



editorial

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Training in neuropsychiatry: is it time to reintegrate into mainstream psychiatry?

In 1988, Yorke highlighted a growing separation between training in psychoanalysis and neuroscience. With recent developments in medical education in the UK, now is an ideal time to review the position on neuropsychiatric training. In the subsequent 17 years there has been a tremendous increase in research concerning the biological aspects of psychiatric symptoms and syndromes. During the 1990s, proclaimed by the US Library of Congress as 'The decade of the brain', there was a fivefold increase in publications containing the term 'neuropsychiatry'. Yet this has not been accompanied by equivalent developments in neuropsychiatry training. Although many understandably resist the notion of increasing sub-specialisation of training, here we put forward the case for reintegrating neuropsychiatry back into mainstream practice.

Importance of training in neuropsychiatry

In the UK, neuropsychiatry as a discipline is much misunderstood. It has gained the reputation of being highly esoteric and exotic, something away from the mainstream clinical practice. A symptom of this problem is that the very word 'neuropsychiatry' provokes looks of either boredom or perplexity from many colleagues. This disinterest may be partly self-inflicted because those that consider themselves specialists in this area have not been clear enough about what neuropsychiatry is and what it is not. Several related descriptive terms like 'biological psychiatry', 'organic psychiatry', 'cognitive neurosciences' and 'behavioural neurology' have perpetuated this confusion. At its core neuropsychiatry essentially concerns the psychiatric aspects of neurological disease. Yet, as most neurological diseases impact upon higher function and as most psychiatric disorders involve the brain, this is rather large territory (Mitchell, 2004).

From an epidemiological perspective approximately 10 million people across the UK have a neurological condition and nearly 2 million care for someone either with a chronic neurological or mental health problem (Neurological Alliance, 2003). Of all disorders these have the greatest impact on the quality of life of both patients and carers (Sprangers *et al*, 2000; Arnold *et al*, 2004; Agrawal & Mitchell, 2005). Cerebrovascular disease alone

accounts for 3.5% of worldwide disability (World Health Organization, 2001). Injuries to the head are the second most common reason for presentation to hospital after sprains and ligamentous injuries (Cambridgeshire County Council, 2004). Delirium is probably the most common major complication of hospitalised patients, occurring in over 50% of very high-risk patients (Edlund *et al*, 2001). By 2016, it is estimated that in women, Alzheimer's disease will be more responsible for years of life lost through morbidity than any other condition across the life span (Mitchell, 2004). From a clinical perspective up to half of new referrals to neurology clinics meet criteria for a neuropsychiatric diagnosis (Carson *et al*, 2000a; Fink *et al*, 2003) and an additional third have medically unexplained symptoms (Carson *et al*, 2000b). It should then be of no surprise that neuropsychiatry overlaps hugely with liaison psychiatry, old age psychiatry, learning disability and clinical neurology/neuroscience. This is a broad clinical spectrum, of relevance to most psychiatrists, neurologists and general practitioners and even hospital managers, as these conditions consume large quantities of National Health Service (NHS) resources (Wilson *et al*, 2005). The World Health Organization considers neuropsychiatric disorders (definition includes major psychiatric disorders) to be the most important cause of disability worldwide, accounting for 31% of the total years of life lived with any disability (43% in Europe and the Americas) (World Health Organization, 2001). Of no lesser importance, it is the psychiatric complications of neurological disease that cause most distress and burden to patients and their carers (Teri, 1997; Aarsland *et al*, 1999; Coen *et al*, 1999; Chipchase & Lincoln, 2001).

