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**Vanessa Argondizo dos Santos**, School of Medicine, Pontifícia Universidade Católica Rio Grande do Sul; **Ana Maria Migott**, School of Medicine, Universidade de Passo Fundo; **Claiton Henrique Dotto Bau**, Department of Genetics, Instituto de Biociências, Universidade Federal do Rio Grande do Sul; **José Miguel Chatkin**, Av. Ipiranga 6690, room 315, 3rd floor, School of Medicine Graduation Office, Pontifícia Universidade Católica Rio Grande do Sul, Porto Alegre 90610-000, Brazil. Email: jmchatkin@pucrs.br

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### Does medication benefit the long-term psychiatric outcomes of children with ADHD?

Langley and colleagues<sup>1</sup> reported 5-year follow-up outcomes of young children with attention-deficit hyperactivity disorder (ADHD) and the maternal and social factors related to the prognosis. The findings provide evidence of high comorbidity of antisocial behaviours associated with ADHD, drawing attention to the long-term outcomes of the disorder. Yet, in my opinion, additional information needs to be clarified regarding the findings.

The authors showed that medication use was not significantly associated with conduct disorder diagnosis or other antisocial behaviours. However, this interesting result was not discussed in detail in the article. What I am interested in is whether medication could reduce the risk of developing psychiatric diseases. Recently, studies have shown that treatment with stimulant drugs for ADHD could reduce the risk for some psychiatric disorders. In a systematic review, Wilens *et al*<sup>2</sup> reported that medication in childhood was associated with a reduction in the risk for subsequent substance misuse. Biederman *et al*<sup>3</sup> showed that stimulant treatment of youths with ADHD decreased the risk for depressive and anxiety disorders and disruptive behaviour later in life. Both studies indicate that medication can benefit psychiatric outcomes. In Langley *et al*'s study,<sup>1</sup> most of the participants (63%) received prescribed stimulant drugs, but the psychological outcomes were not optimistic regarding the prognosis of conduct disorder. Does this result suggest that medication is not beneficial for children with ADHD in the long term? What can account for it? In addition, why did children who were prescribed medication have more ADHD symptoms than those no longer using medication?<sup>1</sup>

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**Rongwang Yang**, MD, Department of Child Psychology, The Children's Hospital, Zhejiang University School of Medicine, China. Email: colortea@zuaa.zju.edu.cn

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**Authors' reply:** We agree that the influence of prescribed medication on the long-term psychological outcomes associated

with ADHD is an interesting and important area of research. However, we regret that our study is not best placed to address these issues.

Our study utilised a naturalistic design, identifying children recently diagnosed with ADHD through child and adolescent mental health services and paediatric clinics in the UK. As such, no restrictions or controls were placed on the prescription or continuation of stimulant medication in this group. To adequately test the questions posed by Dr Yang, specifically designed trials are required – well beyond the scope of our article.

Our findings indicated that prescription of medication at follow-up was associated with higher rates of ADHD symptoms, but not with the other psychological outcomes we assessed (including conduct disorder and substance use). Because our study does not provide sufficient data on stimulant use over time and because the majority (90%) were prescribed stimulant medication at some point, we did not expand further on the reasons for these findings, nor can we speculate on why those prescribed medication at follow-up had more ADHD symptoms.

We are therefore grateful to Dr Yang for highlighting this important area for research, but regret that we cannot address these queries using our data.

**Kate Langley**, Department of Psychological Medicine and Neurology, School of Medicine, Cardiff University, Heath Park, Cardiff, CF14 4XN, UK. Email: langleyk@cf.ac.uk; **Tom Fowler**, Department of Psychological Medicine and Neurology, School of Medicine, Cardiff University; **Tamsin Ford**, Child Health Group, Peninsula Medical School, University of Exeter; **Ajay K. Thapar**, **Michael J. Owen**, **Michael C. O'Donovan**, **Anita Thapar**, Department of Psychological Medicine and Neurology, School of Medicine, Cardiff University, UK

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### Erasing trauma memories

Recent elegant research has raised the salient issue of altering traumatic memories and its treatment implications. Kindt *et al*<sup>1</sup> suggest that 'if emotional memory could be weakened or even erased, then we might be able to eliminate the root of many psychiatric disorders, such as post-traumatic stress disorder'. In a similar vein, Schiller *et al*<sup>2</sup> reported that 'fearful memories can be wiped out for at least a year using a drug-free technique'. The prospect of erasing distressing memories is indeed compelling and has led to widespread media coverage.

However, this issue elicits important ethical and clinical considerations: first, would we want to erase trauma memories, and second, is it clinically helpful to erase such memories?

Loss of knowledge about the past or oneself may be ethically problematic, although reducing suffering clearly may take precedence.<sup>3</sup> Our sense of self is constructed from autobiographical memories, and the authenticity of how they link and our trust in this narrative is important for well-being. Furthermore, losing memory can compromise a victim's ability to provide legal evidence: autonomy and beneficence may trump justice, but it would be better if the evidence could be used and the victim did not suffer.

