

Estimating Hospital Deaths Due to Medical Errors

Preventability Is in the Eye of the Reviewer

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Context Studies using physician implicit review have suggested that the number of deaths due to medical errors in US hospitals is extremely high. However, some have questioned the validity of these estimates.

Objective To examine the reliability of reviewer ratings of medical error and the implications of a death described as "preventable by better care" in terms of the probability of immediate and short-term survival if care had been optimal.

Design Retrospective implicit review of medical records from 1995-1996.

Setting and Participants Fourteen board-certified, trained internists used a previously tested structured implicit review instrument to conduct 383 reviews of 111 hospital deaths at 7 Department of Veterans Affairs medical centers, oversampling for markers previously found to be associated with high rates of preventable deaths. Patients considered terminally ill who received comfort care only were excluded.

Main Outcome Measures Reviewer estimates of whether deaths could have been prevented by optimal care (rated on a 5-point scale) and of the probability that patients would have lived to discharge or for 3 months or more if care had been optimal (rated from 0%-100%).

Results Similar to previous studies, almost a quarter (22.7%) of active-care patient deaths were rated as at least possibly preventable by optimal care, with 6.0% rated as probably or definitely preventable. Interrater reliability for these ratings was also similar to previous studies (0.34 for 2 reviewers). The reviewers' estimates of the percentage of patients who would have left the hospital alive had optimal care been provided was 6.0% (95% confidence interval [CI], 3.4%-8.6%). However, after considering 3-month prognosis and adjusting for the variability and skewness of reviewers' ratings, clinicians estimated that only 0.5% (95% CI, 0.3%-0.7%) of patients who died would have lived 3 months or more in good cognitive health if care had been optimal, representing roughly 1 patient per 10 000 admissions to the study hospitals.

Conclusions Medical errors are a major concern regardless of patients' life expectancies, but our study suggests that previous interpretations of medical error statistics are probably misleading. Our data place the estimates of preventable deaths in context, pointing out the limitations of this means of identifying medical errors and assessing their potential implications for patient outcomes.

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