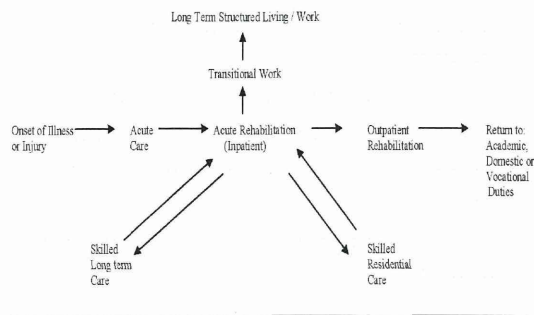


Predictors of Vocational Outcomes



Taiwan's National Health Service

- Uniform standards for neurotrauma surveillance (WHO)
- http://whqlibdoc.who.int/hq/1996/WHO_EHA_SPI_96.1.pdf?ua=1
- ICD9
- ICD10



Figure 3.9.4 Proportional frequency of stroke subtypes in different populations

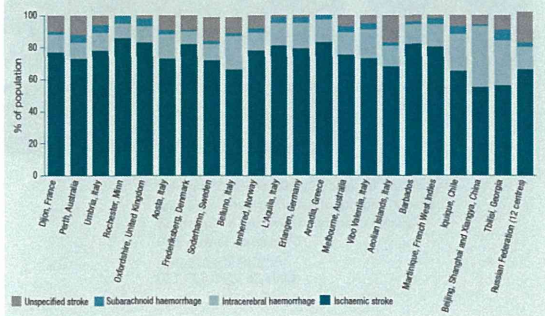
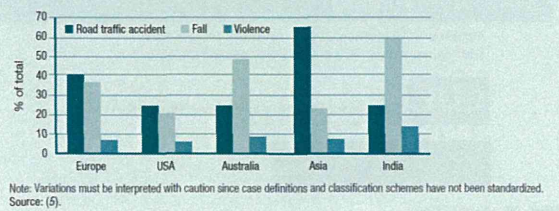


Figure 3.10.2 External causes of traumatic brain injury in selected areas



CONCLUSIONS AND RECOMMENDATIONS

- 1 Research in epidemiology and management has led to better prevention and treatment in some parts of the world during the past two or three decades. Health policy-makers, doctors, nurses and paramedics should be proud of their achievements and join forces to organize a worldwide fight against the silent and neglected epidemic of traumatic brain injury.
- 2 There is an urgent need for the development of global and national policies in order to minimize the risks and the consequences of road traffic accidents, particularly in the developing countries. This should be a joint effort between different government agencies, medical societies, motor vehicle manufacturers and nongovernmental organizations.
- 3 Policies to improve the outcome of TBIs and strengthen road traffic safety must aim primarily at improving the research-based knowledge of regional epidemiology, preventive programmes and the acute management of TBI in pre-hospital and inpatient settings.
- 4 Prevention will have a greater impact if based upon robust data on causes and risk factors involved in TBI and upon knowledge of the efficiency of the various preventive measures.

Taiwan TBI Study 1994

58,563 cases of TBI was collected from 114 hospitals in Taiwan during the period July 1, 1988-June 30, 1994.

- Traffic accident was the major cause of TBI (69.4%), followed by falls and assaults. Motorcyclists accounted for the vast majority of TBI cases among traffic accident victims (64.5%).
- 41,646 cases (79.5%) were considered mild, 4,637 cases (8.9%) moderate, and 6,078 cases (11.6%) severe.
- Skull x-ray showed fracture in 7,663 cases (14.6%). Intracranial hemorrhage was identified in 28.6% of patients receiving CT scanning.
- The outcome of TBI was determined by the Glasgow Outcome Scale.
- Death occurred in 2,621 cases (5.4%), vegetative state in 429 cases (0.9%), severe disability in 1,293 cases (2.6%), moderate disability in 1,890 cases (3.9%), and good recovery in 42,596 cases (87.2%).
- The severity and outcome were worse than those of Western reports.

