

Oral Health and Communication Disorders: Promising Applications in the ICF Environmental Factors Domain

John Hough, DrPH
CDC National Center for Health Statistics

Tami Howe, BEd, MHSc, PhD (Cand)
University of Queensland

Michael MacEntee, LDS(I), Dip. Prosth., FRCD(C), PhD
University of British Columbia

Clive Schneider-Friedman, DDS
University of Western Ontario

Oscar Raul Suarez-Sanchez, DDS, MSD, MMSc (Cand)
Harvard School of Dental Medicine

*Tuesday, June 6, 2006
12th Annual NACC Conference on the ICF, Vancouver, B.C.*



12th Annual North American Collaborating Center Conference on ICF

**LIVING IN OUR ENVIRONMENT:
The Promise of ICF**

2006
JUNE 5 to 7
Vancouver, British Columbia (Canada)

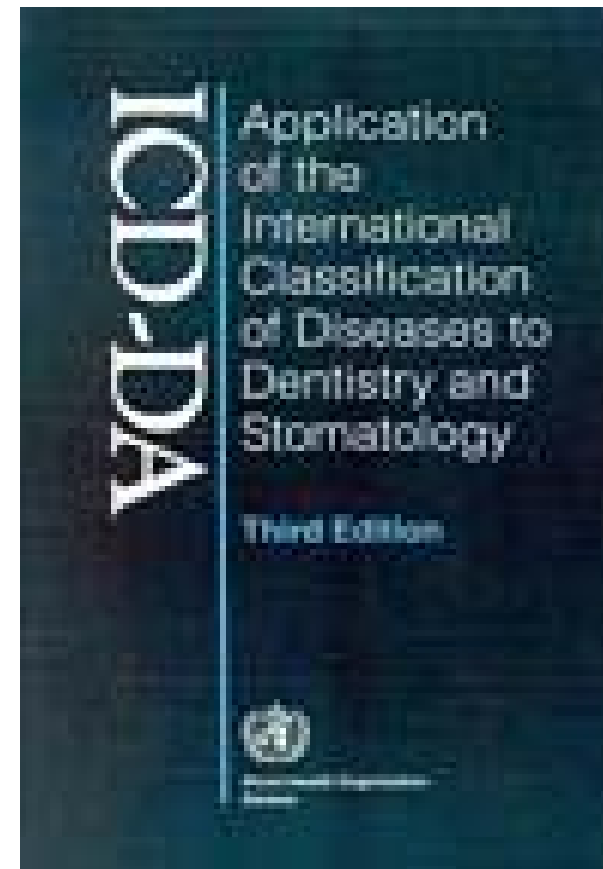
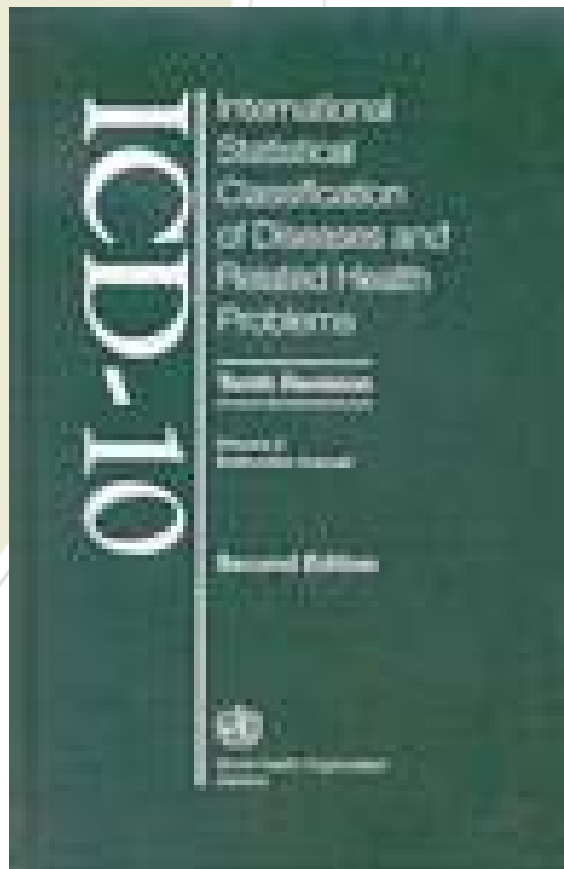
Objectives

