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Public health implications of depression

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INTRODUCTION

Depression is one of the most common reasons for mental ill health in the world, and is the most burdensome disease in Europe in terms of Disability-Adjusted Life Years[1]. The World Health Organization concludes that depression is the fourth most burdensome disease in the world[2]. Hence, depressive illness is a major global public health concern and in order to meet the needs of the people afflicted it is important to make wise decision on how health care budgets should be used for prevention, treatment and management of depression.

The present paper will focus on the economic burden of depression to health care providers, the public sector and society as whole, and will provide a summary of the research conducted in the area up until today.

HEALTH ECONOMICS

We live in a world of scarce resources. How these scarce resources should be optimally allocated to provide maximum output is the essence of the economic sciences. Health economics is the application of the theory of economics on health, and informs us about how we should best use our resources to produce health. Health economic evaluation is a method for assessing costs and benefits of alternative strategies of allocating resources, to assist in decisions aiming at improving efficiency. An efficient allocation of resources implies that no further health gains can be achieved by allocating resources differently.

The research field of health economics has increased dramatically throughout the 1990's until today due to several reasons. First, the demand of health care has put stronger pressure on health care budgets and thus setting prioritities. Second, many countries in Europe are currently phasing a dramatic demographic challenge. Third, there is a strong tendency towards evidence-based medicine and thereby a more systematic way of using health care resources based on research evidence. Fourth, many European countries have installed independent national authorities requesting health economic evidence in the process of handling price and reimbursement of new medical innovations.

THE FULL ECONOMIC BURDEN OF DEPRESSION

Earlier research has shown that affective disorders are the most burdensome disorders amongst all neurological and psychiatric disorders. All psychiatric disorders taken together cost the European society almost _300 billion annually (Andlin-Sobocki et al., 2005). In 2005, the cost of depression was estimated at _120 million, of which the absolute majority of the costs were found in the working population (Sobocki et al., 2006a). Furthermore, the majority of the cost of depression is, without any exceptions in the litterature, found outside the formal health care setting (fig. 1). We have shown that 65% of the total cost of depression is due to lost working capacity (Sobocki et al., 2006). The dominating cost of depression from the formal health care setting is found in outpatient care.

The cost of depression does, however, differ from country to country in Europe. We have shown that the average annual cost of a depressive patient varies from _1,000 to _8,000 (Sobocki et al., 2006a). Moreover, there is a difference in what costs make up the bulk of the cost of depression.

Few studies have tried to assess the development of the economic burden of depression over time. We have managed to track costs due to depression over almost 10 years in Sweden, and have concluded that the societal cost of depression has doubled over 8 years (fig. 2) (Sobocki et al., 2006b).

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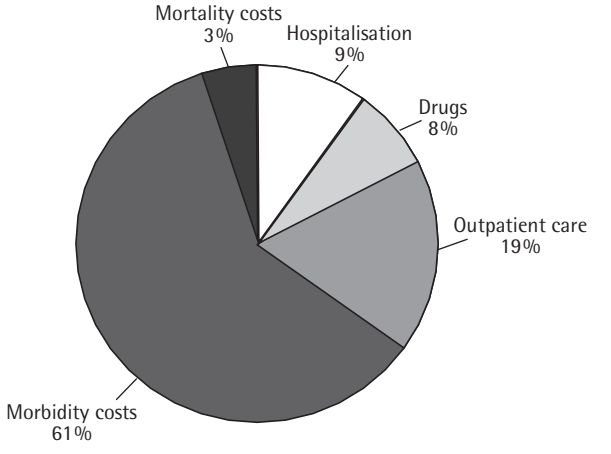

