



PRESS – APRIL 2005 – BRUSSELS

New health economic study:

## **COSTLY EUROPEAN BRAINS**

**Brain disorders account for more than a third of the burden of all diseases in Europe. Yet brain disorders come nowhere near to receiving the same attention as, for example, heart diseases and cancer. A major new pan-European study shows that 127 million Europeans suffer from brain disorders. In 2004 the European cost of this amounted to €386 billion.**

Today The European Brain Council has launched their in-depth study of the prevalence and economic impact of brain disorders in Europe. Based on existing national statistics, economical and epidemiological data the *Cost of Disorders of the Brain in Europe* study focuses on the cost of the twelve most prevalent brain disorders. The study includes both psychiatric and somatic diseases.

### **Unique insight**

The study is based on a holistic view of costs, involving healthcare cost (e.g. hospital care, ambulatory care and drugs), private and public costs outside the medical sector (e.g. nursing home costs and services/goods for private homes) and indirect costs (e.g. limits on work capability, absenteeism and early retirement).

It provides a unique insight into the total cost of disorders of the brain in Europe in 2004 and the results are overwhelming:

- ∞ Across the 28 countries involved (population 466 million), 127 million people are affected by a brain disorder (equals 27 % of the population).
- ∞ This amounts to a total European cost of €386 billion.
- ∞ This total cost can be divided into: €135 billion on direct medical expenditures, €179 billion on indirect costs and €72 billion on direct non-medical costs.
- ∞ The €386 billion equals €829 per European inhabitant, and corresponds to the cost of more than 25 channel tunnels.

### **Divergence between impact and spending**

These numbers underline that disorders of the brain are indeed the most burdensome and costly group of diseases in Europe today. Yet the study also points to the fact that brain research only received 8 % of the life science budget in the EU 5<sup>th</sup> framework programme. This constitutes less than 0,01 % of the annual cost of brain disorders for that period.

- The discrepancy between the impact and the spending on these diseases is alarming. The impact, as the study emphasizes, is enormous. Despite this the area receives only 15 % of the direct health care spending and 8 % of the total drug expenses. The latter constitutes only 3 % of the cost of brain diseases per year, explains Professor Jes Olesen, president of the European Brain Council.

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Prof. Olesen also notes that the low distribution of direct health care stems from a time, when these disorders were simply less likely to be treated and cured than other diseases. However, in recent decades new treatments have revolutionised the possibilities within this field. A reason for the general negligence in this area may be the relative invisibility of brain diseases. You cannot see a depression or a migraine like a broken leg. Also the people who suffer from brain disorders often find it hard to fight for themselves, both due to their disorder and out of fear of stigmatisation.

### **Political view**

In a comment European Commissioner for Science and Research, Mr. Janez Potocnik says:

- The health care area comprises a large portion of the budget in all European countries. It is therefore of great importance to clarify facts and data regarding the cost of different diseases. The present report elucidates an important field, brain disorders. It clearly indicates the scale of the challenge we are facing, both in respect to individual suffering and to the socio-economic costs caused by brain diseases. I am optimistic that Europe, with a major and organised effort, has the potential to cope with the challenge which brain diseases impose on the individual as well as on society.

MEP John Bowis has this comment:

- The study *Cost of disorders of the brain in Europe* clearly demonstrates that brain disorders need further research. Brain disorders affect 127 million people costing some €386 billion - so it is imperative that research is supported at both national and EU level. I am pleased to see that research on the brain and related diseases is specifically included in the Commission's proposed 7th Research Framework Programme and hope that this will help the discovery of new knowledge and treatments. The return on investment could be huge - economically as well as in terms of improved quality of life for patients, says John Bowis.

### **Recommendations**

On the basis of this extended study the European Brain Council therefore recommends boosting research and healthcare efforts at both European and national levels and increasing the amount of brain related teaching at medical schools.

The study *Cost of Disorders of the Brain in Europe* will be published in the European Journal of Neurology 2005; Vol. 12 Suppl. 1 (pp. 1-27).

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### **BACKGROUND – THE EUROPEAN BRAIN COUNCIL**

- The European Brain Council was formed in 2003 with the primary purpose of promoting brain research.
- The European Brain Council unites neurologists, psychiatrists, psychologists, neurosurgeons, basic neuroscientists, patient organizations and industrial research in one co-affiliation.
- For this study the European Brain Council has been supported by H. Lundbeck via an unrestricted grant.

### **BACKGROUND – THE STUDY**

- The study is based on the 25 EU countries plus Iceland, Norway and Switzerland. Due to resource limitations and a lack of data some countries in Eastern Europe were excluded from the study.
- The twelve disorders in the study are: Dementia, epilepsy, migraine, MS, Parkinson's, stroke, brain tumour, traumatic brain injury, addiction, anxiety disorders, affective disorders and psychotic disorders.
- The study reveals differences in cost of brain disorders per inhabitant between the European countries.
- The total cost of €386 billion is a conservative estimate, since not all brain disorders are included, not all costs are included for some diseases, and prevalence estimates for some disorders do not cover the whole population (e.g. only +18).
- The estimate would increase to €447 billion if nicotine addiction and headaches other than migraines were included.
- The data used in the study has been gathered and processed by twelve international groups of neurologists, psychiatrists, psychologists and neurosurgeons in collaboration with healthcare economists.
- For the data processing a specific model was developed to handle the complex national statistics and economical and epidemiological data.

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