Lin JW1, Lin CM, Tsai JT, Hung KS, Hung CC, Chiu (2008). Neurotrauma research in Taiwan. *Acta Neurochir Suppl.* 101, 113-7.

Traumatic Brain Injury Statistics Taiwan

- Step 1 Create nationwide TBI registry in order to identify the risk factors and determinants. We found that the major cause of TBI in Taiwan was motorcycle-related injury, and very few motorcyclists wore a helmet.
- Step 2 Launch the implementation of the helmet use law on June 1, 1997. A rapid decline of TBI hospitalizations and deaths was demonstrated soon thereafter.
- Step 3 was to enroll into international collaborations with the Global Spine and Head Injury Prevention Project (Global SHIP Project) groups for TBI. The comparative results thus obtained could be used to develop prevention strategies for developing countries.
<https://www.cimit.org/programs-traumatic-brain-injury.html>
- Step 4 was to implement clinical researches for TBI, which included a Propofol study, hyperbaric oxygen therapy (HBOT), brain parenchymal oxygen (PbtO2) monitoring, etc.
- Step 5 was to develop guidelines for the management of severe TBI in Taiwan. Through a 2-year period of review, discussion, and integration, a 9-chapter guideline was published in June 2007.

TBI Overall

- Acute vs chronic care models impacts outcomes
- TBI remains underserved on a global basis
- The relationship between TBI and dementia, Parkinson's disorders, other syndromes is emerging
- Depending on age, TBI has age and sex related risk factors



Brain Injury Facts

Alzheimer's Association, 2014 Alzheimer's Disease Facts and Figures, Alzheimer's & Dementia, Volume 10, Issue 2



Centers for Disease Control and Prevention
CDC 24/7. Saving Lives. Protecting People™

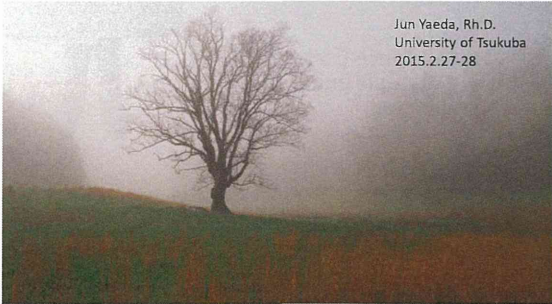


THE N-MHSS REPORT:
Highlights of the National Mental Health Services Survey, 2010 August 7, 2014



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EOD TBI Issues in Japan



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University of Tsukuba
2015.2.27-28

EOD Service Delivery Model

- <http://www.youtube.com/watch?v=wa9D1ISHaVY>

EOD /100,000

- 5~10 before 44 Years of age
- 80 ~ 150 45 ~64 Years of Age
- Male > Female



EOD in JAPAN

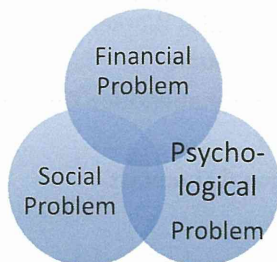
Age 18 to 64 40,000 EOD:

1. Alzheimer's Disease
2. Lewy Body Dementia
3. Vascular Dementia
4. Parkinson's Dementia
5. Substance Abuse....

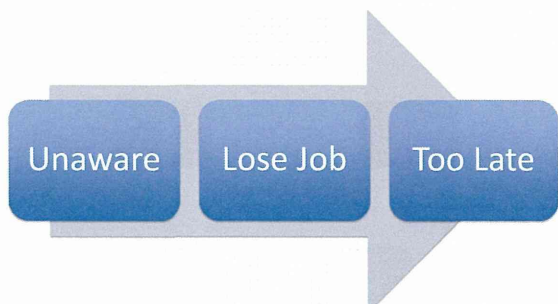


Social Problem of EOD

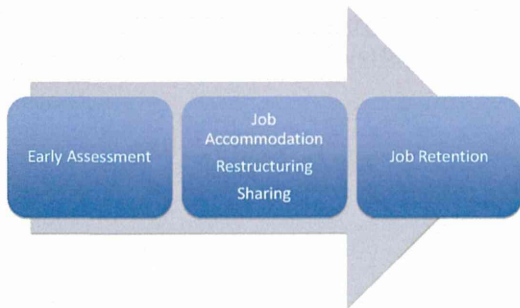
Working Age → Loose the Job → Become Poor → Family Burden → Care Burden → Social Isolation →



