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USA Projections for the Incidence of Neurological Vision Impairment

Incidence of Acquired Brain Injury (ABI) and Traumatic Brain Injury (TBI)

- Every year 1.5 million Americans sustain a TBI - one every 21 seconds.
- In addition, 700,000 Americans will have a stroke each year (ABI) - one every 45 seconds.
- Stroke is the number three killer and leading cause of severe, long-term disability in the US.
- Annual stroke related services in the US equate to US \$62.7 billion

Causes of Traumatic Brain Injury (TBI) in the General Population

In the 1.5 million of the population who will experience a TBI the causes of TBI are as follows:

- Motor Vehicle Accidents accounted for **64%** of TBI, (over 50% the driver was under the influence of alcohol)
- Gunshot Wounds **13%**
- Falls **11%**
- Assault **8 %**
- Pedestrian **3%**
- Sports **1%**

TBI and ABI can result in lifelong cognitive, emotional, sensory (including vision deficits), motor and other impairments, even among those diagnosed as mild TBI. Despite its widespread impact and long-term effects, TBI/ABI is often referred to as the “silent epidemic” as the general public remains largely unaware of it and because the disabilities that result are often invisible.

Projections of Neurological Vision Impairment (NVI)

Josef Zihl, Neuropsychologist – Germany

- *“between 20% - 40% of patients who have a stroke also experience visual disorders”*
- *“Homonymous visual field disorders are the most frequent visual deficits (nearly 80%), which in most of the patients affect reading and visual explorations.*
- *Impairments in spatial orientation, spatial contrast sensitivity and light and dark adaptation have been reported in more than 20% of patients with posterior brain damage.*
- *Other visual disorders, eg. color vision deficits, or visual agnostic disorders are not very frequent.”*

Gianutsos stated:

- *“50% of the patients in a head trauma rehabilitation centre show visual systems disorders not assessed before although most of the patients were chronic and had been treated in other hospitals previously”*

Using a conservative percentage of 33% of the population diagnosed with Acquired Brain Injury (ABI) suffer from associated neurological vision impairment, then in one year alone, 733,000 people would experience a neurological vision deficit. (See figures below.)

USA	2006	2050
Population	300 million	420 million
Acquired & Traumatic Brain Injury Per year	2.2 million	5.6 million
Projection of Neurological Vision Impairment per year.	733,000	1.9 million

The following vision symptoms can occur as a result of an Acquired or Traumatic Brain Injury:

- An inability to see one side of the surroundings
- Bumping into objects or people on one side
- Difficulty locating objects which seem obvious to others
- Ignoring food on one side of a plate or shaving one side of the face
- Seeing double or objects appearing to be hazy or blurred
- Difficulty moving through crowded areas
- Suffering from increased glare sensitivity or difficulty making out detail in dimly lit situations
- Changes in ability to read or in the appearance of print
- Getting lost in familiar environments
- Difficulty in recognizing objects or faces

Neuro Vision Technology (NVT)

Neuro Vision Technology (NVT) draws upon the expertise of vision therapists that have worked in the area of neurological vision impairment for over 20 years. We have developed procedures for assessment and training for visual perceptual deficits, such as homonymous hemianopia. The assessment process initially uses the NVT scanning device to determine the extent of visual field loss and to demonstrate to the patient, and their carers, the nature of the vision impairment. The NVT scanning device is then used as the basis of a training programme to teach the patient to compensate for the lost visual field utilizing the intact areas of their vision. The scanning skills learnt using the NVT scanning device are then transferred to activities of daily living, with a particular emphasis on the person being able to move with safety around their environment. The aim is to enable the person to become as independent as possible.

NVT SYSTEMS has a solution now!

NVT Vision Rehabilitation System - developed by clinicians for clinicians.

**Contact NVT for information regarding the assessment and training
of patients with a Neurological Vision Impairment.**

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A NEW DIRECTION IN NEURO VISION REHABILITATION
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