Current deficiencies in neuropsychiatry training

Given this striking impact of neuropsychiatric conditions on the population, what are the recommendations for neuropsychiatric services from the Royal College of Psychiatrists in the UK? The college recommends 0.1 whole time equivalents for a Mental Illness Needs Index-weighted population of 100 000 aged 18–64 years (Royal College of Psychiatrists, 2001). To put this into context,



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this is the same coverage as eating disorders, perinatal psychiatry, early-onset psychosis service and psychiatric intensive care. Unfortunately, in the real world neuropsychiatry is probably the least well served of these important services. In preliminary data from a national audit of neuropsychiatry services, there were less than ten full-time NHS consultants in post in the UK in 2004. As a result, the vast majority of hospital-based neuropsychiatric disease is treated by liaison psychiatrists, old age psychiatrists, general adult psychiatrists and, often reluctantly, by medical teams. A great proportion of community-based neuropsychiatric disease is treated by no one at all. Half of all long-term neurological disorders are cared for in primary care and a third have no professional input (Department of Health, 2005). Patients with neuropsychiatric conditions are among the most likely to have inappropriate or delayed diagnoses. For example, of pre-existing cases of dementia admitted to hospital for other reasons, the prior detection rate of dementia was 3% (Hénon *et al*, 1997). Many other cases go unrecognised and untreated (Zlot, 1995; Rincon *et al*, 2001). Clearly, the problem is not solely the result of a lack of specialist neuropsychiatrists (although more would be welcome). The problem is one of inadequate training for all hospital specialists, particularly those who go into psychiatry and neurology. We have seen some excellent examples of how training and organisation change can improve clinical care (van Os *et al*, 2004) but such interventions need to be accompanied by systemic local organisation change to be effective (Gilbody *et al*, 2003).

This argument is not unique to neuropsychiatry. Not long ago the same argument could have been applied to psychotherapy (Firbas, 2001). The Royal College of Psychiatrists in the UK (through the Psychotherapy Specialist Advisory Sub-Committee) has just released national guidelines on the expectation for psychotherapy prior to membership examination. The mandatory requirements of a training scheme are three short cases (12–16 sessions) and one long case (12–18 months) organised by a specific scheme coordinator, supervised by a specialist and recorded in log books (Royal College of Psychiatrists, 2004). In the basic specialist training handbook that guides learning objectives for senior house officers, psychotherapy is discussed 15 times but neuropsychiatry (and biological psychiatry for that matter) is not mentioned and does not appear to be a requirement for a training scheme at all (Royal College of Psychiatrists, 2003). Yet in the higher specialist training handbook the College does appear to support the notion that psychiatrists should be competent in neuropsychiatry, briefly specifying that we should have ‘the ability to assess and manage neuropsychiatric cases’ (Royal College of Psychiatrists, 1998). Disappointingly, the College has issued no guidance or requirements on this issue. In the long-awaited series of curriculum documents entitled *A Competency Based Curriculum for Higher Specialist Training*, there are no guidelines on minimum requirements in neuropsychiatry for specialist registrars undertaking old age psychiatry, general adult psychiatry or indeed liaison psychiatry (initially published by the Royal

College of Psychiatrists in 2004 but withdrawn in 2005, pending the publication of a curriculum to comply with requirements of the Postgraduate Medical Education and Training Board). This stands in contrast to the latest version of the *Higher Medical Training Curriculum for Neurology* (Joint Committee on Higher Medical Training, 2004). This has detailed requirements for training in neuropsychiatry as well as neuropsychology and related areas. The result may be that neurologists recognise the need for training in the psychiatric aspects of brain diseases but psychiatrists do not (Kanner, 2005).

Are there any new developments that recognise this deficiency? A specialist document authored by the Neuropsychiatry Special Interest Group (as a part of higher specialist training core competencies) will outline a modular curriculum for psychiatric trainees who explicitly wish to pursue neuropsychiatry either as a career or special interest. However, unless means to achieve these competencies are facilitated, it may not benefit trainees practically, particularly those who will need neuropsychiatric expertise but do not pursue it as a career or special interest. A Joint Neuroscience Council has been set up that will examine basic neuroscience training applicable to all the neurosciences-related disciplines. This could be one mechanism by which broadly defined neuropsychiatry needs can be recognised in training junior doctors.

