

Pharmaceutical Cost Containment
The potential and challenges of Reference Pricing

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Drug Spending

Pharmaceuticals are a major cost driver in U.S. health care. In 2004, prescription drugs accounted for approximately 10 percent of all national health care spending.¹ According to a report issued by the Center for Medicare and Medicaid Services (CMS), the total national spending on prescription drugs, both private and public, from retail outlets “increased on average by about 11 percent a year from 1998 through 2005 – faster than the average 7 percent a year increase in total U.S. health expenditures for the same period.”² In 2005, national spending on pharmaceuticals from retail outlets was approximately \$201 billion.³ Federal spending on prescription drugs in 2005 accounted for an estimated 16 percent of this total (\$33 billion) and is expected to significantly increase due to the advent of Medicare Part D in 2006.⁴

With this upward spiral in pharmaceutical costs, policy makers are searching for innovative strategies to hold down the costs of prescription drugs. This paper will consider reference pricing as a means to control pharmaceutical expenditures.

Reference Pricing Defined

A reference based pricing strategy is one of many approaches to achieving cost savings in the area of prescription drugs. It is a reimbursement policy where payers set a ceiling price, or a reference price (RP), for pharmaceuticals that are comparable and therefore, interchangeable. The RP is typically based on the lowest priced product within a group of comparable pharmaceuticals. The insurer fully subsidizes drugs that are at or below the reimbursement level, with the exception of any co-payment for prescription drugs.⁵ Patients may purchase a drug above the maximum reimbursement amount, but they are responsible for costs that exceed the RP. In contrast, a closed formulary offers no reimbursement for non-formulary drugs. As a result, advocates argue that a reference-based pricing system gives greater consideration to individual preferences and needs.

United States

Unlike most other developed countries, the U.S. has not widely implemented reference-based pricing. Policy makers considered implementing it into the Medicare Modernization Act in about 2000-2003, but they ultimately failed to do so. Below is a listing of some of nations that have adopted reference pricing.

Timeline for Reference Pricing Adoption⁶

Country	Year of Adoption
Germany	1989
The Netherlands	1991
Sweden	1993
Denmark	1993
New Zealand	1993
British Columbia	1995
Australia	1996
Italy	1996
Spain	2000

Despite the lack of implementation on a federal level, reference pricing has been incorporated into the cost containment procedures in other organizations. In 2004, WellPoint announced Blue Freedom Rx, which utilizes a reference pricing prescription drug benefit. It was initially made available to Blue Cross and Blue Shield of Georgia members and expanded to Blue Cross of California in January of 2005.⁷ In 2005, Starwood Hotels & Resorts Worldwide introduced reference pricing into five therapeutic categories,⁸ and the Michigan Medicaid program also adopted a form of reference pricing.⁹ However, “there is little research looking at the use of reference pricing in the U.S. setting, in part because its use has not been extensive.”¹⁰ As a result, examples throughout the paper will largely cite evidence of reference pricing effects and systems from international models from Germany and British Columbia. Germany has the longest history of reference pricing and British Columbia is one of the most studied with regards to health outcomes.

Cost Savings

Reference pricing is a demand side cost control model. By not insulating the patient from the full costs insurers pay for the prescription drugs, patients will become more efficient consumers of pharmaceuticals. In theory, they will only be willing to utilize drugs with costs above the

reference price if they perceive the costs to be equal or less than the benefits they will derive from the drug.

Reference pricing is an indirect means to affect pharmaceutical pricing behavior. Manufacturers are free to set prices. While pharmaceutical companies are not required to lower their prices, they will have an incentive to participate at the reference price in order to obtain more sales.¹¹ Evidence suggests that companies are not able to successfully charge above the reference price as consumers are price sensitive and are unlikely to be willing to carry the excess financial burden.¹² Drugs with little or no competition – due to patent protection or because no similar drugs exist on the market – would not feel pressure to lower their prices.¹³ Competition is much stronger where alternatives exist. This is particularly the case when at least one drug has “lost its patent protection and is available in generic form.”¹⁴

