Systematic review: The relationship between clinical experience and quality of health care

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Background: Physicians with more experience are generally believed to have accumulated knowledge and skills during years in practice and therefore to deliver high-quality care. However, evidence suggests that there is an inverse relationship between the number of years that a physician has been in practice and the quality of care that the physician provides.

Purpose: To systematically review studies relating medical knowledge and health care quality to years in practice and physician age.

Data Sources: English-language articles in MEDLINE from 1966 to June 2004 and reference lists of retrieved articles.

Study Selection: Studies that provided empirical results about knowledge or a quality-of-care outcome and included years since graduation or physician age as explanatory variables.

Data Extraction: We categorized studies on the basis of the nature of the association between years in practice or age and performance.

Data Synthesis: Overall, 32 of the 62 (52%) evaluations reported decreasing performance with increasing years in practice for all outcomes assessed; 13 (21%) reported decreasing performance with increasing experience for some outcomes but no association for others; 2 (3%) reported that performance initially increased with increasing experience, peaked, and then decreased (concave relationship); 13 (21%) reported no association; 1 (2%) reported increasing performance with increasing years in practice for some outcomes but no association for others; and 1 (2%) reported increasing performance with increasing years in practice for all outcomes. Results did not change substantially when the analysis was restricted to studies that used the most objective outcome measures.

Limitations: Because of the lack of reliable search terms for physician experience, reports that provided relevant data may have been missed.

Conclusions: Physicians who have been in practice longer may be at risk for providing lower-quality care. Therefore, this subgroup of physicians may need quality improvement interventions.