Major depression treatment in Germany – descriptive analysis of health insurance fund routine data and assessment of guideline-adherence

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A B S T R A C T

Background: Guideline oriented treatment strategies of Major depressive disorder (MDD) improve treatment outcomes and reduce risks of chronicity and recurrence.

Aims: Description of routine treatment reality and analysis of guideline fidelity in first episode MDD in Germany. Indicators: patients with severe or psychotic depression or severe psychiatric comorbidities’ treatment by specialists, adequate antidepressant pharmacotherapy, permanent treatment with more than one antidepressant, long-term benzodiazepine treatment and provision of psychotherapy.

Method: Descriptive analysis of routine data of the German statutory health insurance fund Barmer GEK in the index year 2011 that covers a population of 7,501,110.

Results: 236,843 patients were diagnosed a depressive episode. 53.0% of the patients with severe depression, 34.4% with psychotic depression and 50.9% with severe psychiatric comorbidities were treated by specialists; of the patients treated by a general practitioner 48.1% with severe and 47.3% with psychotic depression received an antidepressant; 9.7% of all patients with MDD got two antidepressants simultaneously; 8.3% received longterm benzodiazepine prescriptions; 26.1% got psychotherapy.

Limitations: the analyses depends on the indicators definitions that cannot cope with the variety of individual treatment path; comparison with guidelines was complicated by a large fraction of patients with recurrent MDD that was wrongly diagnosed with first episode depression; due to the data structure, not all guideline recommendations could be examined

Conclusions: Routine practice was oriented upon the guidelines recommendations. However some aspects could be identified that bear potential for improvements.

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1. Introduction

Major depressive disorder (MDD) as defined in ICD-10 or DSM-IV/V is a worldwide highly prevalent disease with a life time risk of 8–12% (Andrade et al., 2003). It is an increasingly urgent health problem, as it is supposed to ascend to the 2nd rank of the World Health Organization’s disability-adjusted life year (DALY) index until 2030 (Mathers and Loncar, 2006). Due to the risk of developing a recurrent or chronic disease (Patten et al., 2012) it is highly disabling (Whiteford et al., 2013). For the affected patients MDD leads to great subjective suffering and a decline in quality of life (Rubio et al., 2014). MDD is a major cause for a reduced life expectancy and an increased rate of suicide mortality (Chesney et al., 2014). For society MDD is a high economic burden (Kleine-Budde et al., 2013; Lappa et al., 2007; Wittchen et al., 2011).

To face this challenge, besides prevention strategies (Beardslee, 2013), an evidence-based, guideline-oriented treatment approach is indispensable, as it results in significantly better treatment outcomes (Bauer et al., 2009; Smolders et al., 2009; Katon et al., 1996; Lave et al., 1998; Melfi et al., 1998; Unützer et al., 2002). For MDD different national guidelines exist: In Germany the “S3-guideline unipolar depression” from 2009 (DGPPN et al., 2009; english summary Härter et al., 2010), in the USA among others the American Psychiatric Organisation’s (APA) “Practice Guideline for the Treatment of Patients With Major Depressive Disorder” from 2010 (American Psychiatric Association, 2010) and in Great Britain the National Institute for Health and Clinical Excellence’s (NICE) clinical guideline 90 “Depression in Adults” from 2009 (National Institute for Health and Clinical Excellence, 2009).
The first aim of this study was to describe routine treatment reality in Germany by an analysis of health insurance fund routine data (Wobrock et al., 2009). The second aim was to assess guideline adherence following the German S-3-Guideline Unipolar Depression. Five indicators were defined that could be examined using the available routine data and that were covering key elements in acute depression treatment—delivery of treatment, medication and psychotherapy. The indicators were: Firstly, treatment delivery by a general practitioner (GP) or an outpatient psychiatric specialist. The guideline demands that patients with severe or psychotic depression or severe psychiatric comorbidities (schizophrenia, anxiety disorder, obsessive compulsive disorder, somatoform disorder, personality disorder, dementia) should be treated by a specialist (evidence level IV). This recommendation is specific to the German guideline, it cannot be found in the NICE or APA guideline and is not evidence-based. It is an expert opinion that is a tribute to the specific structure of the German health systems out-patient sector with psychiatric specialists working in semi-private offices. Secondly, antidepressant (AD) pharmacotherapy. The German guideline does not consider a mild depressive episode as an indication for pharmacotherapy whereas it demands an antidepressant treatment for patients with moderate, severe and psychotic depression (evidence level I). Thirdly, antidepressant polypharmacy. The German guideline only cautiously recommends a permanent treatment with more than one antidepressant for cases of treatment resistance (evidence level not mentioned in the guideline). This recommendation of the German guideline is stricter than the equivalent parts in the APA and NICE guidelines that consider augmentation with a second AD an adequate strategy. Fourthly, long-term benzodiazepine treatment. The German guideline disallows long-term treatment with benzodiazepines (expert consensus in the guideline). Fifthly, psychotherapy. The guideline recommends psychotherapy for all patients with MDD (evidence level I) (American Psychiatric Association, 2010; DGPPN et al., 2009; National Institute for Health and Clinical Excellence, 2009).