- **Reviewing both the ICF conceptual model and classification structure in relation to oral health status and communication disorders, particularly aphasia**
- **Demonstrating the complementary relationships between ICF, ICD-DA for dental diagnoses, and ICD for medical diagnoses**
- **Examining the sufficiency of the ICF Environmental Factors code sets pertaining to oral health and communication disorders**
- **Advocating for inclusion of oral health and communication disorders topics within “ICF User Guides”**
- **Building professional alliances**

Why Link Oral Health Status and Communication Disorders?

- Dissimilar diagnoses, but similar functioning issues
- “Oral health status” represents secondary conditions;
“Communication Disorders” are primary disabling conditions
- ICF Environmental Factors codes: the “glue” between functioning in these two broad clinical areas
- ICF information sharing → ICF invigoration
- Transpose lessons learned from Speech Pathology to:
 - Pediatric Dentistry
 - Geriatric Dentistry
 - Public Health Dentistry

Utilizing Various WHO Classifications



Stomatology: the medical study of the mouth (*stoma*) and its diseases

What Is The Current Status of ICF in Communication Disorders Research?

- **Worrall and colleagues at University of Queensland**
 - **Characteristics of the ICF that make it attractive to communication specialists**
 - **Diverse diseases or conditions are involved: stroke, injury, cancer, muscular dystrophy, MS, progressive neurological disorders like Parkinson's**
 - **Impairments in voice, speech, language, fluency**
 - **Activity & Participation limitations: most life activities would be affected but social participation and sustaining personal relationships represent the greatest challenges**

Threats & Worrall (2004) on the Attractiveness of ICF Among Speech Pathologists and Audiologists

- Oral Communication represents at least a 2-way interchange
- A communication partner could herself represent a true “Environmental Factor”
 - A partner is essential for a communication disordered person, representing *performance*
- ICF describes the scope of practice of, and represents a basis for terminology for, speech pathology
- ICF is the foundation for outcome measurement
- Various communication disorders have been described in ICF terms, e.g., dysphonia, larygectomy, aphasia, stuttering
- Intervention involves more than simply observable behaviors

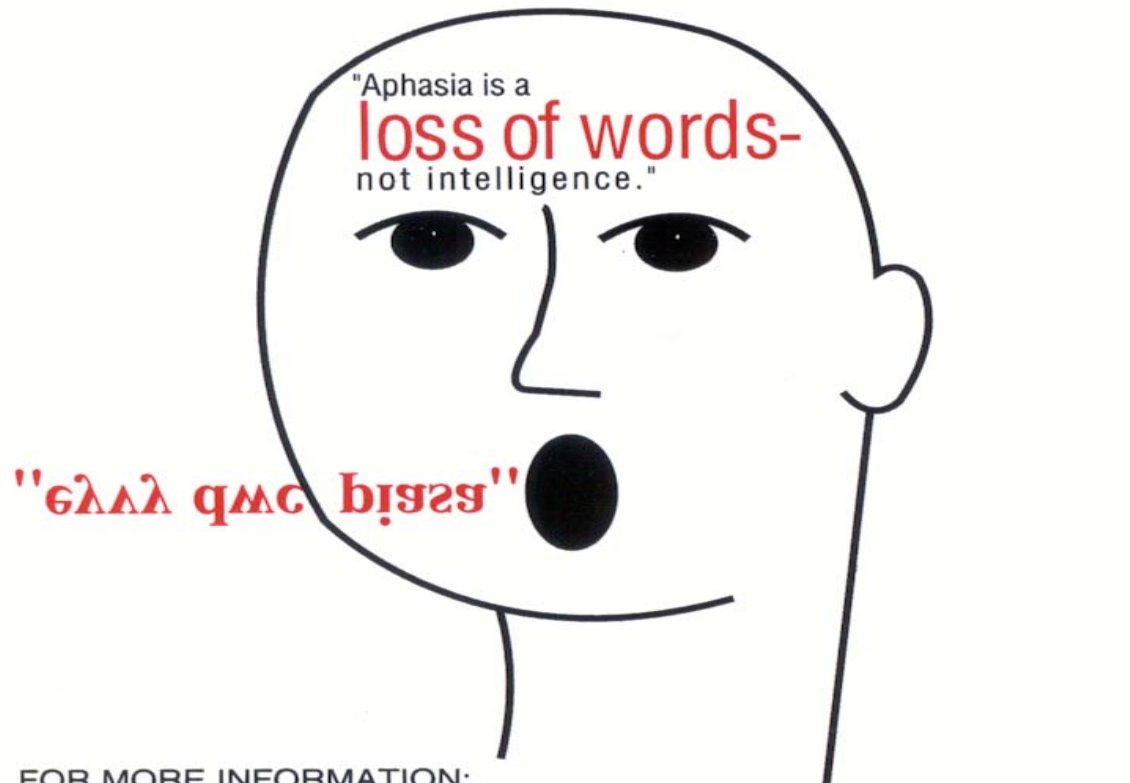
Why Not Fully Not Embrace the ICF in Speech Pathology?

