

**Would Greater Price Transparency and Uniformity  
Benefit Vulnerable Patients?**

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**Abstract**

President Bush, the World Health Organization, and leading scholars have called for greater price transparency in health care. Posting historic prices informs consumers of expected costs and shames providers that charge high prices to vulnerable populations. There is some danger, however, that price transparency would increase prices paid by the poor, delay or deter business entry in poor markets, reduce competition, lower investment, and be misleading if inaccurately measured by a third party. We recommend alternative approaches to lowering prices for the poor and enhancing efficiency.

**Key Words:** transparency, differential pricing, hospitals, pharmaceuticals

## **Calls for Price Transparency**

Price transparency, i.e. low-cost access to information about what others pay, is a treatment prescribed for multiple health care "ailments," including inefficiency and inequity. Some believe price transparency will increase static efficiency by promoting price competition.<sup>1</sup> Others believe price transparency will increase equity by reducing prices and enhancing access for the poor.<sup>2</sup>

The World Health Organization (WHO) and Health Action International (HAI) recommend price transparency for decreasing prices and increasing access to pharmaceuticals for the poor in their 2006 report "Price, availability, and affordability: An international comparison of chronic disease medicines." A 2001 resolution from the World Health Assembly created a mandate for extensive international drug price surveys.

In 2006 President Bush signed an executive order requiring that hospitals and physicians disclose price and quality of care provided to Medicare beneficiaries, federal employees, the military and veterans.<sup>3</sup> At the same time, the chief executive of the largest U.S. hospital chain pledged that HCA hospitals would make price transparency a top priority.<sup>4</sup>

Michael Porter and Elizabeth Olmsted Teisberg advocate price transparency and uniformity in their 2006 book "Redefining Health Care." Their proposals would lead to price uniformity both indirectly through transparency and directly through extending a Maryland law requiring that providers not price differentiate between their patients.

Price transparency is prescribed in some cases to increase efficiency and in other cases to increase fairness, but it can have harmful side effects. Price transparency can increase prices paid by vulnerable people, delay or deter launch of products in poor markets, reduce competition, lower investment spending, and be misleading if inaccurately measured by a third party. We describe the conditions under which transparency might be welfare-increasing or decreasing, and suggest which outcome is likely in various health markets. We conclude by recommending alternative policies.

### **Effects of Price Transparency**

First, price transparency can reduce buyers' search costs. Similarly, price transparency can provide yardstick competition to identify whether procurement personnel are obtaining low prices.<sup>5</sup>

Second, price transparency can make buyers and sellers tougher negotiators. Buyers would have new information, and sellers would have additional incentives to avoid price concessions for one buyer that could cut the price for all buyers.<sup>6</sup>

Third, informational spill-overs from transparent pricing might facilitate collusion among sellers and raise prices.<sup>7</sup> Price cartels are easier to enforce when prices are transparent, because transparency removes the possibility of secret discounts.<sup>8 9</sup>

Fourth, price transparency might make prices more uniform. Many scholars have analyzed the welfare consequences of uniform prices versus different prices in static (one-period) models.<sup>10 11 12</sup> For simplicity, consider the effects on three groups. First, buyers for whom uniform prices are lower than those under price discrimination are clearly better off. Second, buyers for whom uniform prices are higher than those under price discrimination are clearly harmed. Third, sellers' profits fall under most circumstances, because if uniform pricing increased profits, presumably sellers would have already chosen to set uniform prices. To mitigate price compression, firms might elect not to sell to buyers in low price markets or might find alternative ways of making prices less transparent.

Fifth, price transparency and compression could harm incentives for research and development. The discussion thus far has focused on the short-run consequences of uniform prices. In the pharmaceutical industry, however, long run effects on research R&D should also be addressed. If uniform pricing reduces firms' profits it reduces their incentives to invest in risky R&D projects.<sup>13</sup> At the margin, some projects whose social benefits justify the costs of development will not be undertaken.<sup>14</sup>

Price transparency is prescribed for multiple "ailments" of the health care system, including inefficiency and inequity, but it can have the harmful side effects described above. Next we examine the different "patients" for which price transparency is prescribed, beginning with pharmaceuticals and then turning to hospitals.

### **Pharmaceutical Price Transparency**

The World Health Organization and Health Action International advocate pharmaceutical price transparency. A 2001 resolution from the World Health Assembly created a mandate for extensive international drug price surveys. These surveys are, however, flawed according to Ridley (2005). The WHO/HAI price measurement i) has insufficient

adjustments for drug quality variations, ii) uses price ratios rather than price levels, iii) artificially measures countries' wealth (e.g., using a country's lowest-paid unskilled government worker), iv) disregards patents, v) is too slow in adjusting to changes in prices, inflation, and exchange rates, and vi) requires difficult-to-obtain procurement prices.<sup>15</sup> If the measurement issues could be resolved, would pharmaceutical price transparency be socially beneficial? We examine this below.