Deficiencies in neuropsychiatry training for psychiatrists and neurologists are not unique to the UK. These shortcomings in current training programmes have been highlighted in the USA (Price *et al*, 2000; Martin, 2002). There is increasing international recognition that the future professional role of psychiatrists will demand a greater knowledge of brain functions than is currently taught (Kandel, 1998). There has been an attempt in the USA to integrate training in neurology and psychiatry using common core concepts of neurosciences (Price *et al*, 2000; Baker *et al*, 2002; Martin, 2002). Further, the European Federation of Neurological Societies Task Force on postgraduate neurological training recommends early exposure to psychiatry (Pontes, 2001). This is already mandatory in the Czech Republic, Austria and Germany. Indeed, in Austria and Belgium neuropsychiatry training and neurology training are seamlessly combined, and until recently in Italy, specialist neurology training occurred only as part of a larger neuropsychiatry programme (Facheris *et al*, 2005).

Recommendations for training in neuropsychiatry

Given the deficiencies in the UK, what are the possible solutions? We believe training in neuropsychiatry has to be broad-based and applicable to all clinicians while improving the specialised training for all the psychiatrists and neurologists. We propose the following model for improving neuropsychiatry training at three levels:



Medical undergraduates

Training in neuropsychiatry has to start at medical school in order to capture the broadest range of clinicians (Agrawal, 2004). Let us teach them more about the *function* of the brain and less about the minutiae of anatomy and biochemistry. An understanding of brain disease in relation to society, culture (ethnography) and evolutionary development would be welcome. This should not be difficult as neuropsychiatry is one of the oldest branches of psychiatry, not one of the newest, with many fascinating stories to tell (Ramachandran, 2003). Teach senior students about sound principles of diagnostic accuracy and medical errors as they apply to this field – as this really is the basis for improving modern clinical practice. Training programmes should be redesigned to allow exposure to all the neuroscience-based disciplines together with the introduction of common core concepts related to neurosciences in an integrated manner. This will foster more coherent brain-based learning and allow future clinicians to have a much wider perspective than the currently prevalent specialty-driven reductionistic categorisations (Yudofsky & Hales, 2002).

Postgraduate training

Postgraduate exposure to neuropsychiatry will not only benefit trainees in psychiatry and neurology but can be of use to trainees in general practice and medical specialties. The proposed common foundation programme for the postgraduate trainees in the UK has a huge potential to foster this. From the perspective of the basic specialist trainee (senior house officer/junior resident) in psychiatry, why not expect supervision, case presentations and perhaps a clinical logbook specifically for neuropsychiatry? Of course we need to have supervisors, but if the College makes training a mandatory requirement then supervision (staffing) will have to become a priority at local levels. Perhaps a degree of shared education and training with senior house officers in neurology is one way forward? If that sounds impossible one might question how so many training schemes in the USA, Germany, Austria and Belgium manage to integrate both psychiatric and neurological training (Academy of Psychosomatic Medicine, 2004). A step short of joint training is reciprocal clinical exposure to neurology for psychiatry trainees and vice versa. Many trainees arrange such exposure themselves but formal arrangements for all trainees would make this easier and better regulated. The US Institute of Medicine has published recommendations to increase research support for residents (Institute of Medicine, 2003). Better integration of neurology, psychiatry and neuropsychiatry would be expected to increase research opportunities in the UK. Higher specialist trainees in psychiatry who are not training specifically in neuropsychiatry should be allowed and encouraged to gain experience in this area, either through special interest sessions or through a placement in neuropsychiatry. This will be of particular interest to trainees who want to become general psychiatrists, old age psychiatrists or psychiatrists for learning disability.

Higher specialist training in neuropsychiatry

For those who want to specialise in neuropsychiatry there has to be a much clearer pathway of training. The new core competencies in neuropsychiatry are a step forward in defining the training required. However, we urgently need sub-specialty accreditation in neuropsychiatry otherwise suggested core competencies will have little purpose. This will necessitate a significant expansion in neuropsychiatry placements for specialist registrars nationally. Finally at a senior level, we need more training courses in all aspects of neuropsychiatry, ideally leading to certificate level qualification or above (University of Birmingham, 2002). These should be available in several centres nationally and open to any health professional.