- **Believe it or not, the ICF has shortcomings!**
 - **Terminology inconsistent with common usage**
 - **b167: Mental functions of language, vs. “Language functions”**
 - **b1672: Integrative language functions, vs. “Executive language functions”**
- **SHL professionals need and regularly use a broader set of more detailed function-, participation-, and EF-oriented terms**
 - **Lament: ICF invests more than enough detail in hearing functions (b250-b279), but insufficient detail in more complex voice and speech functions (b310-b340)**
 - **Insufficient EF’s creates a barrier to adoption**
 - **“Capacity” presumes a standardized environment**
 - **Absence of Personal Factors represents a real shortcoming**

Aphasia

- **An acquired impairment of language (ICD 784.3)**
- **A person's ability to process language is impaired, but intelligence is not affected**
- **Impaired ability to speak and interpret speech from others; difficulty reading and writing**
- **In the U.S., more prevalent than Parkinson's, CP, MD**
- **Recovery should commence soon after injury or disease onset, lest intervention focus on compensation**
- **Family support and involvement surprisingly crucial**
- **Community roles are crucial and poorly understood**

June is Aphasia Awareness Month



FOR MORE INFORMATION:

National Aphasia Association

800-922-4622 <http://www.aphasia.org>

Thanks to Catholic Medical Center's Aphasia Support Group, Manchester, N.H.

What is the Current Status of ICF in Oral Health Research and Practice?

- A new area of opportunities for ICF applications
- Specialized dental associations have addressed both primary and secondary conditions associated with compromised oral health among disabled persons
- Since 1976, development of “sociodental indicators” to capture non-clinical aspects of oral disease (Cohen & Jago, 1976)
- Since 1979, a derived classification: the ICD-DA
 - Oral cavity conditions are not sufficiently subclassified in the parent ICD, but ICD-DA invokes classification down to the 5th-level digit, to make differential diagnosis meaningful

The Panoply of Oral Structures, Functions, A&P and Environmental Factors

- **Sociodental Scale:** chewing, talking, smiling, laughing, pain, appearance
- **General Oral Health Assessment Index:** chewing, eating, social contacts, appearance, self-consciousness
- **Dental Impact Profile:** Confidence, happiness, social life, relationships
- **Oral Health Quality of Life Inventory:** nutrition, breath odor, self-rated oral health, overall quality of life
- **Oral Impacts in Daily Performance:** performance in eating, speaking, oral hygiene, sleep, emotion

Around The World With ICF: Special Needs Oral Health in Australia

- ICF Australian User Guide, version 1.0 (2003)
 - Drs. Gary Slade and Anne Sanders, Australian Research Centre for Population Oral Health, University of Adelaide
- “Oral Health Impact Profile”: 14- and 49-item questionnaire on overall oral health and its coincident conditions and sequelae (Slade, *et al.*, 1994, 1997)
 - Well-aligned with ICF, particularly at the population level
 - Higher OHIP scores = more frequent adverse dental impact
 - Example: even when controlling for race, a study comparing OHIP scores among elders in Australia, the U.K., Ontario, and North Carolina suggested social and environmental factors interact with personal dimensions of functioning
 - Oral pain has a central role in mediating A&P transitions
 - Children and elders deserve prioritization, but all ages affected

