

Polysomnography

Summary

Objectives: To evaluate the proposed additional diagnosis-based reimbursement criteria for polysomnography (PSG) in Estonia by analysing the available evidence, health service use and related costs.

Methods: A literature review in PubMed database was carried out for PSG's indications from clinical guidelines and evidence on cost-effectiveness. For six new sleep disorder criteria, service needs were estimated based on Estonian Health Insurance Fund (EHF) data from 2008–2012 and 2017. Budget impact calculations were performed for 2020–2025.

Results: According to guidelines, PSG is relevant for diagnosing sleep disorders listed in additional reimbursement criteria. However, the actual need for the PSG is dependent on patient characteristics and clinical decision. Compared to previous assessment in 2013, there were no substantial changes in the guideline recommendations regarding the use of PSG for sleep disorder indications. Available cost-effectiveness evidence was scarce. Literature search found 15 relevant studies addressing the costs or cost-effectiveness of PSG. In four studies that had performed the full cost-effectiveness analysis, PSG was compared with polygraphic study or similar comparators for indications of sleep-disordered breathing. Based on that evidence, polygraphic study could be more affordable alternative for diagnosing sleep apnea even when negative test results are verified with PSG. However, as all studies addressed PSG for diagnosing sleep apnea, no comparable evidence was available for PSG in the context of other sleep disorders. Comparison of EHF data revealed that the potential need for PSG has increased substantially in recent years. Patients with obstructive sleep apnea constituted the largest share of patients with nearly 5-fold increase when 2017 and 2012 data was compared. Despite this, the annual use of PSG has remained constant with on average 751 PSGs performed during 2013–2018. Cost and budget impact analysis showed that 1940–3877 patients would require PSG annually after implementing the additional diagnosis-based reimbursement criteria. Current annual costs of 675,275 Euros are expected to increase to 1.35 million depending on the assumptions regarding service need and actual utilization.

Conclusions: PSG provides clinical information that is necessary for diagnosing several sleep disorders. Therefore, the current indications and additional reimbursement criteria should be amended with the evidence-based criteria covered in current report. Such change, however is expected to result in substantial increase in the demand and the costs for PSG.

Citation: Reile R, Põld K, Kiiwet R-A. Polüsomnograafia. Tartu: Tartu Ülikooli peremeditsiini ja rahvatervishoiu instituut; 2019.