

## Utilization Outcomes and Patient Cost Sharing: A Comment on Chernew and Newhouse

*Given the evidence from adequately controlled research conducted since publication of the RAND Health Insurance Experiment (HIE) and the HIE's finding of "minimal or no adverse health consequences associated with higher cost sharing," empirical support for the commentary's conclusions is limited at best.*



### TO THE EDITOR:

The conclusions of Chernew and Newhouse's commentary on the effects of cost sharing (July 2008)<sup>1</sup> were based on an inaccurate presentation of currently available research evidence.

First, the commentary omitted all but one published controlled study of the effects of prescription drug cost-sharing increases in commercially insured populations. Studies employing quasi-experimental (pre-post or longitudinal with adequate comparison group) designs to assess typical copayment increases ( $\leq$ \$10, more in some studies) have consistently documented positive outcomes in commercially insured populations, including: (1) modest changes in prescription utilization overall<sup>2-6</sup>; (2) little or no impact on chronic medication adherence<sup>2,4,7</sup>; (3) increased use of lower-cost products (eg, generics, preferred brands) in some but not all analyses<sup>2,4,8,9</sup>; (4) no impact on use of medical services, including emergency department visits, office visits, or inpatient hospitalizations<sup>5,6</sup>; and (5) net reductions in payer outlays for prescription drugs.<sup>2-6</sup>

Second and related, the commentary relied on inadequate and/or inapplicable research, including work that (1) was limited to low-income or special populations whose outcomes are not generalizable to commercially insured groups; (2) assessed extreme and atypical copayment changes of  $>$ \$20; and/or (3) employed cross-sectional or simple pre-post research designs, which are insufficient to establish causality and known frequently to produce invalid results.<sup>3,10-12</sup> The recent review by Lu et al of prescription drug use intervention studies that met "minimum criteria for methodological adequacy" (publication dates July 2001 through January 2007) included only one of the studies cited in the commentary by Chernew and Newhouse, a 2003 analysis by Huskamp et al.<sup>2,11</sup>

Because the study by Huskamp et al was the only adequately controlled analysis of a commercially insured population discussed in the commentary, the third error—an inaccurate description of that study's results—is important. Pharmacotherapy discontinuation rates in the study by Huskamp and colleagues were not higher for patients experiencing a change of "about \$10 to \$20 per prescription," as the commentary reported.<sup>1</sup> The analysis described was limited to patients who used nonpreferred brand (NPB) drugs prior to the copayment change.<sup>2</sup> Since the benefit design for the employer in that analysis changed from a single-tier copayment (\$7) to a 3-tier copayment (\$8/\$15/\$30), the actual copayment change was \$23. A

\$23 copayment change is not only higher than the \$10 to \$20 range described in the commentary; it is also atypical, at more than 4 times the mean NPB copayment increase reported for any year from 2001 to 2006 for covered employees in the United States.<sup>13</sup>

Additionally, a second employer studied by Huskamp et al, whose results were omitted from the commentary's discussion, did change its NPB copayment by \$12 (from \$6/\$12 to \$6/\$12/\$24). For that employer, Huskamp et al found that discontinuation rates were not significantly affected by the copayment increase. There was one exception—among users of NPB angiotensin-converting enzyme inhibitors, discontinuation rates were significantly higher for the comparison (\$6/\$12) group than for the intervention (\$6/\$12/\$24) group (15.8% vs 8.3%;  $P = .03$ ).<sup>2</sup>

Fourth, the commentary omitted relevant research evidence that was contrary to the conclusions presented by Chernew and Newhouse. In discussing the effects of cost-sharing reductions, the commentary omitted the finding by Karter et al (2007) that providing free glucose-testing strips to diabetic patients in one managed care organization “shifted costs from patient to health plan, without improving adherence” in blood glucose monitoring.<sup>14</sup> The commentary cited a 2008 study suggesting that copayment reductions of “about \$10 increased patient adherence to treatment regimens for chronic disease,”<sup>15</sup> but did not discuss the study's effect size—a clinically insignificant 7 to 14 days of additional pharmacotherapy annually.<sup>16</sup> The finding by Wharam et al that enrollees in high-deductible health plans distinguish between essential (high-severity) and non-essential (low-severity) use of the emergency department<sup>17</sup> was also omitted.

Given the evidence from adequately controlled research conducted since publication of the RAND Health Insurance Experiment (HIE), and the HIE's finding of “minimal or no adverse health consequences associated with higher cost sharing,”<sup>18</sup> empirical support for the commentary's conclusions is limited at best. Additional controlled research in this topic area is needed, but presentation of accurate information about the currently available data is crucial.

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**Funding:** None reported.

**Author Disclosure:** The author reports no relationship or financial interest with any entity that would pose a conflict of interest with the subject matter of this article.

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