



PROPOSAL FOR THE DEVELOPMENT OF NEUROPSYCHIATRY SERVICES IN IRELAND 2016

1. ABOUT THIS DOCUMENT

This document is a proposal to the Health Service Executive Mental Health Division to develop a lifespan based national clinical neuropsychiatry service. It is also intended to provide a reference to other HSE divisions and National Clinical Programmes requiring neuropsychiatry. These include Neurology, Neurosurgery, Paediatrics and Neonatology, and Neuro-rehabilitation. Currently, there are three National Clinical Programmes in development: The National Clinical Programme of Neurology, The National Clinical Programme for Rehabilitation Medicine and The National Clinical Programme for Paediatrics and Neonatology. All will require the development of Neuropsychiatry to deliver a fit for purpose model of care.

This document addresses the requirements for neuropsychiatry as defined by level of clinical need and age group and regional provision. The document is the work of a cross-faculty CPsychI Working Group looking at care for children and adults and represents the consensus of this Working Group. This document is based on the evidence and policy referenced below.

2. THE ROLE OF NEUROPSYCHIATRY

Clinical neuropsychiatry services are now accepted as an essential part of a clinical neuroscience service in the developed world across the age range. It is uniquely underdeveloped in Ireland. Evidence for the biological underpinnings of neuropsychiatric disorders has led to improved international approaches to assessment and treatment of these disorders. Increasing support for evidence based intervention and healthcare economic analysis has led to specialist services intervening early to moderate mental health sequelae, distress and disability. The change in the understanding of nervous system disease and damage has led internationally to the establishment of dedicated Neuroscience Centres providing evidence based intervention. These centres are staffed by a broad range of highly specialist neuroscience clinicians which in addition to Neuropsychiatrists, include Neurologists, Medical and Paediatric Medicine clinicians, Neurosurgeons, Neurophysiologists, Neuroradiologists, Neuropsychologists, Speech and Language Therapists, Neuro-Physiotherapists, Neuro-Occupational Therapists and Specialist Nurses.

3. THE ROLE OF NEUROSCIENCE CENTRES

Neuroscience Centres involve the co-location and coordination of clinical neuroscience medical and allied health specialties. This enables the delivery of managed clinical care programmes for patients with complex neurological diseases and disorders which include epilepsy, acquired brain injury, infectious disorders, cerebral palsy, cerebral tumors, cerebrovascular accidents and neurodevelopmental disorders. In younger patients' movement disorders, neurocutaneous conditions such as tuberous sclerosis, neurofibromatosis, sleep disorders and some rare disorders such as early onset dementia, including Huntington's disease, are to the fore. A neuropsychiatrist requires the proximity and access to the clinical resources of a Neuroscience Centre to function optimally. Conversely, the neuropsychiatrist is of most value placed within this structure to deliver timely interventions and improve outcomes. Internationally, the development of the Neuroscience Centre model is part of a move toward Academic Health Science Centres (AHSC), to facilitate interdisciplinary clinical, educational and research activity.



4. THE ROLE OF THE NEUROPSYCHIATRIST

The Neuropsychiatrist covers all aspects of a patient's journey from acute/chronic neurological injury/insult to rehabilitation and home. Neurological disorders are rarely without psychiatric consequences. Frequently, psychiatric symptoms, as an inevitable part of the disease process, precede and then parallel the neurological presentation (e.g. Parkinson's disease, Multiple Sclerosis, Huntington's disease, Metabolic and Genetic Disorders) or dominate the clinical presentation (e.g. encephalitis, vascular disease, trauma, epilepsy) or emerge as a reaction to the disability caused (e.g. depressive disorder). On occasion the psychiatric presentation is the only clue to the underlying brain disease (e.g. autoimmune neuronal membrane antibodies). In contrast, all too often a psychiatric illness with abnormal illness behaviour can mimic a neurological disease (e.g. conversion disorder).