Undesired Process



Desired Process



Voice of the EOD



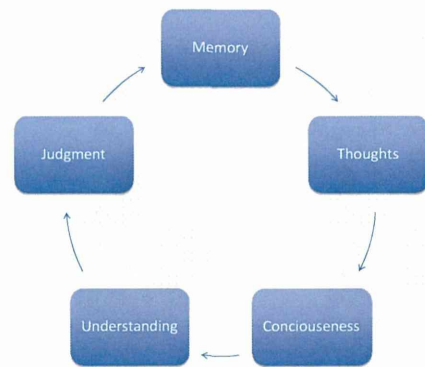
- “Care Insurance users are all ELDERLY people and that is not where I belong”
- “No job, no house chores, no communication. I have no dignity. No place for me at HOME.”
- “No friend to talk to. No hobby to share. No fun. I do not belong to the COMMUNITY.”

Social Security for EOD

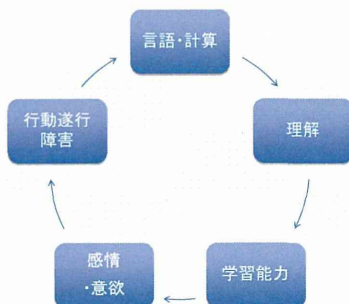
- Care Insurance Act
- Independence Support Act
- Disability Benefit (Disability ID Card)
- Disability Pension
- Advocacy



Cognitive Function



悪循環



Who Support EOD ?

- EOD Coordinator
- Medical Social Worker
- Psychiatric Social Worker
- Community Nurse
- Vocational Rehabilitation Counselor
- Job Coach
- Occupational Therapist



TBI Research at UT

Transition from School to Work: Early Age TBI (Chiba Rehab Center)

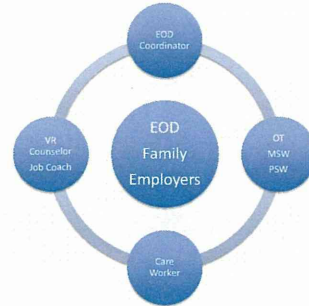
Transition from Hospital to Work: Job Retention (Kitahara Kokusai Hospital, Sagami Hospital)

University of Tsukuba

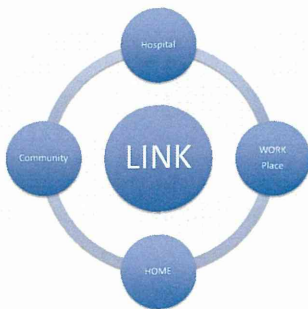
Work Supporter's Competency for HBD(Niigata Rehab Center)

Work Support at Acute Phase Rehabilitation Hospital by MSW(Teikyo Univ Hospital)

Who are the KEY Players?



Rehab Coordinator



What's good for EOD and TBI?



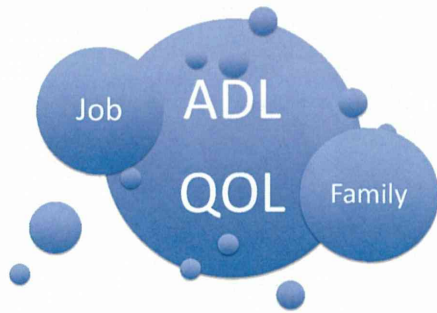
Which Support works best?