WHO/HAI argues that price transparency would simplify procurement. Under price transparency, the price charged to other buyers could be a substitute for a competing bid from a different supplier. The additional information provided by transparent pricing could reveal cases of egregious mismanagement or corruption by government officials or excessive mark-ups by middlemen or retailers. Thus, the WHO/HAI proposal for price transparency might introduce yardstick competition.

Actually, there is little uncertainty about the true cost of most drugs. With a few exceptions (such as biologics), marginal costs are low. True, there might be uncertainty as to exactly how low marginal costs are, and extremely poor countries might benefit from knowing that the true marginal cost is lower by one penny. However,

price transparency would likely be more beneficial to governments in rich countries. Many wealthy countries already use international reference pricing, and mandate that the price cannot exceed the average or minimum price in a basket of other countries. WHO/HAI seems aware of the usefulness of price comparisons in middle and high-income countries, writing "The methodology has been designed primarily for use in low- and middle-income countries, but should be applicable to all countries..."<sup>16</sup>

Easier international price comparisons could lead to more price uniformity across countries. This might result from international reference pricing, parallel trade, or a desire by firms to avoid the appearance of "unfair" price discrimination.<sup>17 18</sup> As mentioned in the previous section, the welfare effects of increased price uniformity are generally ambiguous. Here, we consider which factors would apply in the market for pharmaceuticals.

Developing countries that are paying more than rich countries benefit if price transparency leads to a uniform price below what they are currently paying. Obviously, the converse is also true: countries that are paying relatively low prices for drugs would be harmed if the uniform price were higher. The WHO/HAI report noted many instances in which prices in developing countries



were above the median international price, but there were also many other medicines that were relatively inexpensive (below the median international price) in developing countries. It is worth repeating that profit-maximizing pharmaceutical firms would be more likely to set low prices in developing countries and high prices in developed countries. A uniform price would likely be between the firm's preferred price in developed countries and that in developing countries, thus reducing welfare for developing countries. Furthermore, pharmaceutical companies tend to avoid markets with relatively low prices with the potential to "spill over" to other markets.<sup>19 20 21</sup> In other words, some low-priced markets are simply not served, and greater price transparency might result in even fewer product launches in low-priced countries.

Clearly, pharmaceutical profits fall as a result of price transparency. Understandably, the WHO/HAI is more concerned with the welfare of developing countries than the short-run profits of drug firms. However, in the long run, investment in R&D will probably fall if pharmaceutical firms expect lower profits. Estimates vary as to the magnitude of the reduction in new drug development.<sup>22 23 24 25</sup> However, any decrease in innovative output would have negative welfare consequences for both

developing and developed countries, and these consequences should be weighed against the benefits of increased short-run affordability.

Another concern is that pharmaceutical firms might direct their R&D toward rich-country diseases. Products that are not essential for life are easier to price high and keep out of developing country markets that could undermine the rich-country price. For example, pharmaceutical companies might focus on treatments for conditions such as wrinkled skin, acne, erectile dysfunction, and attention deficit disorder. To some extent, pharmaceutical firms already focus R&D efforts on rich countries.<sup>26 27</sup> However, an increase in price uniformity might only tilt the focus even more towards rich markets.

We noted in passing that firms might respond to a policy of transparency by making direct price comparisons more difficult. In response to U.S. Medicaid procurement policies, which require firms to sell their drugs to Medicaid at the lowest price they sell to any private insurer, firms introduced additional versions of their products, with certain versions intended for the Medicaid market, and slightly different versions for private buyers.<sup>28</sup> Similarly, there is evidence that pharmaceutical firms adjusted their product portfolios in the European

Union to make parallel trade of identical products between high and low price countries more difficult.<sup>29</sup> Some drug firms already produce different versions of their products for developing markets, largely to identify gray market trade (illegal shipments from developing countries to markets with higher prices). They might find it profitable to differentiate further: for example, they might market only basic versions of their products in developing countries, while selling extended-release versions in rich countries.

Thus, even if international price comparisons could be accurately made by third parties, the social consequences are ambiguous.