The Neuropsychiatrist versed in neurology, psychiatry, neuropsychology, neuroradiology and neurophysiology, is in a unique position, in tertiary referral centres, to interpret this complex clinical information. An accurate and timely diagnosis is critical to prevent irreversible damage to the nervous system, achieve earliest discharge from hospital and maintain quality of life in the community (resulting in fewer care needs, medicines, resources etc.). The presence of a Neuropsychiatrist in a Neuroscience Centre offers a breadth of clinical opinion to a range of colleagues, from consultation and educational interactions, to ward consultations, to outpatient clinics.

The role of the Neuropsychiatrist in the Neuroscience Centre includes:

- Collaboration with medical specialists
- Interface with other services e.g. social work, school and education provision
- Outreach and support to non-specialist teams outside of the major teaching centres/ (Videoconferencing facility/ GP teaching roles etc.)
- Training and education of junior staff and allied health professionals
- Research and support of service developments

5. NEUROPSYCHIATRY WITHIN HEALTH DELIVERY AND TRAINING SYSTEMS

There is broad international consensus that Neuropsychiatry is best located within a Neuroscience Centre with strong links to national training structures. Functionally, it is a tertiary level clinical service, incorporated into managed clinical networks both nationally and regionally. Services are centrally based and provide outreach to local services to facilitate care as close to home as possible.

Co-location of Neuropsychiatry colleagues within the Neuroscience Centre also facilitates clinical collaboration (peer review/second opinions), academic activity (training/research and participation in weekly academic meetings), development of specialist skills in certain clinical areas (e.g. epilepsy surgery, traumatic brain injury, Parkinson's disease etc.) and workforce planning (covering leave, teaching etc.). Pathways for the management of transition of neuropsychiatric care across age defined services will be required.

6. ESTIMATING THE NEED FOR CLINICAL NEUROPSYCHIATRY

Neuropsychiatry provision relates to mental health in a lifespan based model and includes special populations such as Learning Disability, Neuro-cognitive disorders and other patients with rare or complex needs. Current service provision within related psychiatry specialties falls short of requirements which will also affect neuropsychiatry provision.

Neuropsychiatric morbidity in adult neurology patients ranges from 20 to 75% with 30% of conditions "not explained" by an organic cause. There are an estimated 4,000 patients with early onset primary dementia in Ireland. Children with complex neurological conditions have up to 8 times the population rates of impairing emotional, behavioural and (specific or global) cognitive problems - which occur in 30-70% of children with neurological conditions. Improved survival of very premature birth and early



neonatal adversity means more children with complex medical conditions survive to adulthood, and older adults survive with dementia. The psychiatric/mental health needs of this population and impact on psychiatric services is growing. Traditional psychiatric services are ill-equipped to deal with this need.

Irish health services are closely modelled on UK services. The recent data concerning provision and need of Neuropsychiatric services in the UK is of value in estimating service requirement in Ireland. In the UK there are a total 21 fulltime adult clinical neuropsychiatry consultant posts and 49 other consultants with at least some dedicated neuropsychiatry clinical sessions. The Royal College of Psychiatry recommends a Service Model and Team per 1 million of the population to include: 2 Consultant Neuropsychiatrists, 1 Neuropsychologist, 1 junior medical staff, 1 Associate Specialist, 2-4 Nurse Specialists, 1 Counsellor/Cognitive-Behavioural Therapist and 1 Administrative staff. The inpatient facility will require 5-10 beds per million of the population which could possibly be shared with clinical neurosciences. Specialised Clinics may require some additional resources. The Group estimate 200-300 new referrals to the Outpatient Clinic per 1 million of the population per year. Based on the Irish Population (4.58 million) being 1/14th of the UK population (64 Million), by the very crudest of estimates, Ireland should provide funding for 7 to 9 adult Neuropsychiatrists and a similar number of NCHD posts.