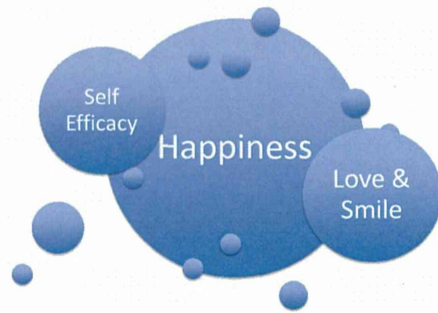
Research



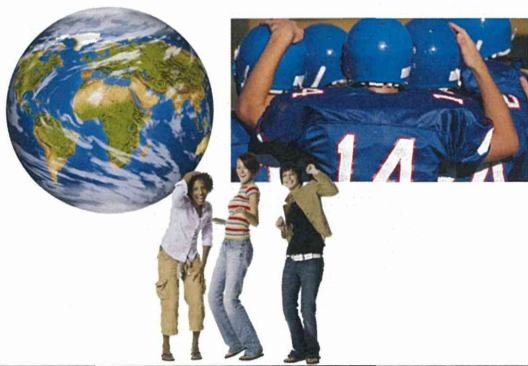
Predictive Studies



Predictive Studies



International Collaboration Studies



Where to GO?



Vocational Rehabilitation Services Early Onset Dementia and TBI: A US Perspective

Carl R. Flowers, CRC, LCPC
Director, Rehabilitation Institute
Southern Illinois University

SIU Southern Illinois
University
CARBONDALE



Vocational Rehabilitation Services Early Onset Dementia and TBI: A US Perspective

Disability

- Globally, 15% of the population has a disability that limits their participation in family, community and political life
- Globally, 10 % of the total world's population, (i.e., 650 million people) live with a disability

Vocational Rehabilitation, Alzheimer's /Early Onset Dementia and TBI A US Perspective



Disability in the United States

- Nearly 50m (e.g., 48.9 million) people, or 19.4% of the population, have a disability
- An estimated 34.2 million people, or 17.5%, of US population have a functional limitation
- 24.1 million have a severe disability
- Of working age adults with disabilities (18 to 64 years old), less than 30% work full (or part) time

Vocational Rehabilitation, Alzheimer's /Early Onset Dementia and TBI A US Perspective



Individuals with Disabilities

- In 2012, more than 34% of adults with disabilities in the US lived in a household that had annual incomes of less than \$15,000
- 29% of all US families have at least one member with a disability
- More than half (54%) of adults with disabilities have never heard of the Americans with Disabilities Act (ADA)

Vocational Rehabilitation, Alzheimer's /Early Onset Dementia and TBI A US Perspective

Disability in the United States

Employment and People with Disabilities



- 72% of individuals, age 16 to 64 who are not employed, would prefer to work
- Workers with disabilities are underemployed; less than 50% view their work as *utilizing* their full talents or abilities.
- Persons with a disability are the largest employment seeking *minority* group in the US

Vocational Rehabilitation, Alzheimer's /Early Onset Dementia and TBI A US Perspective

Disability in the US

Politically,

PWD are less likely to vote, but tend to support government involvement in health care and related areas



Vocational Rehabilitation, Alzheimer's /Early Onset Dementia and TBI: A US Perspective

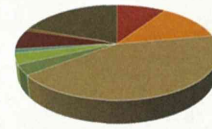


Vocational Rehabilitation History

- 90+ years of serving PWD
- Services enhanced/expanded
 - 1917, 1920, 1935, 1938, 1954, 1978, 1992, 2005
- Legislation
 - Rehabilitation Act of 1973
 - Americans with a Disabilities Act
 - Mental Health Parity Act
 - Affordable Care Act

Vocational Rehabilitation, Alzheimer's /Early Onset Dementia and TBI: A US Perspective

\$\$ Expended on Services



- ELIGIBILITY NEEDS ASSESSMENT
- TOTAL TRAINING
- TRANSPORTATION
- REHABILITATION TECHNOLOGY SERVICES
- ALL OTHER SERVICES
- PHYSICAL & MENTAL RESTORATION
- MAINTENANCE
- PERSONAL ASSISTANCE SERVICES
- POST EMPLOYMENT

