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Effect of the Physician Quality Reporting Initiative on Ophthalmologists’ Documentation of Practice Patterns

Several interventions have been proposed as a means of making health care both more affordable and more evenly distributed among users. Although data exist on the impact of the Physician Quality Reporting Initiative (PQRI) on tracking health care quality with regard to general parameters (routine glycated hemoglobin levels, etc) and regarding ophthalmologists’ adherence to practice patterns such as optic nerve examinations in patients with glaucoma, studies of the effect of pay for performance on ophthalmology are lacking. The purpose of this study was to determine whether implementation of the PQRI was associated with a change in documentation of ophthalmologists’ practice patterns.

Methods. We performed a retrospective review of patient records generated by diagnosis code. The setting of the study was an academic ophthalmology group (approximately 26 health care providers during the periods being studied). Patients with diagnoses that would qualify for the PQRI were randomly selected from the physicians who qualified for the PQRI bonus during the first full year of implementation (2007), and a group of patients was also selected from nonqualifying physicians. A comparison was made of documentation before and after implementation of the PQRI as well as documentation for patients of PQRI-qualifying and nonqualifying physicians.

The categories were as defined by the PQRI. For the glaucoma group of diagnosis codes, documentation of an optic nerve examination was recorded as yes. Similarly, for diabetes there were 2 data points recorded: communication with the primary care provider and documentation of clinically significant macular edema. For macular degeneration, discussion of Age-Related Eye Disease Study vitamins and dilated macular examination were expected of any other aspect of health care quality. Regarding the PQRI, we propose that policy interventions should undergo the tremendous amount of resources being devoted to the reformation of health care delivery in the United States, we propose that policy interventions should undergo the same rigorous outcomes testing and evidence-based implementation expected of any other aspect of health care delivery.

Results. Among patients in the PQRI-qualifying group, 1613 unique patients were identified. A total of 140 patients’ records were reviewed and included for statistical analysis. The overall univariate (χ²) analysis results after pooling all the diagnosis codes demonstrated a small but statistically significant decline in the documentation of practice patterns in the pre-PQRI period compared with the post-PQRI period. Among the patients, 80.7% had documentation that met PQRI criteria in the year preceding implementation, compared with 75.7% in the first year of PQRI implementation (P < .001).

Among the patients in the nonqualifying physician group, 2774 unique patients were identified. A total of 267 patients’ records from the nonqualifying group were reviewed and analyzed. The overall univariate (χ²) analysis results after pooling all the diagnosis codes demonstrated a small but statistically significant decline in the documentation of practice patterns in the pre-PQRI period vs the post-PQRI period. The compliance rates were 80.9% in the pre-PQRI year and 77.9% in the first year of PQRI implementation (P < .001).

Finally, the documentation of practice patterns before and during PQRI implementation was compared between the qualifying and nonqualifying groups using univariate as well as multivariate analysis. Univariate analysis revealed no statistically significant difference (P = .54). For multivariate analysis, we used a logistic regression model. Comparing the qualifying and nonqualifying groups, there was no statistically significant difference in the documentation of practice patterns before (P = .76) or during (P = .36) PQRI implementation.

Comment. Our results indicate that implementation of the PQRI did not result in an improvement in the documentation of practice patterns. The absolute numbers reported may not apply to other practice environments and may be biased by the inadequacies of a retrospective study using paper records. However, these findings support the hypothesis that the PQRI did not positively affect documentation and, by extrapolation, may not have influenced clinical care in a meaningful way. Given the tremendous amount of resources being devoted to the reformation of health care delivery in the United States, we propose that policy interventions should undergo the same rigorous outcomes testing and evidence-based implementation expected of any other aspect of health care delivery.

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Why Was There No Correlation Between Anterior Chamber Depth and Intraocular Pressure Change After Phacoemulsification in Patients With Narrow Angles?

It is traditionally thought that the anterior chamber depth (ACD) is an effective predictor of intraocular pressure (IOP) change after phacoemulsification.1,2 We therefore read with interest that Huang et al3 did not find a statistically significant correlation between ACD and IOP change after phacoemulsification.

There are several possible explanations for this finding. One possibility offered by Huang and colleagues is that it “may be related to the mixed population of open and closed angles.” One way of determining whether this is the case surely would be to analyze correlation between the ACD and IOP lowering in narrow-angle and open-angle groups separately. In fact, the relationship between the angle opening distance and the postphacoemulsification IOP decrease was analyzed separately, and a correlation was found in both groups. We are keen to know the results of the analysis of the correlation between the ACD and postphacoemulsification IOP decrease when separated into these groups.

A second possible explanation is that the open-angle group may have a higher proportion of patients with relatively narrow angles. We were surprised to see that the open-angle group had a mean ACD of 2.76 mm, which is much lower than in other studies (3.14–3.64 mm).4,5 Interestingly, a study by Lavanya et al6 found that an ACD of less than 2.87 mm was highly indicative of a narrow angle. This might suggest that a number of subjectively graded open angles may in fact be narrow angles, which may explain the lack of correlation—possibly even if the narrow angles were analyzed separately.

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In reply

We appreciate the interest and comments from Cheng and colleagues related to the correlation between ACD and IOP change after phacoemulsification in our study.1 We agree that there is likely a strong association of ACD with IOP reduction observed after phacoemulsification. However, we would like to point out a few differences between the articles that were cited and our own results. First, both the article by Kashkewati et al2 and that by Issa et al3 found statistical inverse correlations between preoperative ACD and reduction in IOP. In our article, we reported the association of change in ACD from the preoperative value to after cataract surgery with IOP change (P = .08). Second, different devices were used in all 3 articles to measure ACD—scanning peripheral anterior chamber analyzer in the article by Kashkewati et al,2 A-scan ultrasound biometry in the article by Issa et al,3 and anterior segment optical coherence tomography in our article. Finally, Kashkewati and colleagues included subjects who had peripheral anterior synchiae and were receiving glaucoma therapy, whereas our study excluded patients who had either of those features.

Nevertheless, we have reanalyzed our data to determine the correlation of change in ACD and change in IOP for the narrow-angle vs open-angle groups separately. We found that the associations for the narrow-angle group (P = .59) and open-angle group (P = .60) with IOP change were not statistically significant. However, in a subsequent article we published with a larger cohort of subjects that examined many anterior segment optical coherence tomography parameters, we found that the correlation of change in ACD and IOP for the entire group was statistically significant (P = .045).4 We agree that there is likely an association of the change in both parameters. Furthermore, another reason the P value was not significant in the Archives article may be related to the fact that we had a substantial number of patients who had narrow angles and that the open-angle cohort also included participants who had relatively narrow angles but did not meet our strict criteria of Shaffer grades of 2 or less in 3 or all 4 quadrants by gonioscopy.

Cheng and colleagues point out that the ACD of our open-angle cohort was small compared with 2 prior clinic-based studies.5,6 The populations of those 2 studies consisted of healthy...