The routine data used in this study was provided by the statutory health insurance fund Barmer GEK, the second biggest health insurance fund in Germany with over 8.6 million insurants. In Germany health care is mainly funded by a statutory contribution system (Gesetzliche Krankenversicherungen) and only to a small part by private schemes. For historic reasons more than 100 statutory insurance funds exist. The statutory health insurance founds are compulsory for all with a gross income of less than 4,462 € per month and thereby cover about 90% of the population. Basically, they provide co-payment free health care with a free selection of GPs, out-patient specialists and (when approved by a doctor) hospitals and psychotherapy. Cognitive behavioural therapy (CBT), Brief Psychodynamic Therapy (BPT) and under certain circumstances Psychoanalysis (PSA) are covered for MDD. F32.1, F32.2, F32.3) were selected with the aim of excluding patients with recurrent depression, because treatment strategies in these patients depend much more on the individual treatment history than in first episode patients and often no clear evidence-based recommendations exist. For privacy protection reasons it was not possible to analyse the treatment path of individual patients but only collective data. Only patients that received treatment in two following quarters were included, in order to assess only treatment quality of patients receiving continuous treatment and to get safer diagnoses (however, see Pedersen et al., 2001). In the index year many patients received more than one degree of severity (more than one F32 diagnosis, e.g. F32.0 in one quarter, F32.1 in the next quarter) and were treated by different institutions (e.g. in a psychiatric hospital and by a general practitioner (GP)). Therefore a ranking order of diagnosis following severity (F32.3 > F32.2 > F32.1 > F32.0) and institutions following treatment intensity (psychiatric hospital > psychiatric specialist doctor > general practitioner) was assumed. To evaluate pharmacotherapy ATC (Anatomical Therapeutic Chemical) codes and defined daily doses (DDD) of prescriptions were analysed. DDDs are defined as “the assumed average maintenance dose per day for a drug used for its main indication in adults.” All substances that are approved as antidepressants and benzodiazepines in Germany (Supplement Table 1) were considered. In order to assess only continuous pharmacotherapy a minimum prescribed DDD for antidepressants and benzodiazepines has been defined. For antidepressant treatment a limit of 100 DDD was chosen that corresponds to a treatment of more than three months. In order to evaluate if two antidepressants were given at the same time, the overlap was calculated. If the overlap lasted nine weeks or longer the indicator became positive. Benzodiazepine treatment was defined as too long, if more than 50 DDDs were prescribed continuously. The risk-benefit ratio of long-term benzodiazepine use (more than four weeks) becomes problematic and the risk of an addiction increases significantly (Lader, 2011). For the indicator psychotherapy patients were counted that received in the index year psychotherapy sessions funded by the insurance. Parts of the Barmer GEK dataset, but not the MDD subset, were used once before in 2014 for an analysis of psychopharmacological treatments in dementia (Godemann et al., 2014).

In order to determine if differences between institutions (GP, psychiatric specialist, hospital) and grades of severity (F32.0, F32.1, F32.2, F32.3) were significant, chi-squared tests were used.

3. Results

3.1. Sample characteristics and incidence

To characterise the sample in a first step incidence, severity of depression and gender were analysed. From the total sample of 7,501,110 insurants (≥ 18 years) 236,843 patients were treated for a depressive episode in the index year 2011. This gives an incidence of 3.2%. Since only F32 and not F33 cases were analysed, no prevalence estimation was done. 13.5% (31,935) were diagnosed a mild episode, 52.4% (124,167) a moderate episode, 28.9% (68,450) a severe episode and 5.2% (12,291) a severe episode with psychotic symptoms (Fig. 1A). 74.3% of the patients with a depressive episode were women, 25.7% were men, thus a ratio of 2.89:1. In the total sample this rate was 1.31:1. Normalized for this imbalance the rate in patients with depressive episodes dropped to 2.15:1.

Supplement Table 1

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