In the UK, there are approximately 17 paediatric neuropsychiatry services. These teams are typically embedded in Neuroscience Centres, funded through regional Trusts which have responsibility for both community and hospital based treatments. Notably, twenty five percent of the Irish population is aged 17 or younger. A third of the population is aged less than 25 years. Thus at minimum, 4 Paediatric Neuropsychiatrists and teams are required to provide a service level equivalent to the UK (which is considered sub-optimal).

A Vision for Change recommends two multidisciplinary teams should provide a national resource for neuropsychiatry services with one national neuropsychiatric unit with six to ten beds.

The College of Psychiatrists of Ireland Workforce Planning Report 2013-2023 proposes 7 full-time Neuropsychiatry posts in Ireland by 2020 or 1 per 350,000. (This does not include provision for paediatric Neuropsychiatry). The table below shows the Irish requirement based on UK published data.

REQUIREMENT	PER MILLION (UK recommendation)	UK PROVISION	IRISH PROVISION	IRISH REQUIREMENT
Consultant Neuropsychiatrists	2	21 Fulltime clinical NP 49 part-time clinical NP	0	7-9 Adult NP FTE
Paediatric Neuroscience centres		17	0	4 FTE Paediatric NP FTE
New OPD referrals	200-300 per year			900-1400 per year
Neuropsychiatry beds	5 - 10		0	20

7. STRUCTURE AND FUNCTION: HOW SHOULD SERVICES BE PROVIDED?

Adopting the stepped-care liaison model for service description, there are **four levels** of service model applicable to neuropsychiatry. We outline (overleaf) which model is most appropriate to the needs of the various clinical subgroups.



(i) Consultation Clinics

Specialist tertiary referral outpatient neuropsychiatry service based in Neuroscience Centre co-located with referring medical neuroscience clinician (hub-spoke model). Examples: Parkinson’s disease, Multiple Sclerosis, Huntington’s Disease, Epilepsy, Encephalitis, Vascular diseases, Autoimmune diseases, Neurofibromatosis, Tuberosclerosis, Mitochondrial Diseases, Complex Neurodevelopmental Conditions etc. Referrals come from secondary care mental health or neuroscience specialties. OPD clinic may become available in all hospitals with a neurology service via hub and spoke model.

(ii) Liaison Ward Consults

Specialist tertiary ward service integrated into medical organisation based in Neuroscience Centre - close working relationship and shared admin between other Clinical Neuroscience specialists and neuropsychiatry specialists. Referrals come from neuroscience clinical teams. Organic psychosis and mood disorders, acute phase brain Injury, Epilepsy psychiatry & Non Epileptic Attack Disorder, NEAD including video-telemetry, Neurosurgical (tumours) Delirium.

(iii) Joint Clinics / Meetings

Neuroscience Interdisciplinary team structure based in Neuroscience Centre/National Rehabilitation Centre - shared responsibility for management of clinical programme. High complexity of neuropsychiatric complications including Brain Injury - rehab phase: Epilepsy Surgery programme.

(iv) Inpatient Neuropsychiatry

Acute provision for complex cases requiring multi-disciplinary team assessment and treatment within the Neuroscience Centre. Provision of Neuropsychiatry input in long-stay rehabilitation settings.

8. RECOMMENDATION FOR SERVICE PROVISION AND SERVICE STRUCTURE

Based on international standards for Neuropsychiatry Service provision, which includes a Hub and Spoke model, and the epidemiological information above, we propose as an outline the following:

NP SERVICE	CONSULTANT POSTS	LOCATION	INPATIENT BEDS
DUBLIN ADULT NEUROPSYCHIATRY SERVICE	4 CONSULTANT NEUROPSYCHIATRISTS to include clinical leads in: a. Brain Injury (BH-NRH Axis) b. In-patient NP c. Epilepsy (Surgery programme/ NEAD)	Beaumont Hospital and National Rehabilitation Hospital	20 Neuropsychiatry Beds providing for national and regional requirement
CORK ADULT NEUROPSYCHIATRY SERVICE	2 CONSULTANT NEUROPSYCHIATRISTS	Cork University Hospital	Defined access to 5 inpatient beds at national inpatient unit
GALWAY ADULT NEUROPSYCHIATRY SERVICE	2 CONSULTANT NEUROPSYCHIATRISTS	Galway University Hospital	Defined access to inpatient beds at national inpatient unit
DUBLIN AND CORK PAEDIATRIC NEUROPSYCHIATRY SERVICE	4 CONSULTANT NEUROPSYCHIATRISTS to include clinical leads in: a. Epilepsy psychiatry b. Brain injury c. Movement disorders / Functional disorder d. National outreach / second opinion service: CAMHS/ID/Psychopharmacology	National Children’s Hospital including Ambulatory and Urgent Care Centres Cork University Hospital	Shared beds at NCH / CUH with neurology / liaison services Link with National Rehabilitation Hospital



9. TRANSITION SERVICES: MINDING THE GAP

Transitioning between local and national specialist services requires significant clinical attention. Fundamental to the planning of lifespan services is planning transition at developmental or age stages between child-centered, working age and older adult-oriented healthcare services. These transitions may occur at different ages and stages.

Some adolescents transition to adult services at 16; others at a later stage. The ITRACK study in Ireland and the TRACK study in the UK have made recommendations around good practice. Similar issues may arise in transition from adult to old age services, and when individuals move to other catchment areas. As age span approaches, the importance of planned and supported transition cannot be overstated.

10. SUMMARY AND SUGGESTIONS REGARDING PRIORITISATION

In line with international best practice, Neuropsychiatry should be developed on a national basis to support individuals and their families across the age range. Its funding, administration, governance and development require an integrated national structure. It cannot be developed as a component of a regional community health organisation or developed as an ancillary component of a medical neuroscience service.

This document summarises the rationale and requirement for the development of a National Neuropsychiatry Service, the international norms for neuropsychiatry service provision, and the current level of Irish Neuropsychiatry funding. This current level of formal national funding is zero with ad-hoc service provision based on local arrangements.

It is essential to integrate the development of Neuropsychiatry in conjunction with both a national model for Neuroscience Centres, as well as the three National Clinical Programmes in Neurology, Rehabilitation Medicine and Paediatrics & Neonatology.

REFERENCES

- Agrawal N, Bhattacharya R, Richards H (2015) Provision of neuropsychiatry services: variability and unmet need. *BJPsych Bulletin* 39, 297-301
- Agrawal N, Fleminger S, Ring H, Shoumitro D (2008) Neuropsychiatry in the UK: national survey of existing service provision. *BJPsych Bulletin* 32, 288-291
- Bhattacharya R, Rickards H, Agrawal (2015) Commissioning neuropsychiatry services: barriers and lessons. *BJPsych Bulletin* 39, 291-296
- Blum RW, Garell D, Hodgman CH, Jorissen TW, Okinow NA, Orr DP, et al (1993) Transition from child-centered to adult health-care systems for adolescents with chronic conditions. A position paper of the Society for Adolescent Medicine. *J Adolesc Health* 14(7):570-6.
- Cahill S, O'Shea E, Pierce M (2012) Future Dementia Care in Ireland.
- Caplan R, Siddarth P, Levitt J, Gurbani S, Shields WD, Sankar R (2010) Suicidality and brain volumes in paediatric epilepsy. *Epilepsy Behav.* 286-90
- Christiansen E, Stenager E (2012) Risk for attempted suicide in children and youths after contact with somatic hospitals: A Danish register based nested case-control study. *J Epidemiol Community Health* 2012 66:247-53.