Paradoxically, erasing memories of trauma may not in itself reduce suffering and could even lead to the reverse. In clinical cases where explicit memory of an event has been lost, for example owing to a severe head injury or drug rape (e.g. via flunitrazepam), extreme distress can ensue. The clinical literature suggests that avoidance of trauma memories is associated with worse rather than improved outcome.

We note that the data in the above papers do not in fact indicate memory 'erasure'. Rather, both studies found that fear

responding (the emotional component of the memory) was reduced while declarative memory (knowledge about the event) was left intact. The data therefore point towards erasing the pain but not the knowledge of the trauma memory: an important ethical and clinical difference.

We need to challenge the erroneous public perception of a science seeking to ‘erase’ painful memories as such media headlines are obscuring the true interpretation of the data and what treatment development seeks. Such consideration may help prevent us from inadvertently misleading people (especially those who have suffered trauma) to believe that we are pursuing an ‘eternal sunshine of the spotless mind’.

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**Emily A. Holmes**, Department of Psychiatry, University of Oxford, UK. Email: emily.holmes@psych.ox.ac.uk; **Anders Sandberg**, Future of Humanity Institute, University of Oxford, UK; **Lalitha Iyadurai**, Amersham Hospital, Buckinghamshire, UK

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## Early intervention in psychosis

Professor Singh is the expert on early intervention services and provides a characteristically scholarly and elegant reappraisal.<sup>1</sup> Although I am surprised that the Lambeth Early Onset (LEO)<sup>2</sup> and OPUS<sup>3</sup> trials are interpreted as quite so definitive (when most of us read them as very promising but far from conclusive), I am reluctant to disagree with an admired colleague in his area of expertise. However, I must take issue with one conclusion in his ‘future directions’. Singh argues that generic community mental health teams (CMHTs) have no evidence for them and that ‘The logical next step in the move from institutions to community is from generic community teams to specialist teams’. In this I believe he is mistaken.

Community mental health teams suffer from having evolved before the era of intensive mental health services research. Nobody ‘owns’ them, so few have actively researched them; they have most often been the comparators in randomised controlled trials of other innovative specialist teams. Despite this, research-based conclusions can be drawn about their comparative effectiveness. The body of assertive outreach research is overwhelmingly greater than for any other specialised team. What a series of over 60 assertive outreach team trials shows is that reductions in in-patient care are more highly dependent on the nature of the comparator services than the experimental services.<sup>4</sup> Where these comparator services are poor and fragmented there is a substantial reduction; where they are not, then there is little or no reduction. Often this has been where the comparator is a generic community team.<sup>5</sup>

We have rather myopically interpreted these findings as a failure to demonstrate superiority of the specialist team over CMHTs. However, ‘As health services enter a period of economic austerity’,<sup>1</sup> we need to recognise that the findings tell us much more than that. What they demonstrate is that generic CMHTs have routinely matched the specialist teams in major outcomes yet for a significantly lower cost.<sup>6</sup> They are, in short, more cost-effective and therefore currently our best buy.

Experimentation and innovation in specialised teams must continue if we are to progress. However, if we

conduct research we must pay attention to its findings, no matter how unwelcome. The current evidence supports the superiority of CMHTs, no matter how much that they may grate.

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**Tom Burns**, Professor of Social Psychiatry, University of Oxford, Warneford Hospital, Oxford OX3 7JX, UK. Email: tom.burns@psych.ox.ac.uk

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**Author’s reply:** Professor Burns rightly reminds us that, unlike specialist teams, community mental health teams (CMHTs) have never had strong advocates and have not been actively researched. His point about the wide variation in CMHT outcomes as comparators in trials illustrates this: lacking a clear role, responsibilities and remit, CMHTs have struggled to delineate what they do well, shed what they do not, and ensure that their staff keep up with the changing evidence base for therapeutic interventions. Specialist teams do not do anything special which is out of CMHT reach. Specialist teams are simply better placed to engage patients and deliver high-quality interventions because of the specialist focus that allows clinicians to develop and hone specialist skills. This is the history of improvements in medicine, where specialisation is both an outcome of academic advance and a vehicle for service improvement. It is in the nature of generic teams to deliver generic care; there is no evidence that pouring extra resources into CMHTs would turn them into specialist equivalents.

The latest National Institute for Health and Clinical Excellence (NICE) guidelines on schizophrenia reviewed the clinical and cost-effectiveness of CMHTs and concluded:

‘Despite the fact that CMHTs remain the mainstay of community mental healthcare, there is surprisingly little evidence to show that they are an effective way of organising services. As such, evidence for or against the effectiveness of CMHTs in the management of schizophrenia is insufficient to make any evidence-based recommendations’ (p. 336).<sup>1</sup>

The health economic review adds:

‘The available evidence on health economics is unclear. The non-significant differences between standard care and CMHTs, and between pre-intervention period and intervention period, suggest that CMHTs provide no real cost savings or extra costs’ (p. 337).<sup>1</sup>

Reluctant as I am to disagree with an esteemed colleague, there is little evidence to support the superiority of CMHTs over specialised teams.

Our understanding of mental disorders and the complexity of treatment has moved on considerably from the time when CMHTs were originally established. In this rapidly changing world, it is difficult to see how generic teams can deliver all the recommendations of the 22 NICE guidelines in mental health.