Around The World With ICF: Special Needs Oral Health in Ireland

- Oral Health & Disability: The Way Forward (2005)
- “Oral health is central to the health and well being of people with disabilities. Investing in oral health should not only be calculated in monetary terms, but also considered an investment in *empowering individuals* through increased self-esteem, nutrition, supporting communication, and improving quality of life.”
- “Oral health needs to become integrated into holistic health policy, service provision, and professional training and development.”
- Raised the question of whether General Anesthesia (GA) might be overused even for routine dental care among PWDs, and whether generalist or specialist facilities should be the setting for GA
- Promote “human rights and a social model of disability” and “access, including physical, information, communication, and *attitudinal access*”

Around The World With ICF: Special Needs Oral Health in Japan

- **Maeda, Kita, Miyawaki, et al.: Assessment of patients with intellectual disability using the International Classification of Functioning, Disability and Health to evaluate dental treatment tolerability. *J Intellectual Disability Research* 2005**
 - **Retrospectively applied ICF codes as discriminating variables in dentistry**
 - **Divided 49 adults with ID into two groups according to their tolerability of IV sedation before dental surgery, and then assigned ICF codes from all domains to each participant**
 - **Significant differences arose only within the A&P domain**
 - **“Watching” (d110), “Dressing” (d540), and “Eating” (d550) [but not “Caring For Teeth,” d5201] were directly observable coded characteristics that independently distinguished participants on their tolerability of anesthesia**

Around The World With ICF: Special Needs Oral Health in the United States

- **NIH National Institute of Dental and Craniofacial Research:**
 - **Series: Practical Oral Care for People with Developmental Disabilities**
 - **Continuing dental education modules for clinicians related to autism, CP, Down Syndrome, MR, and Wheelchair Transfer in office-based practice settings**
 - **“Record in the patient’s chart strategies that were successful in providing care . . . such as music, comfort items, and flavor choices.”**
 - **Dental Care Every Day: A Caregiver’s Guide**

Around The World With ICF: Special Needs Oral Health in the United States

- None of 3 recent reports at the Surgeon General's level referred to any overlap between ICDH/ICF and Special Needs Dentistry
- “Oral Health in America: A Report of the Surgeon General” (2000)
 - Disparities, access, overcoming barriers
 - But nothing on professional training for treating, or dental epidemiology in special needs populations
- “National Call to Action to Promote Oral Health: A Public-Private Partnership” (2003)
 - Relevant testimony summarized, but in disparities terms
- “The Surgeon General's Call To Action to Improve the Health and Wellness of Persons with Disabilities” (2005)
 - Silent on ICF and *Healthy People 2010* Chapter 6
 - Tobacco, diet, alcohol use, sunscreen, sexuality

Special Olympics Special Smiles



Special Olympics

Healthy Athletes

Special Smiles



Professional Dental Associations Focused on Special Needs Dentistry

- **Academy of Dentistry for Persons with Disabilities**
- **American Society for Geriatric Dentistry**
- **American Association of Public Health Dentistry**
- **Canadian Association of Public Health Dentistry**
- **American Academy of Developmental Medicine and Dentistry**
- **British Society for Disability and Oral Health**
- **Special Care Dentistry Association**
- **Oral Health America**

Today's Concurrent Session

- **What can Special Needs Dentistry professionals gain from the ICF-related experiences of Communication Disorder professionals?**
 - **Attitudinal shifts among professionals**
 - **“Treating individually, thinking populationally”**
- **Are the Environmental Factors codes sufficient in number and content?**
- **What can the new ICF-CY offer in each field?**

Prosthodontics Defined

The branch of dentistry that deals with the replacement of missing teeth and related mouth or jaw structures by bridges, dentures, or other artificial devices

Oral Health & the Environment



12th Annual North American Collaborating Center Conference on ICF

**LIVING IN OUR ENVIRONMENT:
The Promise of ICF**

JUNE 5 to 7
2006
Vancouver, British Columbia (Canada)