DMTs agents on the progression of these conditions. Further, a review of the published cost-effectiveness models for RRMS was performed. Based on these data, an analysis on the difference and similarities between the two MS forms that could have an impact on the development of decision analytical model for PPMS was performed.

RESULTS:

Based on the analysis, similar structure model used for RRMS could be applied for PPMS. Health states of the model could be based on Expanded Disability Status Scale score as already done for RRMS. The relapse events considered for RRMS should not be included in PPMS model, and no possibility to develop another form, as the Secondary Progressive, should be included. While RRMS models should include at least a second line treatment option due to alternative DMTs available, only first treatment line should be considered for PPMS. Assessing data available to populate the model, poor data on the natural history, utility and cost associated to PPMS were available and assumption or expert opinions will be needed to overcome the lack of robust data.

CONCLUSIONS:

A decision analytical model for PPMS can use a similar structure used in the models for RRMS. However, more robust data on PPMS and some structural change are needed to provide a good tool to assess cost-effectiveness of DMTS in PPMS.

....

VP101 Medical Devices For Treatment-resistant Hypertension: Health Technology Assessment Report

AUTHORS:

Tom Jefferson, Iosief Abraha, Anna Maria Vincenza Amicosante, Mirella Corio, Antonio Migliore, Roberto Cioni, Stefano Taddei, Corrado Vassanelli, Marina Cerbo (cerbo@agenas.it)

INTRODUCTION:

While optimal medical therapy (OMT) represents the current standard of care for treatment-resistant hypertension, non-pharmaceutical therapeutic approaches, such as renal denervation and carotid baroreceptor stimulation therapy, have been proposed. The present Health Technology Assessment (HTA) project was aimed at assessing benefits and risk of those approaches versus OMT.

METHODS:

A systematic review of evidence on effectiveness and safety was performed together with a review of economic studies. A contextual analysis of market availability and use of the technology in Italy was also performed.

RESULTS:

In Italy, ninety-nine renal denervation procedures were performed in 2014. Ten studies from six trials were included in the review and meta-analysis. No evidence of dominance or increased harms of renal denervation compared to OMT were found. Four economic evaluations were included and reported dominance of renal denervation. These were based on short-term clinical data and three evaluations used the same Markov model assuming dominance of renal denervation. Estimated average prospective cost of the procedure was EUR6,129.90 (range EUR3,821.15 – EUR9,714.23). We updated the results of an earlier assessment published by an Italian Regional agency on carotid baroreceptor stimulation therapy (1). None of the three studies identified as ongoing in 2015 were completed or had published preliminary results and the technology was not assessed further within the present HTA project.

CONCLUSIONS:

Even if follow-up was limited to 6 months, randomised evidence showed no benefits of the procedure. Economic evaluations were unreliable, based on unrealistic assumptions of effectiveness and contrived therapy regimes. Further investment in renal denervation should await the results of well-designed and adequately followed-up trials assessing the impact

....

of renal denervation on major cardiovascular events compared to OMT. Future economic evaluations should be based on realistic assumptions of cost and effectiveness.

REFERENCES:

1. Maltoni S, Trimaglio F, Camerlingo M, Ballini L. Implantable device for the treatment of drug-resistant hypertension - Bologna: Agenzia Sanitaria e Sociale Regionale – Regione Emilia-Romagna; 2015 (Available from http://assr.regione.emilia-romagna.it/it/servizi/pubblicazioni/short-report/SR8_ipertensione_en/at_download/file

....

VP102 The Determinants Of Diffusion Of New Technologies Across Life Cycle

AUTHORS:

Giuditta Callea (giuditta.callea@unibocconi.it), Lara Gautier, Patrizio Armeni, Rosanna Tarricone

INTRODUCTION:

The proliferation and uneven diffusion of new medical technologies in recent years has been raising concerns on affordability and equity of care, and inspiring the publication of scientific articles on the determinants of their uptake and adoption (1). Indeed, the knowledge of the determinants spurring the adoption and diffusion of innovative medical technologies is relevant for policymakers because it helps them implementing evidence-based health policies aimed at influencing the use of new technologies, thus reducing inequities in uptake rates across areas and populations.

The aims of this study were (i) to identify the empirical literature investigating the determinants of adoption and diffusion of innovative non-pharmaceutical health technologies, and (ii) to discuss the existence of consensus on the direction and significance of the factors that influence their adoption in each phase of technologies life cycle (that is, early adoption, adoption, diffusion).

METHODS:

We performed a systematic literature review of quantitative empirical literature.

RESULTS:

We identified a total of thirty-three studies, published between 1977 and 2014. We concluded that early adoption of innovative technologies is positively affected by physician characteristics (for example, experience with new technology by the practitioner or by other physicians in the same hospital) and by the fee-for-service reimbursement scheme. The probability of adoption is mainly driven by provider characteristics (for example, size, importance of being perceived as technology leaders, previous adoption of similar or substitute technologies, strong medical staff involvement in decisions of acquisition), by physician experience with the technology and by the new technology expected impact on hospitals and physicians revenues. Socio-economic determinants (for example, health expenditure), hospitals and physicians reimbursement schemes, market structure (for example, number of providers, number of substitute procedures), provider features (for example, size, quality of care, reputation), and physician characteristics (for example, experience with technology, innovator status of the team) significantly increased the extent of diffusion.

CONCLUSIONS:

Our results can be used as a guide by policymakers who wish to make evidence-based decisions.

REFERENCES:

1. Greenhalgh T, Robert G, Bate P, Kyriakidou O, Macfarlane F: *Diffusion of innovations in health service organisations: A systematic literature review*. Oxford Blackwells; 2005.

....