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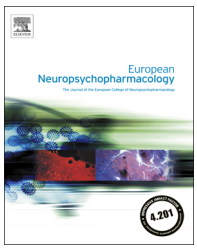

Quality of prescribing for schizophrenia: Evidence from a national audit in England and Wales

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Abstract
The National Audit of Schizophrenia (NAS) examined the quality of care received in England and Wales. Part of the audit set out to determine whether six prescribing standards, set by the national clinical guidelines for schizophrenia, were being implemented and to prompt improvements in care. Mental Health Trusts and Health Boards provided data obtained from case-notes for adult patients living in the community with schizophrenia or schizoaffective disorder. An audit of practice tool was developed for data collection. Most of the 5055 patients reviewed were receiving pharmacological treatment according to national guidelines. However, 15.9% of the total sample (95%CI: 14.9–16.9) were prescribed two or more antipsychotics concurrently and 10.1% of patients (95%CI: 9.3–10.9) were prescribed medication in excess of recommended limits. Overall 23.7% (95%CI: 22.5–24.8) of patients were receiving clozapine. However, there were many with treatment resistance who had no clear reason documented as to why they had not had a trial of clozapine (430/1073, 40.1%). In conclusion, whilst most people were prescribed medication in accordance with nationally agreed standards, there was

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considerable variation between service providers. Antipsychotic polypharmacy, high dose prescribing and clozapine underutilisation in treatment resistance were all key concerns which need to be further addressed.

1. Introduction

Antipsychotic drugs have been the mainstay for the management of schizophrenia for over half a century. Their efficacy has been established for the treatment of acute episodes (National Institute for Clinical Excellence, 2009), and for maintenance treatment by substantially reducing the risk of relapse (Leucht et al., 2012b, 2012a). The benefits of these drugs must however be weighed against their adverse effects (Carlson et al., 2006; Leucht et al., 2012b). Recommendations from the British Association for Psychopharmacology (Barnes, 2011) and the NICE guideline (National Institute for Clinical Excellence, 2009) recommend avoiding antipsychotic polypharmacy in the majority of cases. Also, there is no convincing evidence that doses of antipsychotic drugs higher than the recommended maximum advised in the BNF (British National Formulary) (BMJ Group and RPS Publishing, 2013) afford additional clinical benefit over standard doses. High doses lead to greater risk of dose-related adverse effects such as cardiac sudden death (Barnes, 2011) and polypharmacy has been linked to higher rates of metabolic syndrome and lipid markers of insulin resistance (Correll et al., 2007). Nevertheless, previous studies both in the UK (Paton et al., 2008) and worldwide (Agid et al., 2013; Faries et al., 2005; Ganguly et al., 2004; Kreyenbuhl et al., 2007; Procyshyn et al., 2001; Sim et al., 2004) have shown that high dose antipsychotic prescribing and polypharmacy are common practice. An audit of antipsychotic usage in New Zealand confirmed UK findings (Lelliott et al., 2002) that antipsychotic polypharmacy is strongly associated with a combined daily dose in excess of standard practice (Humberstone et al., 2004). Similarly, a Canadian study reported that a third of patients are discharged on an antipsychotic polypharmacy regimen (Procyshyn et al., 2001). Studies in the US (Faries et al., 2005; Ganguly et al., 2004) and East Asia (Sim et al., 2004) found antipsychotic polypharmacy to be present for approximately 50% of patients.

The term "treatment resistant" in schizophrenia is used to describe people who have not adequately responded to medication despite adequate dose, duration and adherence (National Institute for Clinical Excellence, 2009). Since the average rate of non-adherence among patients with schizophrenia has been reported as 58% (range 24–90%) (Cramer and Rosenheck, 1998) adherence should always be assessed in cases of non-response (National Institute for Clinical Excellence, 2009). Furthermore, studies have shown that patients with psychosis and coexisting substance misuse generally show poorer response to treatment (National Collaborating Centre For Mental Health, 2011). Where treatment resistance for schizophrenia does exist, the superiority of clozapine against other agents has been established in large pragmatic clinical trials such as CATIE (McEvoy et al., 2006) and CUtLASS (Lewis et al., 2006) and yet, low rates of clozapine use are still apparent in clinical practice (Weissman, 2002). Guidelines from both the UK (NICE (National Institute for Clinical Excellence, 2009)) and the US (Patient Outcomes Research Team —PORT (Buchanan et al., 2010)) recommend that clozapine should be offered to all patients who continue to experience clinically significant symptoms after two adequate trials of other antipsychotics (National Institute for Clinical Excellence, 2009). Nevertheless, one study found that patients had received on average five antipsychotics before being prescribed clozapine which had been delayed for an average of five years longer than is clinically desirable (Taylor et al., 2003). Clinician's knowledge, attitudes and preferences are likely predictive factors for the variation in clozapine prescribing patterns (Patel, 2012). Furthermore, not all treatment resistant patients will respond adequately to clozapine and there is a lack of clear guidance on how to manage those who fail to respond. Despite limited evidence and modest improvement at best (Taylor et al., 2012), NICE suggests considering the addition of a second antipsychotic drug to clozapine to augment its effects (National Institute for Clinical Excellence, 2009). In contrast, the PORT guidelines do not support augmentation therapy due to insufficient efficacy and safety data (Buchanan et al., 2010).

The National Audit of Schizophrenia (NAS) set out to obtain a comprehensive picture of the quality of care received by individuals with schizophrenia and schizoaffective disorder in England and Wales. Since a national guideline already exists (National Institute for Clinical Excellence, 2009), the audit objective was to examine whether this was being implemented and to prompt improvements in the care of patients with these conditions. Specifically it aimed to quantify the degree of prescribing of antipsychotics at high dose, the rates for antipsychotic polypharmacy, and also the nature of clozapine prescribing at a national level, thereby overcoming concerns about sampling and generalisability of smaller scale studies.

2. Experimental procedures

2.1. Setting

NAS is a cross-sectional survey of patients involving retrospective examination of clinical records and collection of specific contemporaneous data. It is an audit of practice at the level of individual Trusts and does not allow conclusions to be drawn at the level of individual clinical teams. The term 'Trust' has been used to refer to both English Trusts and Welsh Health Boards throughout. All Trusts in England and Wales were expected to participate if they provided care or treatment in the community for adults with schizophrenia. Sixty of the 64 organisations identified as being eligible by the NAS team submitted data. Further details are available in the national report (Royal College of Psychiatrists, 2012).

2.2. Development

Standards and outcome indicators were developed in June-August 2010 and the audit tools were then developed. Six Mental Health