### **Hospital Price Transparency**

Historically, there has been little patient demand for hospital price information, because most patients have insurance and because in an emergency it is not practical to get multiple price quotations. Likewise, there was little supply of price information; most hospitals were unable or unwilling to quote prices.<sup>30</sup> The demand for price information is increasing, though, as more consumers opt for high-deductible insurance coverage or choose elective surgery not covered by insurance.<sup>31</sup>

In 2006 HCA, the largest U.S. hospital chain initiated a trial at its north Texas hospitals. Patients were offered estimated prices prior to care. While common practice in other markets, estimating individual prices in advance was novel in the U.S. hospital market. In 2007 HCA planned to extend the practice to most of its U.S. hospitals.<sup>32</sup> Exhibit 1 lists prices for uninsured patients using select services posted on the web by HCA hospitals in north Texas in March 2007. HCA describes these as “managed care-like” prices. Insured people, who might care about prices because of deductibles or coinsurance, can call HCA for price quotes. Uninsured people with income less than 200 percent of the Federal poverty level receive free emergency care.

Hospitals, like other firms with market power, prefer to charge lower prices to poor or uninsured patients, who have high demand elasticity. For example, China’s TEDA International Cardiovascular Hospital charges US\$6.70 per night for poor patients or US\$3200 per night for rich patients receiving identical care, though different quality rooms.<sup>33</sup> Likewise, India’s Narayan Hrudayalaya charges US\$2400 for a regular package involving open heart surgery or up to US\$4300 for a package with private rooms but identical care.<sup>34</sup>

Unfortunately, many U.S. hospitals have been charging higher prices to poor uninsured patients than to rich insured patients<sup>35</sup> for three reasons. First, poor uninsured patients do not have the negotiating power of insurers. Second, higher charges for uncompensated care make the hospital appear more charitable (important for justifying the hospital's non-profit status) and increase its Medicare outlier or private insurance stop-loss payments. Tenet appears to have been especially aggressive with its charges; its outlier payments increased from \$351 million in 2000 to \$763 million in 2002.<sup>36</sup> Third, hospital administrators believed that they had to charge high prices to the poor so as not to undermine Medicare and private insurance prices.

Price transparency exposes hospitals that charge higher prices to certain populations. This might benefit the uninsured poor. Transparency might also make insurers better negotiators by enabling them to compare the price they pay to the price their rivals pay. On the other hand, transparency might make hospitals tougher negotiators, because they could credibly decline to give an insurer a discount on the grounds that the hospital would face pressure from other insurers for the same discount. Finally, most hospital markets have few competitors, and in oligopoly markets such as these,

transparent prices can facilitate collusion. Transparent prices make it easier for oligopolies to set a collusive price and easier to maintain the collusive price, because they cannot secretly deviate from it.<sup>37</sup>

If price transparency reduces profits it could force hospitals to close or discontinue unprofitable services. In many industries, it is desirable for less efficient firms to close, but in the case of hospitals the least profitable are those serving inner cities and those providing services such as burn units, neonatal intensive care units, and AIDS clinics. Altman and colleagues (2006) argue that price transparency would have severe consequences unless payers increase reimbursement for under-funded services.<sup>38</sup>

We have argued that price transparency can indirectly lead to price uniformity. Some have argued for direct mechanisms for price uniformity. The state of Maryland requires that providers charge the same price to every patient, regardless of insurance status. Porter and Teisberg (2006) recommend that federal regulations ban differential pricing by providers or at least require that "charges by a given provider for the same services would not vary more than the allowed band."<sup>39</sup>

Price uniformity would correct the problem of poor buyers paying more than rich buyers. A disadvantage of price uniformity, however, is that it would become illegal to charge lower prices to poor people. Surely hospitals should be permitted to give discounts to low-income people. Currently, hospitals negotiate with poor people to pay a fraction of their total charge. This benefits hospitals. Hospitals have high fixed costs of technology, but the marginal costs are often lower, so use of some technology could be offered to the poor at a low price.

Calls for price uniformity are motivated in part by the prevalence of higher hospital prices for the poor than for the rich in the U.S. It seems, however, that some of the problem will be solved by regulatory reform. In 2004 Mike Leavitt, the U.S. Secretary of Health and Human Services, told the American Hospital Association that Medicare rules do not prohibit discounts for poor people.<sup>40</sup> Now some hospitals offer means-tested discounts for uninsured patients bringing the prices they pay closer to or less than prices paid by commercial insurers.<sup>41</sup> <sup>42</sup> If hospitals continue to move toward lower prices for the poor, then uniform prices could raise prices for the uninsured poor. In the next sections, we

make policy recommendations for pharmaceuticals and hospitals.

