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HEALTH ECONOMIC EVALUATION OF DIFFERENT TREATMENT MODALITIES FOR EXTRACORPOREAL PHOTOPHERESIS: CAN NEW ALTERNATIVES GENERATE HEALTH ECONOMIC VALUE?

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INTRODUCTION

The assessment aims to compare the direct medical costs of an offline, an integrated online and a new multi-step online system to evaluate the impact on hospital budgets. While the clinical efficacy of the treatment has been established[1], have recently entered the market, which may impact healthcare provider decisions.

METHODOLOGY

Quantitative data collection on the new multi-step online device combination has been conducted by means of recreating and measuring timing of the procedure. A literature review was conducted to establish average timing and allocated costs of the alternative extracorporeal photopheresis (ECP) treatment modalities.

RESULTS

Both the multi-step online and the integrated online technologies reduce the economic burden on the hospital's budget versus offline alternatives.

	Multi-step online*(2,3,4)*	Multi-step offline*(3,4)*	Integrated system*(3,4)*
Biological analysis (patient)	€ 61,82	€ 61,82	€ 61,82
Cell collection and irradiation	€ 890,00	€ 196,45	€ 1.080,03
Lab analysis (incl. irradiation disposable)	€ -	€ 694,75	€ -
Personnel cost	€ 49,00	€ 122,24	€ 56,93
Bed retention cost	€ 131,25	€ 349,52	€ 159,54
Total	€ 1.070,25	€ 1.362,96	€ 1.296,49

Table: Cost comparison – ECP on various devices

RESULTS (continued)

A part of this economic burden is allocated to the lab analysis costs which adds 694,75 EUR on average in comparison to no cost for the two online systems. In addition, the online procedures almost cut the bed retention and personnel related costs in half.

The main distinguishing criteria between multi-step online and integrated online technologies from a purely health economic perspective is the price of the disposable set which can trigger a difference in economic value of at least 226 EUR based on an indicative price listed in the Table. Novel treatment modalities allow for a more economical yet comparable procedure option for ECP.

CONCLUSIONS

From a hospital budget and patient access point of view, the new alternative (multi-step online) demonstrates an economic benefit. Facilitating such transparency of the costs associated with the different ECP delivery methods may support stakeholders in decision making, improve patient access to care, which in turn may lead to a shift in reimbursement in EU Member States.

On top of the demonstrated cost benefits, both online systems (Multi-step online and integrated) allow patients to spend less time in the hospital, making the experience less burdensome[7], not to mention additional regulatory requirements that may often apply to offline versus online alternatives.

REFERENCES

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