

New Zealand general practice should adopt population-based screening for attention deficit hyperactivity disorder (ADHD)

YES

One of the advantages of having been around in general practice for more than four decades is the opportunity to observe the long-term impact of a change in thinking in one area of medicine and to ask the question 'Why do we not deal with another area according to the same principles?' For example, in the diagnosis and management of diabetes there has been a quiet revolution. When I first started in general practice we waited until a diabetic was symptomatic before assessing. The usual opportunistic test was to check the urine for sugar. The received wisdom at that time was that most practices had 1% of known diabetes but that there was another 1% waiting to be detected if we looked a little harder. At the present time 4% of my patients are known to be diabetic but I am told this is too low. Yes, the rate of diabetes has increased over 40 years because of increasing obesity, but the biggest change is the result of a serious population screening approach with tougher criteria. All the indications are that the benefits in patient outcome are substantial in moving some patients back from the edge of diabetes and reducing end organ damage and therefore mortality.

The same could be said of the management of cardiovascular disease by screening for hypertension and hypercholesterolaemia, and treating early. We also have a much more aggressive approach to smoking cessation and altogether it is making a difference. No one suggests that the modern management of diabetes and heart disease is a waste of time and money.

An equally strong case can be made for the detection of attention deficit hyperactivity disorder (ADHD) across the population. The generally agreed rate of ADHD in most populations is 5%¹ or more, which translates into at least 200 000 people of all ages in New Zealand (NZ). According to Pharmac figures, around 25 000 are currently receiving medication, which is less than 13% of the possible total. There may be another 13% in whom a diagnosis of ADHD has been made, but in whom it has been decided by doctors, patients or families that medication is not appropriate. If these estimates are roughly correct there would still be around 74% who are undiagnosed. Does it matter?

Various studies have found a massive social burden from ADHD. One claims that 25% of those in jail in the USA have ADHD. Another suggests that those with ADHD are 22 times more likely to be incarcerated at some time in life than

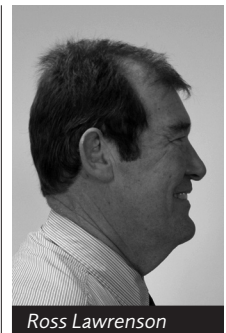
Tony Hanne

MB BS MRCS LRCP
Dip Obst FRNZCGP;
general practitioner,
Fowley Lodge,
215 Bleakhouse Road,
Howick, Auckland,
New Zealand

While evidence can help inform best practice, it needs to be placed in context. There may be no evidence available or applicable for a specific patient with his or her own set of conditions, capabilities, beliefs, expectations and social circumstances. There are areas of uncertainty, ethics and aspects of care for which there is no one right answer. General practice is an art as well as a science. Quality of care also lies with the nature of the clinical relationship, with communication and with truly informed decision-making. The **BACK TO BACK** section stimulates debate, with two professionals presenting their opposing views regarding a clinical, ethical or political issue.



Tony Hanne



Ross Lawrenson

BACK TO BACK this issue:

those who do not.² The rate of road accidents was found to be four times higher in ADHD drivers.³ Substance abuse is double in ADHD, but reduced by treatment.⁴ Academic underachievement,⁵ job instability,⁶ unemployment, relationship breakdowns, teenage pregnancy, and suicide are all significantly higher. Rates of other psychiatric illnesses including depression, anxiety,⁷ schizophrenia, and OCD are all higher. A high proportion of Specific Learning Disorders have an underlying problem of ADHD.⁸ The cost in terms of suffering for the patient and those around him or her is enormous. The financial cost to the Ministries of Education, Social Welfare, Justice, and Health (with particular reference to ACC) must be equally substantial. This latter amount would be many times the cost of a greater use of medication where needed.

Why then do we not take a wider approach to the detection of ADHD in our practices? There are various excuses.

1. Isn't ADHD a new disease?

The first good description of the condition was by Dr Alexander Crichton in 1798 and it was described more fully in 1902 by Dr Joseph Still. Effective treatment began in 1976. The current name is relatively new, first used in 1980 for children and in 1994 for adults, but the symptom complex was clear long before.

2. ADHD is not a real condition, is it?

Positron Emission Tomography first demonstrated in 1990 the difference in blood flow in key areas of the brain, and this was later shown to reverse with medication. The genetic factors are being rapidly defined. The test of variable attention (TOVA) computer test has 80% specificity and 80% sensitivity. Endless RCTs of medication have shown easily measurable benefits in learning and behaviour from treatment.

3. Isn't ADHD a specialist condition?

The diagnosis requires a careful history from the individual, the family and the teacher for children, and a wider circle for adults. It is a common problem. The management involves the

family and the community and is long-term. The medication is simple to titrate and safe. Aren't these the very conditions GPs manage best? Only 3% of general psychiatric patients are referred to psychiatrists in the public system. Why should ADHD be different?

