It allows for an analysis of functioning across several dimensions and does not regard a specific medical diagnosis as a concept that determines functioning, health, or disability.

Figure 13.1 Interactions between the Components of the ICF. From *The International Classification of Functioning, Disability and Health* (p. 18), by the World Health Organization, 2001, Geneva, Switzerland: Author. Copyright 2001 by the World Health Organization. Reprinted with permission. [c13f01.eps]

**Universe of Well-Being**

The *ICF* focuses on *health and well-being* by referring to components of health that are typically a focus of health care professionals (e.g., seeing, hearing, speaking, remembering, learning, walking), and to components (*health-related components of well-being*) that are not typically a focus of health care systems (e.g., labor, education, employment, social interactions, and transportation). Thus, the *ICF* was not designed to classify disability exclusively; it also classifies *health* and *health-related* states that make up a *universe of well-being*.

*Functioning* in the *ICF* includes all body functions, activities, and participation in society. As Figure 13.1 suggests, the *ICF*’s conceptual framework provides a model of functioning and disability that is dynamic, with reciprocal relationships between the various health-related conditions in the context of environmental and personal factors. The *ICF* does not currently classify personal circumstances such as socioeconomic status, race, gender, religion, or culture that may restrict full participation in society for reasons not related to health. The Personal Factors component in the conceptual framework of the *ICF* is important because it highlights the need to consider complex ipsative and social factors that inform classifications of health and functioning.

**Impairment**

*Impairments* are the manifestations of dysfunction in the body structures or functions. The etiology of a particular dysfunction is not the focus of the *ICF*, but rather is the focus of its sister classification, the *ICD-10* (WHO, 1992). Impairments do not necessarily imply the presence of a disorder or disease but “represent a deviation from certain generally accepted population standards” of functioning (WHO, 2001, p. 12). Determination of impairment is made by “those qualified to judge physical and mental functioning according to these standards” (p. 12).
Structure of the International Classification of Functioning, Disability and Health

The ICF is made up of two parts, each with two components: The first part of the ICF describes the individual via Functioning and Disability; the second part addresses Contextual Factors. All components are further divided into chapters that contain categories of function in a given domain of health and health-related states. The units of classification are qualified with numeric codes that specify the magnitude or extent of disability or function in a given category or, within the case of environment, the extent to which a factor in the environment is a facilitator or a barrier.

There are two versions of the ICF: the full version that provides four levels of classification detail, and the short version that provides two levels of classification. In addition to an alphabetical index that organizes the hardcopy version of the ICF, the WHO created an electronic version of the ICF that is searchable through the ICF Browser (www.who.int/classifications/ICF/en/) or CD-ROM (WHO, 2001).

Part One: The Individual

In the first part, Functioning and Disability, there are two components: The first component, Body, consists of two parallel classifications, Body Functions and Body Structures. The second component, Activities and Participation, covers domains of functioning from both an individual and societal perspective. The two components of functioning in the first part of the ICF can be expressed either as nonproblematic functioning or as disabilities (i.e., impairment, activity limitation, or participation restriction), and are operationalized through four separate but related constructs. Body Functions and Structures are interpreted through changes in physiological systems or anatomical structures, and Activities and Participation are interpreted though capacity and performance (WHO, 2001).

Part Two: The Context

The second part of the ICF classification describes Contextual Factors through two components, Environmental Factors and Personal Factors. Environmental Factors are factors in the physical, social, or attitudinal world ranging from the immediate to more general environment. Environmental Factors are qualified as either facilitating or hindering functioning. The second component of Contextual Factors is Personal Factors, which is comprised of personal attributes such as race, age, fitness, religion, lifestyle, habits, upbringing, coping styles, social background, education, profession, past and current experience, overall behavior pattern and character style, and individual
psychological assets (WHO, 2001). A summary of the ICF chapters is listed in Table 13.1.

