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Quality of studies submitted for incorporation of non-pharmaceutical technologies

EIXO 1: SUSTENTABILIDADE NOS SISTEMAS DE SAÚDE

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Introduction: Hospitals employing Health Technology Assessment (HTA) methodologies to support technology incorporation decisions commonly require the presentation of clinical studies as a basis for the request for incorporation by the relevant professional or department. Various factors influence the selection of presented studies, including conflicts of interest, confirmation bias, and whether systematic methods were used in evidence retrieval. This study aims to evaluate the quality of studies presented to support the incorporation of non-pharmaceutical technologies.

Methods: We conducted a review of submissions made by the clinical staff of a university hospital between 2018 and 2023. Information regarding the submitted studies, complementary searches conducted by the Health Technology Assessment Unit (HTAU), and their application in the issued recommendations were collected. The collected data were organized into tables and analyzed descriptively.

Results: A total of 36 non-pharmaceutical technologies related to incorporation were identified, including medical equipment, devices, orthoses, prostheses, and special materials. The average number of studies attached per request was 3.0 (±2.6). Sixteen submissions (44.4%) were based on controlled clinical trials (intervention) studies, with 8 systematic literature reviews (SLR) of clinical trials, 03 randomized clinical trials (RCT), 02 systematic literature reviews of diagnostic accuracy and 03 quasi-experimental studies (QE). Among the technologies that were based on experimental studies, 06 had a favorable recommendation and 10 unfavorable. Of the 20 technologies supported by observational studies, 09 contained RSL, 04 single-arm studies, 06 comparative studies and 01 case series only. Of the technologies that were based on observational studies, 10 obtained a favorable recommendation and 7 unfavorable.

Discussions and conclusions: According to the GRADE approach, the randomized clinical trial (RCT) is the most appropriate study design to assess intervention effectiveness, providing greater reliability and bias control. The quality of scientific evidence is a critical factor underpinning incorporation decisions. Our results indicate that, among intervention- -based technologies, only a limited number received favorable recommendations, primarily supported by high-quality RCTs or SLRs of these trials. Observational studies also played a significant role, provided they were well-conducted. However, it is important to acknowledge the higher potential for bias in these studies. Familiarity with HTA principles is essential for technology stakeholders and decision-makers to optimize the process of requesting and incorporating non-pharmaceutical technologies in the hospital context.

Keywords: Evidence; Non-Drug Technologies; Incorporation; Hospital