### **Recommendations for Pharmaceuticals**

First, rich and poor governments alike should commit to reduce gray market trade and international reference pricing.<sup>43</sup> Facilitating differential pricing will probably help developing countries and pharmaceutical firms, though richer countries would have to accept higher drug prices. For example, the U.S. government accepted that it would be charged higher prices than low-income people in the U.S. Drug manufacturers are required to give Medicaid their best price (OBRA 1990) but in order to facilitate drug discount cards for the poor, the administrator for the Centers for Medicare and Medicaid Services informed pharmaceutical manufacturers in 2002 that their discount cards would not count against Medicaid best price. Without relaxing the law, several manufacturers indicated that they would not have offered low prices to the poor.<sup>44</sup>

Second, the WHO and other international organizations should continue to examine the bottlenecks to supply within developing countries.<sup>45</sup> It is in the interests of drug manufacturers and advocates for the poor to improve drug supply chains. These alternatives to



transparent pricing would likely be more effective in achieving the fundamental aims of the WHO/HAI.

### **Recommendations for Hospitals**

First, the U.S. government and private insurers should change reimbursement mechanisms that reward hospitals for inflating charges for the poor. While hospitals no longer interpret the rules as requiring them to charge high prices to the poor, hospitals can still inflate their apparent generosity by charging high prices for people who do not pay. Uncompensated care should be valued at Medicare prices rather than at hospitals' list prices.

Second, hospitals should promise low prices to the poor who hold hospital discount cards. Charging lower prices to them can be permissible, ethical, and profitable, so we should expect it. The program could be modelled on the discount cards introduced by pharmaceutical manufacturers.

Third, other hospitals should join HCA in providing patients with price quotes in advance. This is more useful for hospitals and patients than relying on third parties to post historic prices paid by others.

## **Conclusions**

Price transparency and uniformity might seem fair and desirable, especially to those that are uninformed and/or pay higher prices. Transparency and uniformity might, however, raise prices for the poor and decrease providers' incentives to enter poor markets. For example pharmaceutical manufacturers might delay sales to a poor country and might shift R&D focus even further toward rich-world diseases. Hospitals might eliminate less lucrative services for the poor, including closing hospitals in poor neighborhoods. Wilensky (2006) suggests that ending differential pricing would hurt poor people in pharmaceutical markets and have uncertain affects on poor people in hospital markets.<sup>46</sup> Additional research would be valuable in measuring the net effect of price transparency.

Providers and manufacturers should be prepared to quote advanced prices for patients. Pharmaceutical companies and a few U.S. hospitals already do. In these cases, governments and non-governmental organizations should not require that a seller's price to one buyer be uniform or transparent to all buyers, because it can undermine differential pricing (and be inaccurate). Indeed, it might be more beneficial for governments to promote opaque and differential pricing in the interest of helping the poor and promoting innovation. Providers

should also endeavor to help the poor (and often help their own profits) by identifying low-income patients and charging them lower prices.

**EXHIBIT 1**

HCA posts estimated prices for its uninsured patients on the Internet. This is common practice in other industries, but rare for hospitals in 2007.

<b>Service</b>	<b>Arlington</b>	<b>Fort Worth</b>	<b>Plano</b>
Atrial Fibrillation	\$6,967 - \$17,099	\$5,834 - \$14,038	\$6,203 - \$14,969
Congestive Heart Failure	\$11,713 - \$24,963	\$8,105 - \$18,134	\$7,742 - \$20,473
Coronary Atherosclerosis	\$10,539 - \$22,059	\$7,446 - \$13,194	\$8,899 - \$16,387
Percutaneous Transluminal Coronary Angioplasty	\$36,113 - \$55,257	\$24,009 - \$36,370	\$30,171 - \$44,905
Low Cervical Cesarean Section (C-Section)	\$6,670 - \$8,483	N/A	\$6,118 - \$7,907
Normal Vaginal Delivery of a Newborn	\$3,113 - \$3,858	N/A	\$3,280 - \$3,918
Total Hip Replacement	\$35,160 - \$41,354	\$31,453 - \$38,806	\$36,399 - \$43,780
Total Knee Replacement	\$31,832 - \$41,620	\$31,116 - \$42,197	\$33,034 - \$40,686
CAT Scan	\$1,039 -	\$1,098 -	\$1,224 -

	\$1,614	\$1,484	\$1,652
MRI	\$1,390 - \$2,386	\$877 - \$2,587	\$1,139 - \$2,131

Uninsured patients with income less than 200 percent of the Federal poverty level receive free emergency care.

Source: HCA North Texas Patient Pricing and Financial Information March 2007 (<http://www.lonestarhealth.com/>)

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