### Table 13.1 Summary of ICF Chapters

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>BODY FUNCTIONS</th>
<th>BODY STRUCTURES</th>
<th>ACTIVITIES AND PARTICIPATION</th>
<th>ENVIRONMENTAL FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CODE LETTER</td>
<td>B</td>
<td>S</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>8 PARALLEL CHAPTERS</td>
<td>9 CHAPTERS</td>
<td>5 CHAPTERS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chapter 1</td>
<td>Mental functions</td>
<td>Structures of the nervous system</td>
<td>Learning and applying knowledge</td>
<td>Products and technology</td>
</tr>
<tr>
<td>Chapter 2</td>
<td>Sensory functions and pain</td>
<td>The eye, ear, and related structures</td>
<td>General tasks and demands</td>
<td>Natural environment and human-made changes to environment</td>
</tr>
<tr>
<td>Chapter 3</td>
<td>Voice and speech functions</td>
<td>Structures involved in voice and speech</td>
<td>Communication</td>
<td>Support and relationships</td>
</tr>
<tr>
<td>Chapter 4</td>
<td>Functions of the cardiovascular, hematological, immunological, and respiratory systems</td>
<td>Structures of the cardiovascular, immunological, and respiratory systems</td>
<td>Mobility</td>
<td>Attitudes</td>
</tr>
<tr>
<td>Chapter 5</td>
<td>Functions of the digestive, metabolic, and endocrine systems</td>
<td>Structures related to the digestive, metabolic, and endocrine systems</td>
<td>Self-care</td>
<td>Services, systems, and policies</td>
</tr>
<tr>
<td>Chapter 6</td>
<td>Genitourinary and reproductive functions</td>
<td>Structures related to the genitourinary and reproductive systems</td>
<td>Domestic life</td>
<td></td>
</tr>
<tr>
<td>Chapter 7</td>
<td>Neuromusculoskeletal and movement-related functions</td>
<td>Structures related to movement</td>
<td>Interpersonal interactions and relationships</td>
<td></td>
</tr>
<tr>
<td>Chapter 8</td>
<td>Functions of the skin and related structures</td>
<td>Skin and related structures</td>
<td>Major life areas</td>
<td></td>
</tr>
</tbody>
</table>
Levels of Classification

Domains in the ICF are practical and meaningful sets of related physiological functions, psychological functions, and anatomical structures. These functions also include actions, tasks, and areas of life described from bodily, individual, and societal perspectives (WHO, 2001).

The one-level classification of the ICF includes the following components:

- The Body Functions component contains 8 chapters that address “physiological functions of body systems (including psychological functions)” (WHO, 2001, p. 12).
- The Body Structures component contains 8 chapters that parallel the Body Functions component and deal with “anatomical parts of the body such as organs, limbs, and their components” (p. 12).
- The Activities and Participation component contains 9 chapters, with Activities addressing “the execution of a task or action by an individual” and Participation addressing “involvement in a life situation” (p. 14).
- The Environmental Factors component contains 5 chapters focusing on “the physical, social, and attitudinal environment in which people live and conduct their lives” (p. 171), organized from the immediate to more general environment.

The two-level classification is comprised of specific chapter headings. For each chapter, alphanumeric codes are used to indicate chapters (e.g., b for Body Functions, s for Body Structures, d for Activities and Participation, and e for Environmental Factors) and specific categories in each chapter. For example, the classification associated with the psychological function of emotion is found in the first chapter of Body Functions (code “b”) under the specific mental function section, called Emotional Functions, or alphanumeric code b152 (WHO, 2001).

The Detailed Classification with Definitions lists all categories in the ICF along with their definitions, inclusions, and exclusions, providing the greatest level of detail using four- and five-digit numeric codes. Examples of the detail level in Emotional Functions could include appropriateness of emotion (b1520), regulation of emotion (b1521), and range of emotion (b1522).
Body Functions and Structures

The criteria for impairment are the same for Body Functions and Structures and are classified according to (a) loss or lack, (b) reduction, (c) addition or excess, and (d) deviation. Codes have qualifiers to indicate a magnitude or level of health for a given code. The Body Function component qualifies impairment with a Likert-type scale (ranging from “mild” to “complete” impairment; WHO, 2001, p. 47). The Body Structure component also uses a Likert-type scale to qualify severity of impairment and the nature of change in a specific body structure. A different qualifier is used to indicate the location of the impairment.