Department of Children and Youth Affairs (2012) The State of the Nation's Children Report

Department of Health and Children (2006) A Vision for Change Report of the Expert Group on mental health policy

Draft (2016) National Policy and Strategy for the Provision of Neuro-Rehabilitation Services in Ireland

Draft (2016) Clinical Strategy and Programmes Division National Clinical Programme for Rehabilitation Medicine

Draft (2015) A National Model of Care for Paediatric Healthcare Services in Ireland

Fazel S, Wolf A, Långström N, Newton CR, Lichtenstein P (2013) Premature mortality in epilepsy and the role of psychiatric comorbidity: A total population study. *Lancet*. 2013 382: 1646-54.

Foundation for People with Learning Disability (2011) Valuing people now. Equalities scoping study. Mental Health Foundation UK.

French C, Ferlie E, Fulop N (2014) The International spread of academic health science centres: A scoping review and the case of policy transfer to England. *Health Policy* 117 382 -391

International League Against Epilepsy: (2015) Indications and expectations for neuropsychological assessment in routine epilepsy care: Report of the ILAE Neuropsychology Task Force, Diagnostic Methods Commission, 2013-2017.

International League Against Epilepsy: (2006) Proposed Criteria for Referral and Evaluation of Children for Epilepsy Surgery: Recommendations of the Sub commission for Paediatric Epilepsy Surgery. *Epilepsia*. 47(6):952-9.

International League Against Epilepsy: Indications and expectations for neuropsychological assessment in routine epilepsy care: Report of the ILAE Neuropsychology Task Force, Diagnostic Methods Commission, 2013 -2017

NICE (2004) The epilepsies: the diagnosis and management of the epilepsies in adults and children in primary and secondary care, NICE Clinical Guideline, CG20

NICE (2007) Chronic fatigue syndrome, NICE Clinical Guideline, CG53

NHS: Clinical Neuropsychology Services - delivering value for the NHS A briefing paper for NHS commissioners & policy makers (BPS 2015)

NHS: Healthcare for all. Michael J Sir (2008): A report of the independent inquiry into access to healthcare for people with learning disabilities.

NHS: Specialised Services (2012) Safe & Sustainable Children's Neurosurgical Services Review (http://www.specialisedservices.nhs.uk/safe_sustainable/childrens-neurosurgical-service)

Naylor C, et al, (2012) Long-term conditions and mental health: The cost of co-morbidities. The King's Fund

Rudzinski LA, Meador KJ (2013) Epilepsy and neuropsychological comorbidities. *Continuum Minneap Minn* 3 Epilepsy:682-96

RCPsych Competencies Framework (2013)

The British Psychological Society (2015) The paediatric neuropsychology competency framework

The College of Psychiatrists of Ireland (2013) Workforce Planning Report 2013 - 2013

TRACK: (2010) Transition from CAMHS to Adult Mental Health Services: A Study of Service Organisation, Policies, Process and User and Carer Perspectives. Report for the National Institute for Health Research Service Delivery and Organisation programme. Singh P, Paul M, Islam Z, Weaver T. (SDO Project 08/1613/117).

UK Department for Education and Skills (DFES) (2007) Aiming High for Disabled Children: better support for families



UK Department of Health (2005) Long-term (Neurological) Conditions National Service Framework

UK Department of Health (2011) No health without mental health: A cross-government mental health outcomes strategy for people of all ages. London: HMSO

UK Department of Health (2004) Disabled Children and Young People and those with Complex Health Needs

UK Department of Health (2004) Mental and Psychological Well-Being of Children and Young People

UK Department of Health (2014) Closing the Gap: Priorities for essential change in mental health. London: HMSO

Vedi K, Bernhard S (2012) The Mental Health Needs of Children and Adolescents With Learning Disabilities Current Opinion in Psychiatry. 25(5):353-358.

Viner R (1999) Transition from paediatric to adult care. Bridging the gaps or passing the buck? Archives of Disabilities in Childhood 81, 271-275.

www.rcpsych.ac.uk/workinpsychiatry/faculties/neuropsychiatry.aspx