

Psychiatry

THREE RECENT DEVELOPMENTS of outstanding international significance have occurred in psychiatry. First, *The global burden of disease* report,¹ which showed that depression, bipolar disorder, alcoholism, schizophrenia and obsessive compulsive disorder were among the leading causes of worldwide disease disability and burden, has had major ramifications for government prioritisation of health services. Second, significant research in Alzheimer's disease has revealed the specific molecular defects underpinning the rare familial early-onset form of this condition. Third, major advances in pharmacotherapy have led to dramatic shifts in treatment, particularly for depression and schizophrenia, but also for dementia and bipolar disorder. Nationally, a major epidemiological study — the National Survey of Mental Health and Well-being of Adults² — confirmed the high prevalence and disability of mental illnesses, with depression and anxiety accounting for considerable morbidity. These international and national findings prompted the Federal Government to establish the National Depression Initiative "beyondblue".

Diagnosis. In psychiatry, diagnoses continue to be made on the grounds of pattern recognition (ie, by delineation of clinical syndromes). However, as the pathophysiological mechanisms underlying the various mental illnesses gradually become apparent, the prospect of diagnostic tests comes closer. Most noticeably, there is an air of excitement surrounding aetiological research into Alzheimer's disease. The abnormal degradation of amyloid precursor protein (present on all cells) releases the β protein fragment that polymerises to form amyloid, which, over some decades, results in the formation of plaques. In the past decade, the first animal model of Alzheimer's disease has been developed in mice; abnormal genes on chromosomes 1 (coding for *presenilin 1*), 14 (coding for *presenilin 2*) and 21 (coding for an altered amyloid precursor protein, APP) have been identified in families with early-onset Alzheimer's disease. It has also been recognised that some alleles of the gene for apolipoprotein E increase the risk of the late-onset form. These findings may lead to an understanding of the key events in the genesis of the disease, and possibly to prevention or cure.

Interventions. For depression, the selective serotonin reuptake inhibitors have become the most commonly prescribed antidepressants, probably reflecting their greater tolerability and safety. Meta-analyses suggest that the recently available agents that act on both noradrenaline and serotonin (ie, venlafaxine and mirtazapine) may have greater efficacy. Other antidepressants likely to become available in the next few years include the selective noradrenergic agent reboxetine, and antagonists of corticotropin-releasing factor.

For bipolar disorder, the anticonvulsants valproate and carbamazepine have proven to be of similar efficacy to lithium. Newer anticonvulsants, such as lamotrigine and topiramate, are showing promise as future potential mood stabilisers.

The second generation (atypical) antipsychotic drugs — clozapine, risperidone, olanzapine and quetiapine — are

being prescribed for schizophrenia (and for bipolar disorder) at ever-increasing rates because of their beneficial side-effect profiles, and, in the case of clozapine, superior efficacy in treatment-resistant disease. In the next five years, newer antipsychotic drugs, such as ziprasidone, iloperidone and aripiprazole, are likely to be in routine clinical use.

A further major advance is the advent of drug treatments for Alzheimer's disease.³ Currently, the only drugs approved are the cholinesterase inhibitors donepezil, rivastigmine and galantamine, which work by blocking the enzyme that destroys acetylcholine, the major neurotransmitter for memory. While their clinical effects are modest but significant, their major impact has been in stimulating earlier diagnosis and raising doctors' awareness. The cholinesterase inhibitors may improve or maintain cognition, as well as having positive effects on behaviour and function. Cholinesterase inhibitors provide symptomatic relief only.

Increased attention is needed to the integration of psychosocial and pharmacological treatments. A major Australian contribution to management of mental illness has been the development of the concept of "mental health literacy" (community knowledge of mental disorders),⁴ which is now recognised as a major determinant of the effectiveness of any intervention.

Prevention. This is a goal that is yet to be realised. Promising avenues include early intervention (secondary prevention) for schizophrenia, and the (more distant) possibility of vaccination as primary prevention for Alzheimer's disease. Studies in Melbourne of early intervention in schizophrenia have received considerable international attention.⁵ The focus on early detection and intervention in psychiatry is likely to grow stronger.

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Figure: Courtesy of the Cunningham Dax Collection, 2001.170

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