Activities and Participation, and Capacity and Performance

This second component under Functioning and Disability classifies nine domains of functioning from both individual and societal perspectives (see Table 13.1). In all instances, the Body Functions and Structures component is intended to be used with the Activities and Participation component. The term activity is defined as the execution of a task or action by an individual such as sitting, copying, calculating, or driving. The term participation is defined as involvement in a life situation. As with the term impairment, activity limitations and participation restrictions “are assessed against a generally accepted population standard” (WHO, 2001, p. 15) for someone without a similar health condition.

The domains of the Activities and Participation component are operationalized through the use of the qualifiers capacity and performance. Capacity “describes an individual’s ability to execute a task or an action,” or more specifically, “the highest probable level of functioning that a person may reach in a given domain at a given moment” (WHO, 2001, p. 15). One must apply the capacity qualifier in the context of a “uniform” or “standard” environment; a heuristic for capacity could be what a person can do. The performance qualifier describes “what a person does in his or her current environment” (p. 15); a heuristic for performance could be what a person does do.

The performance and capacity qualifiers are rated on the same 0 to 4 scale as the first qualifier of Body Functions and Structures, substituting the term difficulty for impairment. Performance and capacity can be considered both with and without assistive devices or personal assistance, forming four possible qualifiers (performance with and without assistance, and capacity with and without assistance).

Contextual Factors

Environmental Factors (the physical, social, and attitudinal worlds) are classified in the ICF by whether they facilitate or hinder functioning. Environmental Factors are organized into three levels: (1) individual level (e.g., support network), (2) services level
(e.g., vocational rehabilitation), and (3) cultural or legal systems level (e.g., worldviews, laws). Table 13.1 lists the five chapters that comprise Environmental Factors.

Although it is not currently classified, the Personal Factors component of the ICF is comprised of personal characteristics such as gender, race, age, fitness, religion, lifestyle, habits, upbringing, coping styles, social background, education, profession, past and current experience, overall behavior pattern and character, individual psychological assets, and other health conditions. It is believed that all of these descriptors can impact health and functioning, and users are encouraged to consider these issues qualitatively while classifying other areas of health and functioning. Great interest has been expressed by a variety of stakeholders to further develop this component of the ICF (e.g., Hurst, 2003). In its current iteration, these issues must be considered as they may affect the outcome of a given health care intervention when classifying health and functioning using the ICF. An integrative overview of the ICF is illustrated in Table 13.2.

Table 13.2 Overview of the ICF

<table>
<thead>
<tr>
<th>TWO PARTS (A DYNAMIC INTERACTION)</th>
<th>PART 1: FUNCTIONING AND DISABILITY</th>
<th>PART 2: CONTEXTUAL FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPONENTS</td>
<td>BODY FUNCTIONS AND STRUCTURES</td>
<td>ENVIRONMENTAL FACTORS</td>
</tr>
<tr>
<td></td>
<td>ACTIVITIES AND PARTICIPATION</td>
<td>PERSONAL FACTORS</td>
</tr>
<tr>
<td>Domains</td>
<td>Body Functions (including Psychological Functioning)</td>
<td>Life areas (tasks, actions)</td>
</tr>
<tr>
<td>(Contain the categories or units of classification of the ICF)</td>
<td>Body Structures</td>
<td>External influences on functioning and disability</td>
</tr>
<tr>
<td>Constructs</td>
<td>Change in body function (physiological)</td>
<td>Capacity: Executing tasks in a standard environment (“can do”)</td>
</tr>
<tr>
<td></td>
<td>Change in body structure (anatomical)</td>
<td>Performance: Executing tasks in the current environment (“does do”)</td>
</tr>
<tr>
<td>Positive aspect</td>
<td>Functioning</td>
<td>Facilitators</td>
</tr>
<tr>
<td></td>
<td>Functional and structural integrity</td>
<td>Not classified in the ICF</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
<td></td>
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<td></td>
<td>Participation</td>
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<tr>
<td>Negative aspect</td>
<td>Disability</td>
<td>Barriers/ hindrances</td>
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<td>Impairment</td>
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<td>Activity limitation</td>
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<td>Participation restriction</td>
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Note: Units of classification are situations, not people.


