

INPLASY PROTOCOL

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None declared.

Systematic review on the utility values of health states in patients with herpes zoster and postherpetic neuralgia

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Review question / Objective: The study aims to synthesize, through a review of existing scientific literature, the Health State Utility Value (HSUV) of patients with herpes zoster or postherpetic neuralgia.

Condition being studied: Herpes zoster is caused by the reactivation of a primary varicella zoster virus infection. Postherpetic neuralgia is the most common complication, which is defined as pain in a dermal distribution that is maintained for at least 90 days after the rash. The pain caused by postherpetic neuralgia is often debilitating and affects physical functioning, psychological and well-being. Thus, the postherpetic neuralgia has a profound negative impact on functional status and quality of life, and generally results in substantial utilization of health services. An increase in the incidence of post-herpetic neuralgia and herpes zoster is expected, due to the increase in life expectancy, therefore, the result of this review may be important for public policy decisions.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 July 2022 and was last updated on 29 July 2022 (registration number INPLASY202270125).

INTRODUCTION

Review question / Objective: The study aims to synthesize, through a review of existing scientific literature, the Health State Utility Value (HSUV) of patients with herpes zoster or postherpetic neuralgia.

Rationale: Beyond the importance of the quality of life for clinical evaluation, utility is a main indicator for policies in health. Utility data are essential for the making of economic models in health, required for decisions on reimbursement. Systematic gathering of information to ensure the lack

of bias. So far, we did not track a summary on this research question.

Condition being studied: Herpes zoster is caused by the reactivation of a primary varicella zoster virus infection. Postherpetic neuralgia is the most common complication, which is defined as pain in a dermal distribution that is maintained for at least 90 days after the rash. The pain caused by postherpetic neuralgia is often debilitating and affects physical functioning, psychological and well-being. Thus, the postherpetic neuralgia has a profound negative impact on functional status and quality of life, and generally results in substantial utilization of health services. An increase in the incidence of post-herpetic neuralgia and herpes zoster is expected, due to the increase in life expectancy, therefore, the result of this review may be important for public policy decisions.

METHODS

Search strategy: The health databases resorted for the selection of academic articles on utility values; quality of life of patients with herpes zoster; post-herpetic neuralgia are: Pubmed, LILACS (Latin American and Caribbean Literature in Health Sciences), EMBASE, SchHARR HUD and Cochrane.

Terms:

- #1 Herpes Zóster OR Zoster OR Shingles
- #2 Neuralgia, Postherpetic OR Postherpetic Neuralgia
- #3 Health Utility OR EQ-5D
- #4 #1 AND #2 AND #3.

Participant or population: Adults with herpes zoster or postherpetic neuralgia, with no exclusions based on gender, ethnicity or age.

Intervention: All interventions will be included.

Comparator: There is no comparator as the review does not attempt to identify a specific treatment effect.

Study designs to be included: There are no restrictions in the types of study design eligible for inclusion. Randomized and non-randomized studies will be eligible for inclusion, except case reports, case series reports, phase 1 studies and narrative reviews.

Eligibility criteria: It will be considered studies that gather data on quality of life attached to health with tools based on preferences in adults with herpes zoster or postherpetic neuralgia.

Information sources: Pubmed, LILACS (Literatura Latino-Americana e do Caribe em Ciências da Saúde), EMBASE, SchHARRHUD e Biblioteca Cochrane.

Main outcome(s): Value of average utility according to the health studies (HSUV) reporte, in patients with herpes zoster or postherpetic neuralgia.

Additional outcome(s): As possible, the data will be stratified according to clinical, geographical and demographical features.

Data management: The selection and evaluation on the eligibility of the studies will be carried out by two independent researchers following pre-defined criteria by the supervising researcher, using the Rayyan platform. Any upcoming divergence found between the researchers shall be discussed and analyzed. In addition, the entire text of the article will be reviewed by both, as well as the list of references. If there is any major discrepancy between the two reviewing researchers, a third researcher shall come to a decision. For the extraction part, the reviewers will electronically record the HSUV contained in the selected studies in an online form (Google forms). Based on previous reviews of health status utility values, we will record for each study: first author, year of publication, name of publication, study design, country, age group, method of assessment health status descriptors of patients with herpes zoster or postherpetic neuralgia, in addition to HSUV.

Quality assessment / Risk of bias analysis:

In clinical trials, the risk of Cochrane bias (ROB) will be adopted. In the other study design, we will adopt the Joanna Briggs Institute (JBI) Critical appraisal tools, developed by the JBI and collaborators and approved by the JBI Scientific Committee.

Strategy of data synthesis: A narrative synthesis about the quality of life and utility data will be the strategy for data synthesis. Descriptive statistics will be extracted for utility values (e.g. means, standard deviations, medians, inter-quartile ranges). It will be applied risk ratio, odds ratio, or risk difference. If it is possible to obtain all the necessary data, it will be performed to analyze the heterogeneity of subgroups por meta-regression models or random-effects model.

Subgroup analysis: When possible, analysis of subgroups will be carried out to investigate heterogeneity such as: age, gender, ethnicity, stage of the disease, use or not of interventions. If applied, meta-regression models could also be run.

Sensitivity analysis: Sensitivity analyzes will be conducted including or excluding studies in the final analysis based on methodological quality.

Language: Studies of all languages will be included.

Country(ies) involved: Brazil.

Keywords: Herpes zoster, postherpetic neuralgia, utility data, health state utility value, HSUV.

Dissemination plans: It is intended to be published in a peer-reviewed journal.

Contributions of each author:

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References:

GNANN, J. W.; WHITLEY, R. J. Herpes zoster. *The New England Journal of Medicine*, v. 347, n. 5, p. 340–346, 2002.

GAUTHIER, A. et al. Epidemiology and cost of herpes zoster and post-herpetic neuralgia in the United Kingdom. *Epidemiology and Infection*, v. 137, n. 1, p. 38–47, 2009.

KATZ, J. et al. Acute Pain in Herpes Zoster and Its Impact on Health-Related Quality of Life. *Clinical Infectious Diseases*, v. 39, n. 3, p. 342–348, 2004.

SCHMADER, K. E. et al. The Impact of Acute Herpes Zoster Pain and Discomfort on Functional Status and Quality of Life in Older Adults. *Clin J Pain*, v. 23, n. 6, p. 490–496, 2007.

PETROU, S.; KWON, J.; MADAN, J. A Practical Guide to Conducting a Systematic Review and Meta-analysis of Health State Utility Values. *Pharmaco Economics*, v. 36, n. 9, p. 1043–1061, 2018.