Figura 1 *Distribution of cost of depression in Europe by resource category.*

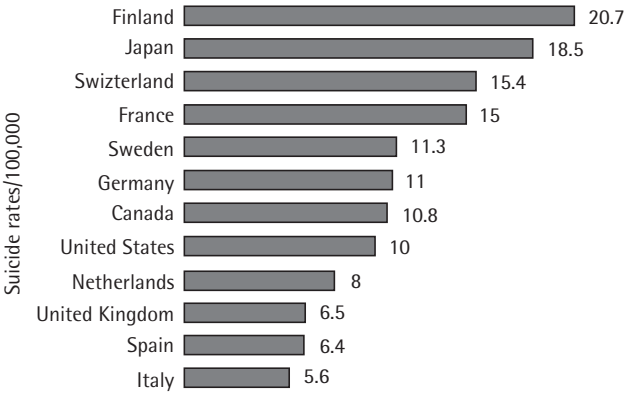

Figura 3 *Suicide rates (per 100,000 inhabitants) across the world.*

DEPRESSION AND SUICIDE

Suicide is recognized as a major public health problem and the suicide rate is varying across the world (fig. 3). The absolute majority of suicides are associated with depression. Suicide ideation is common among depressed patients, and 10-20 % of those with ideation actually commit suicide. Preventive and effective measures to decrease both suicidal ideation and suicides are therefore important. The suicide rates have, however, been reduced by almost 40 % since 1987 in Sweden. Likely reasons for this reduction are improved diagnosis setting and improved treatments for depression (e.g., antidepressants). The use of antidepressants increased seven-fold (measured in DDDs) during the same time period.

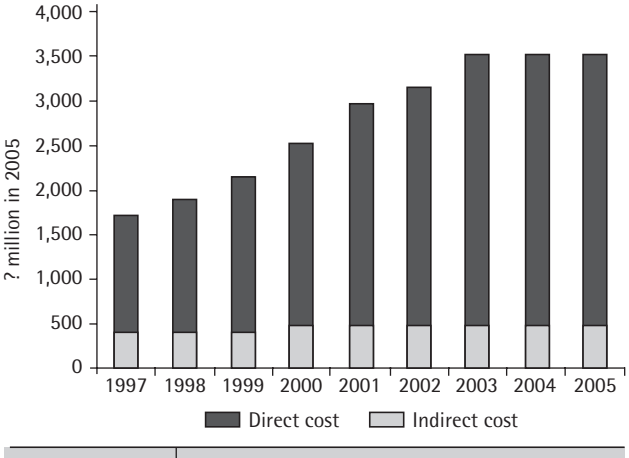

Figura 2 *The economic cost of depression in Sweden from 1987 to 2005.*

THE ECONOMICS OF TREATMENTS AND MANAGEMENT OF DEPRESSION

Today there exist a number of treatment alternatives in the mangement of depression. One of the major innovations in the treatment of depression came with the introduction of antidepressive drug therapies. Pharmaceutical sales of antidepressants increased heavily during the 1990's (fig. 4) (Sobocki et al., 2006b). This increase was mainly due to the introduction of the SSRIs. In Sweden only, total sales increased from 100 MSEK (_11 million) in the year 1990 (128 MSEK in 2005 year prices) to almost 1 200 MSEK (_130 million) in the year 2005, which is an increase by more than 1 100 % (or 900 % when adjusting for inflation).

Put into context, the drug costs spent on care for depression only makes up a minority of the total economic burden of the disease. At a European level, it has been shown that drug costs make up 8 % of the cost of depression (Sobocki et al., 2006a).

A number of studies have, moreover, shown that effective treatment and management of depression results in reduced health care costs as well as costs outside the health care sector (e.g., improved working capability). Furthermore, we have shown that by successfully treating patients to remission (e.g., symptom-free state) the perceived quality-of-life in the patients increase by some 40 % (Sobocki et al., 2006c). We have, moreover, shown that the economic burden of depression is reduced by 40 % by effectively treating patients until they are symptom-free.