4. Doesn't ADHD treatment lead to drug abuse?

Studies have shown, on the contrary, that later drug abuse is substantially reduced by the early use of medication. The proportion of those receiving medication who abuse is less than 5% if they are strictly managed. Why punish the other 95%?

5. Can't ADHD be well-managed by better parenting, firm teaching, diet, and counselling?

All of these measures may help, but only when appropriate medication is considered at the same time. Vast amounts of money are spent by desperate parents on alternative medicines and therapies for which there is no evidence of benefit.

6. Isn't ADHD only a childhood condition which they outgrow?

ADHD is recognisable throughout life. About half of ADHD sufferers have adapted sufficiently by the end of the teens, but the other half need ongoing help.

A population approach to ADHD would inevitably mean shifting responsibility for basic assessment and management to general practice. This, in turn, would necessitate training interested GPs to be able to undertake this effectively.⁹ More complex problems with multiple psychiatric diagnoses would still need specialist input. Tools, of which there are many, to assist diagnosis should be reviewed to establish suitability, effectiveness and reliability. Current barriers to the decision to prescribe stimulants would need to be modified. The rules have recently been relaxed to allow GPs to prescribe Isotretinoin in acne, arguably a more risky decision. Education of teachers, parents, and social workers would need to be under-

taken to achieve a more harmonious working relationship to support ADHD patients. Funding for GPs with a special interest in this area to allow sufficient time for thorough assessment would need to be agreed.

Singapore and South Korea, with similar rates of ADHD to NZ, are developing a population approach in which GPs are central. They report that this is working well. What are we waiting for?

References

1. Barbaresi W, Katusic S, Colligan R et al. How common is attention deficit/hyperactivity disorder? Towards resolution of the controversy: results from a population-based study. *Acta Paediatr Suppl.* 2004;93:55–59.
2. Satterfield JH, Schell A. A prospective study of hyperactive boys with conduct problems and normal boys; Adolescent and adult criminality. *J Am Acad Child Adolesc Psychiatry.* 1997;36:1726–1735.
3. Barkley RA et al. Motor vehicle driving competencies and risks in teens and young adults with attention deficit hyperactivity disorder. *Pediatrics.* 1996;98(6):1089–95.
4. Wilens TE, Adamson J, Monuteaux MC et al. Effect of prior stimulant treatment for attention deficit/hyperactivity disorder on subsequent risk for cigarette smoking and alcohol and drug use disorders in adolescents. *Arch Pediatr Adolesc Med.* 2008;162:916–21.
5. Barkley RA, Fischer M, Edelbrock CS, Smallish L. The adolescent outcome of hyperactive children diagnosed by research criteria: 1. An 8-year prospective follow-up study. *J Am Acad Child Adolesc Psychiatry.* 1990;29:546–557.
6. Murphy K, Barkley RA. Attention deficit hyperactivity disorder adults: co-morbidities and adaptive impairments. *Compr Psychiatry.* 1996;37:393–401.
7. Bowen R, Chavira DA, Bailey K et al. Nature of anxiety comorbid with attention deficit/hyperactivity disorder in children from a pediatric primary care setting. *Psychiatry Res.* 2008;157:201–9.
8. Casey JE et al. Learning disorders in children with attention deficit disorder with and without hyperactivity. *Child Neuropsychology.* 1996;(2):83–98.
9. Langberg JM, Froehlich TE, Loren REA et al. Assessing children with ADHD in primary care settings. *Expert Rev Neurother.* 2008;8:627–41.

New Zealand general practice should adopt population-based screening for attention deficit hyperactivity disorder (ADHD)

NO

Prevention of harm through screening is naturally a good thing to do—only a wowsler would vote against it. However we work in a resource-limited system and so have to carefully consider where we should put our efforts. Over the years many new screening programmes have been proposed and then fallen by the wayside. As far back as 1968 the World Health Organization promoted a set of criteria to be met before a screening programme is adopted. These include: Is it a well-defined and important disease? Does the population want the screening? Do we have a sensitive and specific test to help differentiate those at risk? Do we have an effective intervention, is the screening likely to lead to harm rather than benefit? Do we have evidence of

benefit from randomised controlled trials? Do we have the resources to implement the screening programme?

So how does screening for attention deficit hyperactivity disorder (ADHD) stack up against these criteria? ADHD is a chronic behavioural disorder characterised by persistent hyperactivity, impulsivity, and inattention.¹ Its reported prevalence is greater in boys than girls, decreases with age and varies from country to country with the USA reporting as many as one in 20 children with a diagnosis of ADHD.² Many young people with signs of ADHD have comorbid conditions such as depression, conduct disorders, substance abuse and bipolar disease.¹ It is therefore difficult to determine what the natural history of ADHD is when many of the outcomes can be confounded by the comorbidities. Whilst we have quite good data on what happens to children with signs of

Ross Lawrenson MD,
FRCGP, FFPH, FAFPHM;
Professor of Primary
Care, Waikato Clinical
School, The University of
Auckland, Auckland, New
Zealand; r.lawrensen@
auckland.ac.nz