**Contrasting the International Classification of Functioning, Disability and Health with the Medical Model**

An example may help to contrast the utility of the *ICF* with that of the traditional medical model. When an individual incurs a spinal cord injury (SCI), he or she will likely be assessed for an inpatient rehabilitation program. This determination will be made by a physician. The prevailing model for categorizing SCI relies on medical technology and expertise to determine the level of the injury (in the spinal column) and the degree to which the spinal cord may be impaired (complete versus incomplete; Elliott & Rivera, 2003). Various disciplines on an multidisciplinary team will conduct assessments that represent their particular expertise (e.g., nursing, physical therapy, psychology, social work), and this information ideally is used to develop a clinical treatment plan. However, the medical condition—an SCI (e.g., paraplegia, tetraplegia) and the completeness of lesion—serves as the overriding diagnosis that determines the clinical treatment plan and corresponding decisions concerning length of stay, reimbursement for services, and qualification for possible services postdischarge. The SCI is the “disability.”

The *ICF* dictates a more thorough appreciation of the condition, the individual, and environmental factors, and it considers psychological and social factors that might impose impairment above and beyond the medical diagnosis (see Table 13.1). A person diagnosed with “incomplete paraplegia” may have nerve damage that results in a loss of motor movement of the lower limbs, but it may also spare sensations at or below the site of the lesion. This person would retain chest, hand, arm, shoulder, and neck functions. Under the Body Functions component, the *ICF* emphasizes factors like mental functions (including personality traits, coping behaviors, mental status) and sensory functions (e.g., persistent pain often associated with incomplete lesions) just as much as it rates damage to the spinal cord and where this damage is located (under Body Structures). This coding scheme—and the corresponding evaluations of impairment—may then have greater explanatory power in appreciating impairment imposed by persistent pain, ineffective coping skills in regulating emotions, and subsequent depression, beyond the initial medical diagnosis alone.
Implications for Counseling Psychology

The ICF has numerous implications for professional psychology, generally, and for counseling psychology, specifically. First, disability should no longer be equated with a medical diagnostic condition, and disability issues need no longer be considered as synonymous with vocational rehabilitation or restricted to the services of any single health profession or medical specialty. From the perspective of the ICF, any health condition (including such varied conditions as depression, asthma, diabetes mellitus, schizophrenia, or HIV) can have disabling features that can be understood (and rated) along the components in the ICF framework.

Second, the ICF functions as a working model, and it does not purport to stand alone as a comprehensive theory of any particular condition (or associated component). It simply provides an organizing scheme for appreciating factors related to an individual that can impose limitations and complicate or facilitate function and adjustment. Third, the ICF does not serve any specific health profession and does not constrain the disability experience to any particular agency or outcome. Although vocational rehabilitation remains an important aspect of adjustment, this feature does not limit the wide array of possible services, opportunities, and options for persons with disabling conditions.

One by-product of the ICF is that it highlights the ways in which professional psychology has implicitly adopted a medical model in defining psychological specialties and respective areas of expertise and practice. It implies a compartmental approach in which health and rehabilitation psychologists work with people with physical disabilities, and nonspecialists (e.g., counseling psychologists) do not. Olkin and colleagues have argued that this implicit stance limits the available psychological services and opportunities for people who live with some disabling condition (Olkin, 1999; Olkin & Pledger, 2003).

Although counseling psychology research has documented that persons with disabilities lack access to mental health services and encounter barriers that impede their participation in psychological services (e.g., poor transportation; Pelletier, Rogers, & Dellario, 1985), it is unfortunate that most doctoral programs in clinical and counseling psychology do not address disability in coursework or practica (Leung, Sakata, & Ostby, 1990; Spear & Schoepke, 1981). The ICF presents considerable research and practice opportunities for counseling psychologists. We briefly describe several of them below.

