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Strategies To Support Quality-based Purchasing: A Review of the Evidence

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Preface

The Agency for Healthcare Research and Quality (AHRQ), through its Evidence-based Practice Centers (EPCs), sponsors the development of evidence reports and technology assessments to assist public- and private-sector organizations in their efforts to improve the quality of health care in the United States. The reports and assessments provide organizations with comprehensive, science-based information on common, costly medical conditions and new health care technologies. The EPCs systematically review the relevant scientific literature on topics assigned to them by AHRQ and conduct additional analyses when appropriate prior to developing their reports and assessments.

To bring the broadest range of experts into the development of evidence reports and health technology assessments, AHRQ encourages the EPCs to form partnerships and enter into collaborations with other medical and research organizations. The EPCs work with these partner organizations to ensure that the evidence reports and technology assessments they produce will become building blocks for health care quality improvement projects throughout the Nation. The reports undergo peer review prior to their release.

AHRQ expects that the EPC evidence reports and technology assessments will inform individual health plans, providers, and purchasers as well as the health care system as a whole by providing important information to help improve health care quality.

We welcome written comments on this technical review. They may be sent to: Acting Director, Center for Outcomes and Evidence, Agency for Healthcare Research and Quality, 540 Gaither Road, Rockville, MD 20850.

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Structured Abstract

Context: Although evidence of quality problems has been available for years, purchaser interest in quality-based purchasing (QBP) is a recent phenomenon. Furthermore, employers who support quality-based purchasing have expressed uncertainty about how to measure quality, especially outcomes, and what incentives to offer to stimulate performance improvement.

Objectives: The objectives of this project were to develop a conceptual model of how incentives influence provider behavior, to summarize what is known from randomized controlled trials about the effectiveness of different QBP strategies, to describe ongoing QBP research, and to perform simulations to determine whether outcomes reports are too influenced by chance events to be used in QBP.

Data Sources: We used online databases (e.g., MEDLINE®) and bibliographies of retrieved articles for the literature search and government and foundation listings to identify ongoing research. For the simulations, we used data from public reports of myocardial infarction outcomes in California.

Study Selection: For the literature review, we sought studies in which providers had been randomized to an incentive group or a control group. We included only projects involving interventions purchasers could plausibly adopt (payment strategies or public reporting of performance). Studies of interventions that were beyond purchaser purview (e.g., implementing clinical guidelines) were excluded.

Data Extraction: We extracted information about the type of incentive used and the clinical and economic context in which it was applied.

Data Synthesis: We evaluated 5,045 publications. Nine were randomized controlled trials, and many of these did not report key characteristics of the incentive or the context in which incentives were applied. Incentives used included additional fee-for-service, quality bonuses, and public release of performance data. The results were mixed: among the 11 performance indicators evaluated, 7 showed a statistically significant response to QBP strategies while 4 did not. We also found 18 ongoing research projects, none randomized. These will yield data about the approaches to QBP currently in use, provider awareness of and concerns about QBP, and some preliminary estimates of the potential impact of QBP.

Regarding assessments of outcomes reports, we found that, under reasonable assumptions and applications, outcomes reports generate meaningful information about provider performance. Providers with good (expected) performance are unlikely to be labeled as *poor quality* in any given period, and very unlikely to be mislabeled more than once in a 3-year period, even if one allowed approximately 10% of hospitals to be labeled *poor* performers annually. In addition, hospitals with *superior* performance were quite likely to be identified as such at least once in 3 years.

Conclusions: Little is known about the impact of QBP on clinical performance. However, it does appear that basing incentives on measurements of outcomes is feasible without undue risk to the reputation or financial status of good hospitals. Ongoing research will only address some of the gaps in our knowledge about QBP, suggesting that much more additional research is

needed. This should include comparisons of alternative QBP approaches and qualitative assessment of the barriers to and facilitators of quality improvement in response to QBP incentives.

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Appendixes for this report are provided electronically at www.ahrq.govv/clinic/epcindex.htm. Scroll through the topic list to select this report.