NHS Education for Scotland

The Matrix Evidence Tables

NEUROLOGICAL DISORDERS

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The Scottish Government

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RECOMMENDATION

A	Highly recommended
B	Recommended
C	No evidence to date but opinion suggests that this therapy might be helpful

Matrix: Level of evidence	Recommendation	
A At least one meta-analysis, systematic review, or RCT of high quality and consistency aimed at target Population	A	Highly recommended
B Well-conducted clinical studies but no randomised clinical trials on the topic of recommendation directly applicable to the target population, and demonstrating overall consistency of results	B	Recommended
C Widely held expert opinion but no available or directly applicable studies of good quality.	C	No evidence to date but opinion suggests that this therapy might be helpful

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SUMMARY

THIS SECTION COVERS RECOMMENDATIONS FOR PSYCHOLOGICAL THERAPIES FOR THE MOST COMMON AND RELEVANT NEUROLOGICAL DISORDERS IN YOUNG ADULTS AGED 16-64.

A significant portion of study samples in the reviewed studies are within this age group. It includes psychological therapies for mental health issues but not cognitive techniques or treatments for cognitive problems. In the absence of good research evidence for a particular intervention in a particular neurological population, clinical judgement should be used if considering interventions which have been shown to be effective for similar problems in other adult populations.

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BRAIN INJURY

DEFINITION

Acquired Brain Injury (ABI) is an umbrella term that is defined by the SIGN 130 guideline[1] as implying "damage to the brain that was sudden in onset and occurred after birth and the neonatal period. It is thus differentiated from birth injuries, congenital abnormalities and progressive or degenerative diseases affecting the central nervous system."

"This definition permits the inclusion of open or closed traumatic head injuries, and non-traumatic causes, such as vascular incidents (e.g. stroke), infection (e.g. meningitis), hypoxic injuries (e.g. cardiorespiratory arrest), or toxic or metabolic insult (e.g. hypoglycaemia)."[1]

Traumatic Brain Injury (TBI) is the most common form of brain injury, in young adults. TBI is defined by the SIGN 130[4] guideline as a traumatically induced structural injury and/or physiological disruption of brain function as a result of an external force that is indicated by new onset or worsening of at least one of the following clinical signs, immediately following the event:

- Any period of decreased level or loss of consciousness
- Any loss of memory for events immediately before or after the injury
- Any alteration in mental state at the time of the injury (confusion, disorientation, slowed thinking, etc.)
- Neurological deficits (weakness, loss of balance, change in vision, praxis, paresis/plegia, sensory loss, aphasia, etc) that may not be transient
- Intracranial lesion

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RECOMMENDATIONS FOR ACQUIRED BRAIN INJURY

Level of Severity	Level of Service	Intensity of Intervention	What Intervention?	Recommendation
Moderate to Severe	Highly Specialist / Tertiary Care	High	Holistic Neurorehabilitation*	A[1,2,3,4]
	Secondary	High	Group CBT for anger management and /or emotional distress reduction	C[5]

*N.B. Holistic Neurorehabilitation is a multidisciplinary model to work with the individual as an entity rather than working on single areas of difficulty. Key is the development of insight, adjustment and adaptive skills, the use of psychotherapy and the involvement of the family in rehabilitation to facilitate the focus on generalisation from the rehabilitation environment to the community.[3]

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RECOMMENDATIONS FOR TRAUMATIC BRAIN INJURY

Level of Severity	Level of Service	Intensity of Intervention	What Intervention?	Recommendation
Mild	Secondary	Low	Information, support and advice to reduce social morbidity and severity of 'post-concussion' symptoms	A[7]
			Information booklet and coping strategies to reduce 'post-concussion' symptoms and stress	B[6]
Mild to Moderate	Secondary	Low	Online CBT, plus telephone follow up for depression	C[8]
			Group mindfulness-based stress reduction (MBSR) for depression	C[9]
Moderate to Severe	Highly specialist or Tertiary Care	High	Holistic Neurorehabilitation	A[1,3,4]

*N.B. There is limited but encouraging evidence for using CBT plus Cognitive Remedial Therapy for depression and anxiety; more evidence is required[10].

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STROKE

DEFINITION

The World Health Organisation definition of stroke is "a clinical syndrome of rapidly developed clinical signs of focal or global disturbance of cerebral function, lasting more than 24 hours or leading to death with no apparent cause other than vascular origin.[11]"

RECOMMENDATIONS FOR STROKE

Level of Severity	Level of Service	Intensity of Intervention	What Intervention?	Recommendation
Adjustment to disability and depression acutely post stroke	Secondary	Low	Motivational Interviewing improved outcome at three month post-stroke follow-up	A[12]

Further information on evidence:

i. A Cochrane review (2008)[13] suggested that there was insufficient evidence to support psychological interventions for treatment of post-stroke depression. SIGN 118 (2010)[14] reached a similar conclusion. Diagnosis may be complicated by the overlap between symptoms of depression or anxiety and physical or cognitive changes associated with stroke. Care must be taken not to regard patients' and carers' natural reactions to stroke as pathological.

ii. A recent RCT suggested behavioural therapy might improve the mood of people with aphasia at three month post-intervention.[15] However, similar conclusions were not supported by other studies.[15, 16, 17] Further studies are recommended.

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EPILEPSY

DEFINITIONS

Epilepsy is "a neurological condition characterised by recurrent epileptic seizures unprovoked by any immediately identifiable cause". An epileptic seizure is the clinical manifestation of an abnormal and excessive discharge of a set of neurons in the brain as defined in the NICE guideline [CG137][19]

RECOMMENDATIONS FOR EPILEPSY

Level of Service	Intensity of Intervention	What Intervention?	Recommendation
Secondary	High	CBT for depression	C[20, 21]

* N.B. RCT evidence for CBT for depression for those with epilepsy is inconsistent.

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MULTIPLE SCLEROSIS

DEFINITION

The NICE guideline 186[22], defines Multiple Sclerosis (MS) as "an acquired chronic immunemediated inflammatory condition of the central nervous system (CNS), affecting both the brain and spinal cord".

RECOMMENDATIONS FOR MULTIPLE SCLEROSIS

Symptoms	Level of Service	Intensity of Intervention	What Intervention?	Recommendation
Distress	Secondary	Low	Group CBT	A[27]
		Low/High	Individual CBT, group CBT and telephone administered CBT	A[26]
		High	Telephone based individual CBT	A[23]
			Stress management to reduce stress	A[24]
			CBT based adjustment group to improve distress	A[25]
Fatigue	Secondary	High	Group CBT	A[28]
			Group Mindfulness	A[29]

*N.B. A Cochrane review (2008)[30] suggested that cognitive behaviour approaches could also be beneficial in helping people adjust to and cope with Multiple Sclerosis. However, evidence is limited, further studies are recommended.

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PARKINSON'S DISEASE

DEFINITION

NICE guideline 35[31] defines Parkinson's Disease (PD) as ''a progressive neurodegenerative condition resulting from the death of the dopamine-containing cells of the substantia nigra".

RECOMMENDATIONS FOR PARKINSON'S DISEASE

Symptoms	Level of Service	Intensity of Intervention	What Intervention?	Recommendation
Depression	Secondary	High	Individual CBT for depression	A[32]
Impulse control behaviours	Secondary	High	Group CBT for Impulse control behaviour	B[33]
Worry	Secondary	Low	Group CBT based guided self-help book/ resource for worries	A[34]

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