PD27 The Cost Effectiveness Of Non-Hospital Cardiac Rehabilitation: A Systematic Review

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Introduction: Cardiac rehabilitation (CR) with physical exercise is crucial for the secondary prevention of myocardial infarction and heart failure. However, according to published studies there are differences in access to hospital-based CR depending on sex, age, ethnicity, and geographical region. An alternative is CR in non-hospital settings such as primary care, the patient's home, or another place by means of telerehabilitation.
Methods: We conducted a systematic review of full economic evaluations where non-hospital CR was compared with hospital CR in patients with ischemic heart disease or heart failure. Other eligibility criteria were model-based or clinical trial-based evaluations; studies reporting quality-adjusted life-years, years gained, or other clinical outcomes relevant to CR; and studies published in English or Spanish. Searches were conducted in June 2023 in various literature databases, including MEDLINE, Embase, CINAHL, Web of Science, INAHTA, PEDro, the Cost-Effectiveness Analysis Registry, and others. Study selection, data extraction, quality assessment, and evidence synthesis were conducted by one economist and checked by a second reviewer.
Results: Nine studies were selected from the 673 references identified. Another study was identified through previous systematic reviews. Ten randomized clinical trials were included in the review. None of the studies found differences in effectiveness between hospital CR and non-hospital CR. Two studies found that non-hospital CR was less costly than hospital CR, whereas the remainder did not find any differences in costs between the two groups or were unable to demonstrate the statistical significance of any differences observed. The best conducted studies concluded that non-hospital CR was as effective as and less costly than hospital CR.
Conclusions: Non-hospital CR was as cost effective as hospital CR for low- to-moderate risk patients. Based on the evidence, CR can be recommended in non-hospital settings. However, any form of CR should be evaluated after implementation because its complexity limits the generalizability of results across regions.

PD29 Using Different Parametric Distributions In Partitioned Survival Analysis: Impact On Incremental Cost-Utility Ratio In A Proportional Hazards Model

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Introduction: Partitioned survival analysis (PtSA) is a useful modeling technique, especially in oncology, in which different parametric distributions can be used to extrapolate survival data. Many studies lack justification for their chosen distributions, neglecting exploration of uncertainty in extrapolated estimates. We evaluated how different distributions impact the incremental cost-utility ratio (ICUR) for docetaxel, compared with abiraterone plus docetaxel (AA+DTX), for prostate cancer.
Methods: A three-state PtSA was constructed using overall survival (OS) and progression-free survival (PFS) curves from a docetaxel trial extrapolated over a 20-year horizon with exponential, Weibull, and Gompertz distributions. Log-normal, log-logistic, and generalized gamma were not considered because they are not compatible with the proportional hazards assumption. Curves for AA+DTX were adjusted using hazard ratios (HRs) from indirect comparisons for OS (HR 0.75, 95% confidence interval [CI]: 0.59, 0.95) and PFS (HR 0.50, 95% CI: 0.35, 0.72). Assessment included visual inspection, clinical plausibility, and Akaike and Bayesian information criterion (AIC/BIC) statistics. Utility values, medication costs, and disease monitoring costs were considered based on health state (pre- or post-progression).
Results: For docetaxel PFS, visual inspection showed no significant differences between the three distributions used for the proportional hazards model, while the exponential model showed the longest tail for OS. When choosing by the lowest AIC/BIC (OS: Weibull; PFS: exponential), cost-effectiveness analysis resulted in an ICUR of BRL79,224 (USD16,139) per quality-adjusted life-year (QALY). The maximum and minimum ICUR was BRL81,559 (USD16,615) (OS: Gompertz; PFS: Weibull) and BRL70,136 (USD14,288) (OS: exponential; PFS: Weibull), respectively, which represented an important variation in the base case scenario (AIC/BIC) ICUR.
Conclusions: Using the Brazilian cost-effectiveness threshold (BRL120,000 [USD24,446] per QALY gained) and choosing any of the three distributions of the proportional hazards model, AA+DTX would be considered cost effective, which would not change the direction of the recommendation. However, despite the few recommendations in the literature regarding the adoption of parametric models for economic analyses in health, it is important to explore scenarios with different distributions.

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