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Natural Language Based Decision Support in Neuro-rehabilitation

SPECIFIC TARGETED RESEARCH PROJECT
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DELIVERABLE 6.2: CARE DELIVERY ASSESSMENT REPORT

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Executive Summary

The goal of this document is to describe the activities performed in Task 6.2 by SSSA and UCBM teams from October 2006 to March 2007.

The main aim of the D6.2 is to outline the epidemiological and cost-related scenario in which the Alladin ADD has been developed; to identify the main factors of strengths and the elements to readjust in order to successfully manage the future commercialization of the ADD; to provide an operative tool and a theoretical model for the evaluation of the Alladin ADD costs and costs savings, once at its best running.

In details:

- *In the first section a review of the epidemiological and economic data about stroke is presented; the main published epidemiological studies have been analysed in order to estimate, basing on data about stroke incidence, prevalence, mortality and disability, the full market potential of the Alladin ADD. The cost categories of stroke have been defined according to the Cost-of Illness approach and a critical analysis of the most relevant published data about the total – and the social – cost of stroke is proposed in order to provide a general frame of costs – and potential cost-savings- related to the use of the Alladin ADD;*
- *In the second part of the work the results of a SWOT survey carried out within the Alladin Consortium are presented; a SWOT questionnaire has been defined and distributed to each Partner in order to investigate, from a multidisciplinary perspective, strength, weaknesses, opportunities and threats of the Alladin ADD. Partners were asked to list, according to their experience, the main Strengths, Weaknesses, Opportunities and Threats of the ALLADIN system. The 90% of the total number of questionnaires submitted was received by SSSA/UCBM team for the analysis of the results. The results showed a prevalence in the number of strengths identified, with respect to the weaknesses, opportunities and threats. All Partners agree with the idea that is worth going on with the validation of the ALLADIN approach through further clinical trials. They also agree in the conviction that further technical improvements are needed in order to propose the system for certification and introduction on the market. On the whole, a general agreement on the advantages brought by the easiness of use and robustness of the system and by the use of natural language for describing patient's conditions has been expressed. The opportunity of using many data coming from different body districts has been highlighted. Each Partner is aware of the possible objections that the medical community may raise, towards the acceptance of this innovative approach in functional assessment. For this reason, they suggest dissemination and sharing of results, and training sessions among hospitals and rehabilitation institutes.*
- *In the third section is presented an operative tool for the assessment of costs and cost-savings related to the use of Alladin in clinical practice and in comparison with the standard approach; the instrument, in the shape of a questionnaire, considers both the diagnostic and the rehabilitative stages of the assistive route for a stroke patient. Its main aim is to examine all the services provided and the human resources involved in the whole diagnostic and rehabilitative process, comparing the traditional techniques with the ALLADIN device. Particular attention is given to the analysis of the time spent for providing such services with the two methods. The questionnaire has been distributed to the clinical partners of the Alladin project and, basing on the obtained feedback, has been readjusted until to get the*

final version. The proposed instrument could provide useful information once applied to Alladin ADD at its full running.

- *In the last section a theoretical model is proposed for the assessment of the social and economic benefits of the Alladin approach if compared with the standard one. A traditional approach – “trial and error strategy” is compared to the Alladin one – “in progress evaluation”, considering the diagnostic and the rehabilitative steps of the assistive route for a stroke patient. The model points out the potential social costs-saving related to the application of the Alladin approach. Moreover, under the consideration that higher severity of stroke implies higher level of disabilities and consequently higher levels of social costs, the model shows that the use of the Alladin ADD would be more “effective”, from a social and economic point of view, in the case of patients with severe and very severe stroke.*

Deliverable D6.2 is the main outcome of Task T6.2 ‘Assessment of impact on care delivery’, led by Scuola Superiore Sant’Anna (SSSA), in close collaboration with University Campus Bio-Medico (UCBM).

Scuola Superiore Sant’Anna (SSSA) team thanks to its academic expertise on economic studies on health care assessment mainly focused its effort on the review of the principal literature on epidemiologic data on stroke and on the cost of stroke (assessment and treatment). Relevant efforts have been devoted by the SSSA economic team for setting and developing the operative and theoretical models.

The questionnaire on the SWOT analysis of the ALLADIN ADD and end-products and the questionnaire on the estimation of potential cost savings of the ALLADIN ADD and end-products was led by SSSA team, in collaboration with UCBM team.

University Campus Bio-Medico (UCBM) mainly focused to the analysis of the results from the two questionnaires .

This deliverable has been developed during the third year of the ALLADIN project (Months 33 to 38) by the WP6/T6.2 Team directly joined by two Alladin partners (SSSA, UCBM). According to the ALLADIN multidisciplinary approach, T6.2 has been carried out in tight co-operation with the project co-ordinator, also asking feedback for the validation of the proposed approach by the other ALLADIN partners for the SWOT analysis and the clinical partners (AHS, NIMR, TCD) for the analysis of potential cost savings. The final approach selected for the assessment of care delivery is mainly based on the specific agreements which were achieved during the OCB meeting held in Athens, November 30-December 1, 2006 .

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