Vocational Rehabilitation, and Alzheimer's /Early Onset Dementia A US Perspective

Definitions of Rehabilitation

- "A process aiming to restore personal autonomy in those aspects of daily living considered most relevant by patients and service users, and their family carers"
- Rehabilitation is concerned with enabling those with any short or long-term disability to obtain the maximum psychological or physical independence possible

Vocational Rehabilitation, Alzheimer's /Early Onset Dementia and TBI A US Perspective



- Mental Health Parity Act
http://www.cms.gov/CCIIO/Programs-and-Initiatives/Other-Insurance-Protections/mhpoea_factsheet.html
- The Affordable Care Act
<http://www.hhs.gov/healthcare/facts/timeline/timeline-text.html>
- The Americans with Disabilities Act
[42 U.S.C. §§ 12111-12117](http://www.gpo.gov/42U.S.C.%2012111-12117)
- Healthcare Information Portability Protection Act (HIPPA)
<http://www.cms.gov/Regulations-and-Guidance/HIPAA-Administrative-Simplification/HIPAAGenInfo/Downloads/HIPAALaw.pdf>

Vocational Rehabilitation, Alzheimer's /Early Onset Dementia and TBI A US Perspective

Vocational Rehabilitation Services Conduits

- Council of State Administrators of Vocational Rehabilitation (CSAVR)
- National Council of State Agencies for the Blind (NCSAB)
- Consortia of Administrators for Native American Rehabilitation (CANAR)



Vocational Rehabilitation and TBI A US Perspective

VR Services

- PWD rely upon the state-federal VR system to help them become employed/return to work
- The VR system is a time-limited service provider
- Counselors are *generalists*
 - not trained to be 'experts' in TBI and effective approaches to rehabilitation.



Vocational Rehabilitation and TBI A US Perspective

- Traumatic Brain Injury
- 70 - 90k TBI individuals experience LT functional limitations annually
- Less than 25% of individuals with TBI are working at 1 year post-injury
- Demographics
 - 4:1 Male to Female ratio
- Personal income loss
 - \$642 million in Year 1-post-injury for TBI clients



Vocational Rehabilitation and TBI A US Perspective

Issues re: Effective VR Services/Outcomes

- Extended services are usually needed
 - Start/stops along the way
- Average VR caseload
 - 1-3% are TBI referrals
- Outcomes (successful)
 - Less likely with TBI referrals



Vocational Rehabilitation and TBI A US Perspective

Issues/Barriers to Effective VR Services/Outcomes

- Large case loads
 - Prevent concentrated delivery of services
 - Discourage the pursuit and adoption of innovative approaches to service
- Delayed referral to VR
 - Results in delayed services
- Too early referrals
 - May result in a determination of ineligibility for services



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Vocational Rehabilitation,
and Alzheimer's /Early Onset
Dementia A US Perspective

Thank You


Carl R. Flowers, CRC, LCPC
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Vocational Rehabilitation,
and Alzheimer's /Early Onset
Dementia A US Perspective


Vocational Rehabilitation Services
Early Onset Dementia and TBI:
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Vocational Rehabilitation,
and Alzheimer's /Early Onset Dementia A US
Perspective

Alzheimer's and Dementia
Facts and Figures 

- Early on Onset: Under 65 yoa
- About 20% of all dementia are EOD
- Estimated 2.2 million Americans affected, estimated 7 to 10 million by 2040

Bouasker, Ghachem, Guermari, Moula & Robanna (2013)

Vocational Rehabilitation,
and Alzheimer's /Early Onset Dementia A US
Perspective

Alzheimer's and Dementia
Facts and Figures 

- Living with ADRD
- Family are primary caregivers

Vocational Rehabilitation,
and Alzheimer's /Early Onset Dementia
A US Perspective

Definitions of Rehabilitation

- "A process aiming to restore personal autonomy in those aspects of daily living considered most relevant by patients and service users, and their family careers"
- Rehabilitation is concerned with enabling those with any short or long-term disability to obtain the maximum psychological or physical independence possible