Program Components

The process of developing this mechanism typically entails:¹⁵

- Clustering of comparable products;
- Determining a maximum reimbursement amount for each cluster of drugs;
- Creating a means to educate patients and providers about the system so that they can make informed decisions; and
- Developing a process for medical exception

Clustering products and setting a reference price

There are variations in reference pricing policies that differ depending on the “extent to which drugs are considered interchangeable by a particular health plan.”¹⁶ Three common policies exist in creating drug clusters: 1) Interchangeable drugs are chemically equivalent, and have the same active chemical ingredients;¹⁷ 2) All drugs with “chemically related active ingredients that are pharmacologically” the same are to be defined as interchangeable;¹⁸ and 3) All drugs that have comparable therapeutic effects are considered interchangeable.¹⁹ Setting the reference price may take many forms. For instance, an insurer may base the reimbursement amount on the least expensive product in a therapeutic class or the least costly branded agent available.²⁰ The greater the price difference “between the preferred drug (the drug at which the reference price is set) and its non-preferred alternative, the more attractive the preferred drug appears.”²¹ If the price difference is minimal, patients will have less incentive to shift away from the non-preferred drug.

Robust information

Patients and medical providers need “robust information” to ensure that drug choices maximize patient outcomes and preferences.²² They require information about drug effectiveness to determine whether the benefits of a more expensive product will be at least equal the costs that patients must pay out-of-pocket.

Medical Exception

Reference pricing strategies typically include a medical exception rule. The payer will fully subsidize a higher cost drug for individuals that meet certain criteria.²³ Examples of such circumstances include when a patient has an adverse reaction to drugs at or below the reference price or when a “patient has previously responded well to a non-formulary drug and changing drugs is risky.”²⁴ If the criteria for medical exception are too generous, they are likely to reduce potential cost savings.

Unintended Consequences and Challenges of Reference Pricing

This section will summarize the main difficulties that may occur with a reference pricing system.

Imperfect Information

Consumers often do not have the information they require to conduct an adequate cost-benefit analysis. Many times they lack the expertise and training required to understand available studies on drug effectiveness, and they rely on physicians to make drug decisions in their best interests. However, even physicians have their limitations, sometimes lacking access to “reliable information on the attributes of rival prescription drugs.”²⁵ Information can be biased if it comes from pharmaceutical manufacturers. Even information from the government may not be completely balanced. In Germany, public insurance systems hold a near monopoly of information with regards to the relative efficacy of the drugs in a therapeutic group.²⁶ This is problematic as “there may exist a bias because of the monopoly held by public systems and the cost reduction priority imposed by public authorities.”²⁷

Health Outcomes

Reference pricing is not designed to promote individual patient health outcomes as drugs are not a “one size fits all” product. It is not uncommon for patients to try several options before

finding the one that works most effectively for them.²⁸ While medications may have comparable therapeutic effects, a “slightly different formula may be better for some people.”²⁹ By limiting full subsidization to drugs at or below the reference cost, the system reduces patients’ access to drugs. As a result, the sick may “have less chance of getting the latest drugs, and their chances of recovery or effective relief are to that extent compromised,” especially when generic and patented drugs are listed together.³⁰

Other concerns about effects on patient outcomes include that “the policy might induce beneficiaries to switch from partially to fully reimbursed drugs, or not switch but reduce compliance with prescribed regimens of the partially reimbursed drugs.”³¹ Both cases may lead to worse patient health because drugs at or below the reimbursement amount may have fewer health benefits.

Sustainability and extent of cost-savings

Evidence strongly suggests that the cost-savings generated from reference pricing typically occur in the short-term and are an ineffective way to contain overall pharmaceutical costs in the long-run. Additionally, the system may just shift costs to the consumer instead of achieving healthcare system wide savings. Despite evidence of cost savings in British Columbia, it appears that reference pricing was only effective in the early stages, experts claim that “only in the two to three years during the active expansion of RDPs, 1995-1997, was the growth in Pharmacare’s (British Columbia’s government sponsored drug benefit program) expenditures slowed.”³² Schneeweiss et al. note that in 1998, “the increase in Pharmacare’s costs returned to its pre-RP rate of about 15% per year.”³³ Additionally, Pharmacare’s drug costs per beneficiary rose by 150%,³⁴ similar to worldwide trends.³⁵

