

Peer Review Report

Review Report on Identification and economic evaluation of differentiated thyroid cancer care consumption patterns using sequence analysis

Original Article, Int J Public Health

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EVALUATION

Q 1 Please summarize the main findings of the study.

This study, assessed the economic impact of various care trajectories for differentiated thyroid carcinoma (DTC), focusing on socioeconomic status influences. The study used data from the EVATHYR cohort and French National Health Insurance, and the research applied net cost methods, optimal matching, and clustering techniques to form care consumption clusters. A multinomial logistic regression model analyzed the influence of individual characteristics on these clusters, while generalized estimating equations evaluated their effect on healthcare costs. Key findings include an average three-year cost of €11,600 per DTC patient, with factors like high-risk cancer recurrence, female gender, and socioeconomic deprivation significantly driving up DTC care consumption. This study underscores the disparities in DTC management in France, influenced by socioeconomic factors, and suggests the necessity for more tailored DTC management strategies.

Q 2 Please highlight the limitations and strengths.

The used dataset provides a robust and detailed source for analysis. The application of advanced statistical methods enhances the rigor of the study, allowing for a sound understanding of the impact of individual characteristics on care consumption and costs. Additionally, the focus on socioeconomic factors in differentiated thyroid carcinoma (DTC) management offers valuable insights into healthcare disparities. The limitations of study could be mentioned as reliance on data from a single country, which may limit the generalizability of the findings to other healthcare systems with different socioeconomic dynamics. The observational nature of the study might introduce selection bias and confounding factors that could influence the results. Furthermore, the economic evaluation was limited to direct healthcare costs, overlooking indirect costs like loss of productivity, which could provide a more comprehensive understanding of the economic burden of DTC.

Q 3 Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

1. Abstract, results: this part does not provide any findings on the aimed "different care trajectories" of DTC as introduced in this study.
2. Abstract, discussion: the provided conclusion is not mainly based on the study findings as the factors contributing to different DTC costs is not truly equal to disparities in DTC care. A revision and rewording the final conclusion is needed.
3. Introduction: an opening in the used methods like sequence analysis is highly essential in this section to inform the readers.
4. Methods: a distinct subsection on statistical analysis is needed to be provided and expanded on the specific statistical methods used in this paper for data analysis.
5. Figures 1 and 3: the figure legend has some words in French.
6. Adding a final section as conclusion that wraps up the whole study is highly suggested.

PLEASE COMMENT

Q 4 Is the title appropriate, concise, attractive?

Yes it is.

Q 5 Are the keywords appropriate?

Yes they are.

Q 6 Is the English language of sufficient quality?

The language is acceptable.

Q 7 Is the quality of the figures and tables satisfactory?

Yes.

Q 8 Does the reference list cover the relevant literature adequately and in an unbiased manner?)

Yes it does.

QUALITY ASSESSMENT

Q 9 Originality



Q 10 Rigor



Q 11 Significance to the field



Q 12 Interest to a general audience



Q 13 Quality of the writing



Q 14 Overall scientific quality of the study



REVISION LEVEL

Q 15 Please make a recommendation based on your comments:

Minor revisions.