Measurement and Assessment

To facilitate implementation of the ICF in the United States, the American Psychological Association (APA) and WHO formed a series of interdisciplinary teams to develop The Procedural Manual and Guide for the Standardized Application of the ICF:
A Manual for Health Professionals (Reed et al., 2005). Given the size of the volume to date (over 800 pages), it may be useful to develop computerized matching systems in using the ICF (Peterson & Rosenthal, 2005). Once the Procedural Manual is published, the guide can be used for training to promote consistent coding. Studies will be needed to evaluate the clarity and utility of the manual to clinical practice, and to validate the application of the ICF given the new implementation guidelines (Peterson & Rosenthal, 2005).

The ICF is designed as a system that requires the active participation of a consumer in a collaborative and informational process, and is not something that is done to a consumer (Peterson, 2005; Peterson & Threats, 2005; Threats & Worrall, 2004[AU:Not in refs, add there or delete here]). Eleven ethical provisions were established in the sixth Annex of the ICF (WHO, 2001, pp. 244–245) to reduce the risk of disrespectful or harmful use of the newly revised classification system. Coordinators of the WHO revision efforts for the ICIDH (WHO, 1980) included people with disabilities and disability advocates in the revision process, which led to important changes in the content and structure of the ICF (WHO, 2001). The 11 ethical provisions address three critical areas: (1) respect and confidentiality, (2) clinical use of the ICF, and (3) social use of ICF information (WHO, 2001).

There are several potential pitfalls in the ICF classification process that may affect ratings. These pitfalls reflect more general problems in clinical judgment and assessment biases, and in the interactional dynamics between raters and participants. Counseling psychologists who are interested in these issues will need to receive training in the use of the ICF and become involved in its use to study these biases. Several health professions are now using item response theory to convert the ICF into measurement systems that individualize the assessment process, reduce respondent burden, and increase measurement precision (Velozo, 2005). In one recent conference, professionals from rehabilitation psychology (DiCowden, 2005), nursing (Coenen, 2005), occupational therapy (Velozo, 2005), and physical therapy (Mayo & McGill, 2005) discussed efforts to develop instruments and protocols based on the ICF model.

Other psychologists have participated in the development and refinement of measures to (a) evaluate and quantify the extent of physical disability and capacity for self-care, (b) identify limitations for discharge and rehabilitation, (c) identify outcomes associated with rehabilitation interventions, and (d) inform the identification of goals for rehabilitation (Heinemann, 2005; Mermis, 2005). The increased emphasis on activities, access, and capacities (particularly in the pursuit of personal goals for optimal well-being) will likely require greater use of quantitative methods in individual assessment, program evaluation, and longitudinal models to identify personal and social variables predictive of optimal and complicated adjustment over time. This will permit counseling psychologists to examine theoretical perspectives that are related to adjustment (e.g., career development of women with disabilities; Noonan, Gallor, Hensler-McGinnis, Fassinger, & Goodman, 2004).
Counseling psychologists can also contribute by studying and refining concepts that may eventually be subsumed in the Personal Factors components (which is not yet classified), including characteristics such as gender, race, age, fitness, religion, lifestyle, habits, coping styles, and individual psychological assets. Ideally, future versions of the ICF will include psychometrically sound items for rating characteristics that prove important in understanding present and subsequent functioning. Creating such measures will be a formidable task, requiring identification of relatively few measurable constructs that could be efficiently included in the ICF from among the vast array of potential person-psychological variables. Counseling psychologists are well suited to participate in this process given the field’s interest in the roles of gender, culture, age, and religion in health and well-being across the life span. Counseling psychology’s concerns with psychometrics and studying and promoting “positive assets” also fit well with the explicit valence the ICF places on access and well-being and on developing sound ways to measure important person and environmental inputs.