Conclusions

There is considerable change occurring in postgraduate education under the Postgraduate Medical Education and Training Board (Shooter, 2005). Instead of 8 years for post completion of postgraduate training, the time spent in training will be nearer 5 years (Mukherjee & Nimmgadda, 2005). In this condensed training there is an inherent danger of relegating perceived specialist aspects of training to the period following completion of the Certificate of Completion of Training. The model we propose here acknowledges that most aspects of neuropsychiatric training are needed at all levels of expertise.

This model of neuropsychiatry training is not revolutionary and, in fact, has learnt much from the existing psychotherapy training model (Krull, 1990; Yager & Kay, 2003). Most psychiatrists now consider psychotherapy to be part of everyday psychiatry. We would not avoid a therapeutic relationship with a patient because the trust employs a dedicated cognitive-behavioural therapist. Neither should we be unable to treat patients with a post-concussional syndrome or refuse to diagnose early-onset Alzheimer's disease because the trust has (or perhaps lacks) a part-time neuropsychiatrist. Specialist services are predominantly designed for treatment of refractory cases and diagnostic dilemmas (Nirodi *et al*, 2003).

The forces of psychoanalysis and biological psychiatry are not in opposition (Yorke, 1988; Eisenberg, 2000). Both have much to teach about complex models of illness. Increased focus on psychosocial factors does not conflict with a neuropsychiatric model but improves it. We suggest that a refocus on biological factors will not detract from mainstream psychiatric practice but will improve it. Basic neuropsychiatry is no more esoteric than basic psychotherapy and both are the cornerstones of good psychiatric practice. Unfortunately in the case of neuropsychiatry, it happens to be a cornerstone that is not widely taught or widely learnt.



