Quality indicators for the rehabilitation before and after total knee arthroplasty in Japan: a modified Delphi method and practice test

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Abstract

Background It is important to adhere to the pertinent guidelines to ensure evidence-based rehabilitation of patients with total knee arthroplasty (TKA); however, studies have suggested that pre- and post-TKA rehabilitation provided in Japan may not be adequately evidence-based. Quality indicators (QIs) translate practice guidelines into action-able and measurable statements by identifying the clinical context, timing, and target population. This study aimed to develop QIs for pre- and post-TKA rehabilitation in Japan. Additionally, a pilot practice test was conducted to assess the feasibility and applicability of the developed QIs prior to their actual clinical application.

Methods This study used a modified Delphi technique (RAND/UCLA Appropriateness Method). A nine-member panel of clinicians and researchers evaluated the 49 proposed QIs related to rehabilitation before and after TKA. Pan-elists independently rated the 49 candidate QIs on a 9-point Likert scale and discussed these QIs in an online meeting. After the meeting, the panelists independently re-rated the QIs, and QIs with a median score of 7 or higher and score of less than 3 by two or fewer panelists were adopted as the final QIs. In addition, a pilot practice test was conducted to assess the feasibility and applicability of the developed QIs by retrospectively analyzing the medical records at two hospitals.

Results Forty-nine candidate QIs were developed based on one set of QIs, nine practice guidelines, eight best prac-tice recommendations, and 162 systematic reviews. Finally, 36 indicators, including two new ones, were adopted con-sensually by nine panelists. Among these 36 indicators, some had overlapping elements, so they were consolidated and organized into 24 indicators. The pilot test ($n = 352$) revealed a median QI performance of 86.1 (IQR, 56.1–100), with six QIs demonstrating performance levels below 10%. This low performance indicated that the proportion of patients receiving rehabilitation in accordance with the indicators was actually low.

Conclusions This study developed 36 QIs for patients undergoing rehabilitation before and after TKA in Japan. Although their feasibility was confirmed at two facilities, future studies are warranted to measure the quality of care more comprehensively.

Keyword Knee osteoarthritis; Total knee arthroplasty; Rehabilitation; Quality indicator

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