Certain specific, measurable constructs studied in counseling psychology research may hold promise in distinguishing “behavioral patterns” that predict both self-reported adjustment and objective health outcomes. Ineffective social problem-solving abilities are associated with greater distress and self-reported psychosocial impairment beyond variance attributable to the physical limitations imposed by a physical disability (Elliott, Godshall, Herrick, Witty, & Spruell, 1991). Ineffective problem-solving abilities are also predictive of expensive, preventable, and potentially life-threatening secondary complications over a 3-year period among persons with severe physical disability (Elliott, Bush, & Chen, 2006). Such constructs are particularly attractive because they have implications for interventions that can be delivered by nondoctoral level service providers in a variety of ways (e.g., via long-distance technologies, such as telephone counseling; Grant, Elliott, Weaver, Bartolucci, & Giger, 2002).

**Developing Services and Policy**

The implications of the ICF for developing, providing, and evaluating services for persons with disabling conditions are immense. The WHO model of disability champions advocacy and consumer perspectives. The use of the ICF will encourage services that attempt to promote independent living via improved access to institutions, improved role functioning and mobility, and reduced disability. This will hopefully create service delivery systems and associated policies that promote better collaborative partnerships with persons who live with a disabling condition and increased community and home-based services (Institute of Medicine, 2001; WHO, 2002). Consequently, a greater premium will be placed on the provision and use of assistive devices and enhanced computer technologies, and the removal of existing environmental barriers (Scherer, 2002). Psychological interventions have demonstrated considerable impact in the treatment of specific disability adjustment issues and in enhancing role function (Elliott & Jackson, 2005; Elliott & Leung, 2005). Consumers will likely want a greater emphasis
on health promotion, exercise, and leisure activities than previously observed (Rimmer & Braddock, 2002).

Agencies may experience some difficulty in developing collaborative partnerships that recognize consumers as active stakeholders in their own health and well-being. Psychologists who use qualitative methods and conduct participatory action research (Kidd & Kral, 2005) may assume influential roles in developing, implementing, and evaluating such services. Social-constructionist views of disability (Olkin, 1999) may also be used to help design interventions consonant with the aspirations of the ICF. Counseling psychologists may also realize more influential roles in developing and providing assistive services as an extension of public and health care policy.

The managed care industry has caused health professionals to be more outcome-focused in their reports to third-party payers, rather than reporting only traditional diagnostic information (Tarvydas et al., 2005). The ICF provides a system to document functional outcomes that complement the diagnostic information in other health classification efforts.

The use of the ICF in service delivery will eventually impact both academic and research discourse on disability. Bodenreider (2005) has recently mapped the ICF onto the National Library of Medicine’s Unified Medical Language System (UMLS). ICF concepts were associated with a related term in the UMLS, so that in the future the ICF could be cross-referenced with other information systems that are already linked to the UMLS. Previous UMLS initiatives were primarily influenced by the medical model. The ICF’s taxonomy has challenged the UMLS to develop new categories that better reflect functional information rather than diagnostic information alone.

The ICF may also assist in managing the ever-increasing amount of medical information. Chute (2005) suggested that, although measures and classifications of functioning are the overall metric of organic well-being, the evolving knowledge base of medical information has outgrown our ability to consume it effectively. He suggested that systems like the ICF can help us to develop shared semantics, vocabularies, and terminologies, in a way that helps us to use medical knowledge effectively in treating people in health care settings.

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**Conclusion**

The ICF has influenced many health care entities internationally and is now in use in several countries including the United States, Australia, Canada, and the Netherlands (Bickenbach, 2003; Holloway, 2004; Madden, Choi, & Sykes, 2003). Work on the World Health Survey, built on the ICF conceptual framework, has been implemented in 74 countries (Üstün et al., 2003). Future research and implementation efforts with the ICF promise to (a) revolutionize the way stakeholders in health care delivery systems think
about and classify health, (b) improve the quality of health care for individuals across the world, (c) generate innovative outcome-based research, and (d) influence culturally sensitive global health policy (Peterson & Rosenthal, 2005; Stucki, Ewert, & Cieza, 2003).

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