References

- AARSLAND, D., LARSEN, J. P., KARLSEN, K., et al (1999) Mental symptoms in Parkinson's disease are important contributors to caregiver distress. *International Journal of Geriatric Psychiatry*, **14**, 866–874.
- ACADEMY OF PSYCHOSOMATIC MEDICINE (2004) *Recommended Guidelines for Consultation-Liaison Psychiatry Training in Psychiatry Residency Programs* (<http://www.apm.org/resident.shtml>).
- AGRAWAL, N. (2004) Neuropsychiatry (careers). *BMJ Careers*, **328**, s35–s36.
- AGRAWAL, N. & MITCHELL, A. J. (2005) The national service framework for long term conditions. *BMJ*, **330**, 1280–1281.
- ARNOLD, R., RANCHOR, A. V., SANDERMAN, R., et al (2004) The relative contribution of domains of quality of life to overall quality of life for different chronic diseases. *Quality of Life Research*, **13**, 883–896.
- BAKER, M. G., KALE, R. & MENKEN, M. (2002) The wall between neurology and psychiatry: Advances in neurosciences indicate it is time to tear it down. *BMJ*, **324**, 1468–1469.
- CAMBRIDGESHIRE COUNTY COUNCIL (2004) Joint Casualty Data Report. (http://www.cambridgeshire.gov.uk/NR/rdonlyres/FB8D02A9-4D6E-4AD9-8EDE-4A2CBE5E7EDD/O/jcdr_chap12_2004.pdf).
- CARSON, A. J., RINGBAUER, B., MACKENZIE, L., et al (2000a) Neurological disease, emotional disorder, and disability: they are related: a study of 300 consecutive new referrals to a neurology outpatient department. *Journal of Neurology, Neurosurgery and Psychiatry*, **68**, 202–206.
- CARSON, A. J., RINGBAUER, B., STONE, J., et al (2000b) Do medically unexplained symptoms matter? A prospective cohort study of 300 new referrals to neurology outpatient clinic. *Journal of Neurology, Neurosurgery and Psychiatry*, **68**, 207–210.
- CHIPCHASE, S. Y. & LINCOLN, N. B. (2001) Factors associated with carer strain in carers of people with multiple sclerosis. *Disability and Rehabilitation*, **23**, 768–776.
- COEN, R. F., O'BOYLE, C. A., SWANWICK, G. R. J., et al (1999) Measuring the impact on relatives of caring for people with Alzheimer's disease: Quality of life, burden and well-being. *Psychology and Health*, **14**, 253–261.
- DEPARTMENT OF HEALTH (2005) *National Service Framework (NSF) for Long-term Conditions* (http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsPolicyAndGuidance/Articles/fs/en?CONTENT_ID=4105361&chk=j7dri).
- EDLUND, A., LUNDSTROM, M., BRANNSTROM, B., et al (2001) Delirium before and after operation for femoral neck fracture. *Journal of the American Geriatric Society*, **49**, 1335–1340.
- EISENBERG, L. (2000) Is psychiatry more mindful or brainier than it was a decade ago? *British Journal of Psychiatry*, **176**, 1–5.
- FACHERIS, M., MANCUSO, M., SCARAVILLI, T., et al (2005) Neurology residency training in Europe: an Italian perspective. *Lancet Neurology*, **4**, 258–262.
- FINK, P., HANSEN, M. S., SØNDERGAARD, L., et al (2003) Mental illness in new neurology patients. *Journal of Neurology, Neurosurgery and Psychiatry*, **74**, 817–819.
- FIRBAS, W. (2001) Psychotherapy – a deficient area in medical training? *Wiener Klinische Wochenschrift*, **113**, 395–396.
- GILBODY, S., WHITTY, P., GRIMSHAW, J., et al (2003) Educational and organization interventions to improve the management of depression in primary care: A systematic review. *JAMA*, **289**, 3145–3151.
- HÉNON, H., PASQUIER, F., DURIEU, I., et al (1997) Preexisting dementia in stroke patients – baseline frequency, associated factors, and outcome. *Stroke*, **28**, 2429–2436.
- INSTITUTE OF MEDICINE (2003) *Research Training in Psychiatry Residency: Strategies for Reform* (<http://www.iom.edu/report.asp?id=15646>).
- JOINT COMMITTEE ON HIGHER MEDICAL TRAINING (2004) *The Specialist Advisory Committee (SAC) in Neurology. Higher Medical Training Curriculum for Neurology* (<http://www.jchmt.org.uk/neuro/index.asp>).
- KANDEL, E. (1998) A new intellectual framework for psychiatry. *American Journal of Psychiatry*, **155**, 457–469.
- KANNER, A. (2005) Should neurologists be trained to recognize and treat comorbid depression of neurologic disorders? Yes. *Epilepsy and Behavior*, **6**, 303–311.
- KRULL, F. (1990) The problem of integrating biological and psychodynamic views in psychotherapeutic training of physicians. *Psychotherapy and Psychosomatics*, **53**, 115–118.