FUNDING FOR RESEARCH INTO DEPRESSION

It is adequate to compare what resources are allocated to come to better means with depression. We have shown that

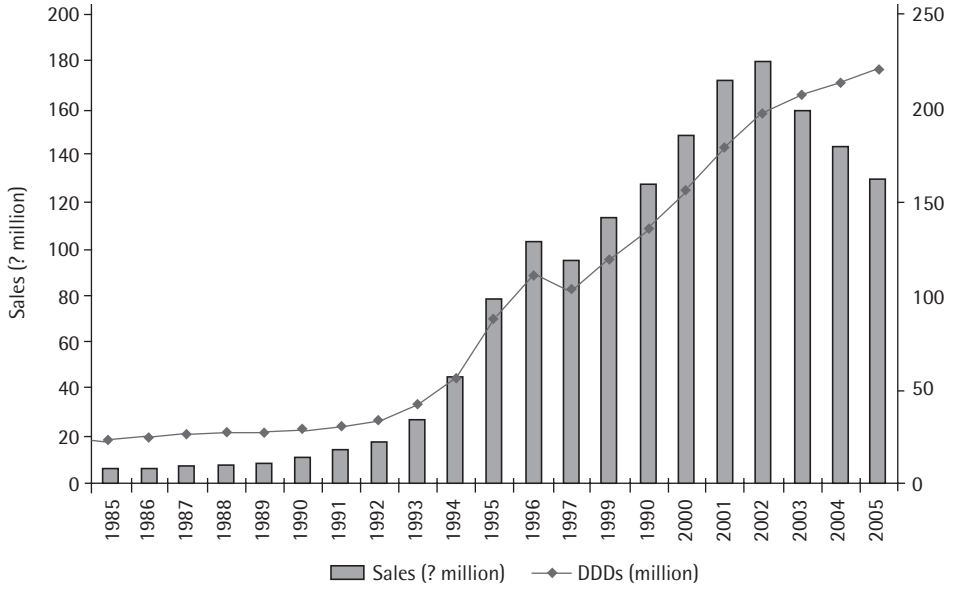

Figura 4 *Sales and volumes of antidepressants (N06A) in Sweden 1985-2005 (sales in current prices and volumes in DDDs).*

the total annual industry and public funding into research around depression reaches less than $40 million in Europe, and thus comprise 0.1% of the total economic burden of depression (Sobocki et al., 2006d). Comparing research into depression with other medical fields, such as cancer or neurology (fig. 5), confirm that depression is a neglected field of research and that there is a need for closer assessment of how public funds are allocated in future, in order to improve the life for millions of depressed patients in Europe.

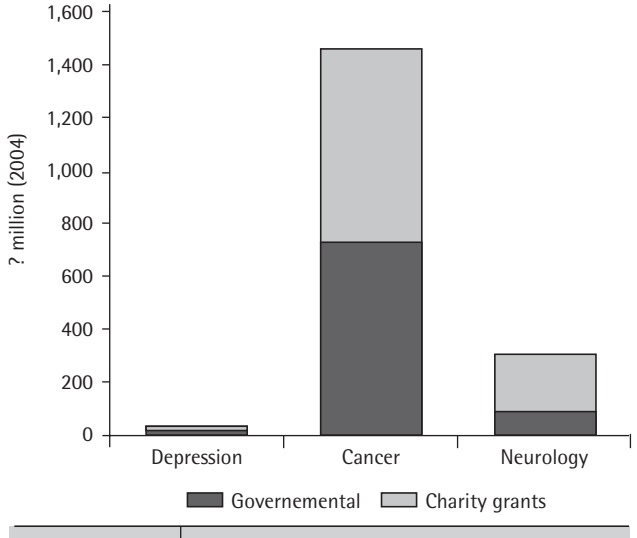

Figura 5 *Comparison of funding into various medical fields.*

CONCLUSION REMARKS

I can conclude that the economic burden of depression is substantial for the European society, and that the bulk of the cost is due to lost working capacity. However, today there exists a number of effective treatment alternatives for depression, and by effectively using those both the quality-of-life as well as cost due to depressed patients can be substantially reduced. By better assessing which treatment alternatives to use in the management of depressed patients, we can more wisely use the scarce resources available for care of depression. Morever, I believe that there is a need for increased resources for research into the field of depression, in order to be able to imrpove the situation for millions of depressed patients in the world.

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