In some cases, such as Germany, the significance of savings from reference pricing is questionable and difficult to ascertain as it was accompanied by other cost containment policies. However, most literature suggests that Germany’s reference pricing did not make major impacts on drug costs.³⁶

Equity

Advocates of reference pricing state that it is “perceived fair to low-income patients because patients do not need to give a co-payment if they choose a therapeutically equivalent drug below the reference price.”³⁷ However, reference pricing practices may disadvantage low income

individuals who do not have the financial means to pay for drug costs above the reference price and due to social economic factors may be less informed than their more financially advantaged counterparts.³⁸ As previously discussed, medication is not a one size fits all product. The difference between more expensive brands and the reimbursement may “amount to tens or even hundreds of dollars per a week.”³⁹

Innovation

Compensating companies for patented products at generic prices creates a financial disincentive for pharmaceutical companies to improve existing drugs or to invest in the creation of new drugs. Applying reference pricing has huge costs to the pharmaceutical industry. Under reference pricing systems that lump branded and generic drugs into the same group, patients are likely to shift to generic products, which are typically one of the lower priced drugs. As a result, money is likely to go to generic firms in lieu of the “innovative industry,” undermining the funding of R&D research essential to advances in medical technology.⁴⁰ Massachusetts recently enacted, as part of the Health Care Reform Act of 2006, reference pricing as a means of prescription drug cost control. According to Bain & Company, a consulting firm, branded drug makers could stand to lose approximately “\$30-35 billion over the next three to four years” which is “equivalent to about 25% of total branded drug industry profits.”⁴¹ Such losses can be significant for these companies because there will be less money to cover the huge investments pharmaceutical companies make in research and development to create new drugs. According to an estimate by Bain & Co., the cost of “bringing a new drugs to market” is approximately \$1.7 billion - this figure is based on “R&D expenditures by pharmaceutical companies during 2000-2002.”⁴²

It is also likely to bring about changes in drug production behavior. Companies will move towards investing in research on disease “not currently treated by multiple drug therapies. The reason is simple, “these drugs would be literally incomparable.”⁴³ This may potentially lead to reevaluation of the “me too” phenomenon. Pharmaceutical companies may stop the development of new drugs without “clear superior efficacy for a targeted set of patients.”⁴⁴ This might be detrimental as patients may at least derive some incremental benefits from me-too drugs. According to a recent study, if the United States were to apply RP, particularly to expensive drugs, it would “have more negative effects on prices of on-patent products because of the more competitive U.S. generic market, and on research and development and future supply of new drugs, because the much larger U.S. share of global pharmaceutical sales.”⁴⁵

Increased Consumption

Reference pricing may make drugs at or below the RP appear cheaper to consumers, who due to their full insulation from costs, may increase their consumption levels, thereby increasing total plan expenditures on pharmaceuticals.⁴⁶

Other Considerations

Another issue raised is that reference pricing may not decrease the drug expenditures as it causes the pharmaceutical industry to increase promotion of products that are exempted from reference pricing.⁴⁷ Firms may also increase the price of exempted products to recapture losses created through reference pricing.⁴⁸ From 1991 to 1992, the prices of pharmaceuticals under the reference pricing in Germany decreased by 1.5% while the price of exempted drugs rose by 4.1%.⁴⁹

Physicians may also prescribe around exempted pharmaceuticals. In Germany and British Columbia, physicians began prescribing more expensive drugs that were exempt from reference pricing.⁵⁰

Conclusion

There is no easy fix to address the issue of rising pharmaceutical costs. Trade-offs and challenges accompany every cost containment policy. Any consideration of implementing reference pricing in the United States should thoroughly consider the effects on innovation, equity, health outcomes, and other areas of concern when attempting to achieve cost savings. Additionally, the efficacy of reference pricing in achieving cost savings is questionable and potentially short-term. Policy makers must be mindful that in creating and implementing cost containment policies, pharmaceuticals are not the largest source of health care expenditures. In 2004, hospital care and physician and clinical services respectively accounted for 30 and 21 percent of all health care expenditures.⁵¹



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