- LIBRARY OF CONGRESS (2000) *Project on the Decade of the Brain* (<http://lcweb.loc.gov/loc/brain/>).
- MARTIN, J. B. (2002) The integration of neurology, psychiatry and neuroscience in the 21st century. *American Journal of Psychiatry*, **159**, 695–704.
- MITCHELL, A. J. (2004) *Neuropsychiatry and Behavioural Neurology Explained*. Edinburgh: W B Saunders.
- MUKHERJEE, R. A. S. & NIMMAGADDA, S. R. (2005) Changes to training in medicine and psychiatry: a trainee's perspective on a possible way forward. *Psychiatric Bulletin*, **29**, 43–45.
- NEUROLOGICAL ALLIANCE (2003) *Neuro numbers – a brief review of the numbers of people in the UK with a neurological condition* (http://www.neural.org.uk/pages/about/how_many.asp).
- NIRODI, P., MITCHELL, A. J. & MINDHAM, R. H. S. (2003) Survey of expert second opinions in a tertiary psychiatric out-patient clinic in the Yorkshire region between 1988 and 2000. *Psychiatric Bulletin*, **27**, 416–420.
- PONTES, C. (2001) EFNS Task Force on postgraduate neurological training. Survey of the current situation of postgraduate neurological training in Europe. *European Journal of Neurology*, **8**, 381–384.
- PRICE, B. H., ADAMS, R. D. & COYLE, J. T. (2000) Neurology and psychiatry: closing the great divide. *Neurology*, **54**, 8–14.
- RAMACHANDRAN, V. S. (2003) *The Emerging Mind. BBC Reith Lectures* (<http://www.bbc.co.uk/radio4/reith2003/>).
- RINCON, H. G., GRANADOS, M., UNUTZER, J., et al (2001) Prevalence, detection and treatment of anxiety, depression, and delirium in the adult critical care unit. *Psychosomatics*, **42**, 391–396.
- ROYAL COLLEGE OF PSYCHIATRISTS (1998) *Higher Specialist Training Handbook* (<http://www.rcpsych.ac.uk/publications/op/op43.htm>).
- ROYAL COLLEGE OF PSYCHIATRISTS (2001) *Roles and Responsibilities of a Consultant in General Psychiatry* (<http://www.rcpsych.ac.uk/publications/cr/council/cr94.pdf>).
- ROYAL COLLEGE OF PSYCHIATRISTS (2003) *Basic Specialist Training Handbook* (<http://www.rcpsych.ac.uk/traindev/postgrad/bst.pdf>).
- ROYAL COLLEGE OF PSYCHIATRISTS (2004) *Requirements for Psychotherapy Training as Part of Basic Specialist Psychiatric Training* (<http://www.rcpsych.ac.uk/traindev/postgrad/ptBasic.pdf>).
- SHOOTER, M. (2005) Our educational future: a personal view. *Psychiatric Bulletin*, **29**, 41–42.
- SPRANGERS, M. A. G., DE REGT, E. B., ANDRIES, F., et al (2000) Which chronic conditions are associated with better or poorer quality of life? *Journal of Clinical Epidemiology*, **53**, 895–907.
- TERI, L. (1997) Behavior and caregiver burden: Behavioral problems in patients with Alzheimer disease and its association with caregiver distress. *Alzheimer Disease and Associated Disorders*, **11** (suppl. 4), S35–S38.
- UNIVERSITY OF BIRMINGHAM MSc/DIPLOMA/CERTIFICATE IN CLINICAL NEUROPSYCHIATRY (2002) (<http://www.neuroscience.bham.ac.uk/Postgraduate/taught/Neuropsychiatry/index.htm>).
- VAN OS, T. W., VAN DEN BRINK, R. H., TIEMENS, B. G., et al (2004) Are effects of depression management training for General Practitioners on patient outcomes mediated by improvements in the process of care? *Journal of Affective Disorders*, **80**, 173–179.
- WILSON, T., BUCK, D. & HEM, C. (2005) Rising to the challenge: will the NHS support people with long term conditions? *BMJ*, **330**, 657–661.
- WORLD HEALTH ORGANIZATION (2001) *World Health Report 2001 – Mental Health, New Understanding New Hope* (<http://www.who.int/whr/2001/en/index.html>).
- YAGER, J. & KAY, J. (2003) Assessing psychotherapy competence in psychiatric residents: Getting real. *Harvard Review of Psychiatry*, **11**, 109–112.
- YORKE, C. (1988) A defect in training. *British Journal of Psychiatry*, **152**, 159–163.
- YUDOFKY, S. C. & HALES, R. E. (2002) Neuropsychiatry and the future of psychiatry and neurology. *American Journal of Psychiatry*, **159**, 1261–1264.
- ZLOT, S. I. (1995) Psychological distress and cognitive impairment in neurological inpatients – its prevalence and its recognition by residents. *International Journal of Psychiatry in Medicine*, **25**, 203–213.

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