

## 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.