

POLICY FORUM

Protecting Pharmaceutical Patents and Test Data: How the Trans-Pacific Partnership Agreement Could Affect Access to Medicines in the US and Abroad

Jing Luo, MD, and Aaron S. Kesselheim, MD, JD, MPH

Abstract

The Trans-Pacific Partnership (TPP) Agreement is a proposed free trade agreement between the US and 11 other countries in Asia and South America covering many consumer goods, including prescription medicines. This review describes how the TPP could affect international laws governing intellectual property rights for prescription drugs, focusing on patents and exclusivity protections for test data, including their effect on reimbursement decisions by national health care authorities responsible for health priority setting. We conclude that the TPP could affect low-income patients' access to medicines in signatory countries.

On February 4, 2016, trade ministers from 12 Asia-Pacific countries (the United States, Canada, Mexico, Peru, Chile, Australia, New Zealand, Singapore, Brunei, Malaysia, Vietnam, and Japan) accounting for approximately 40 percent of global trade met in New Zealand to officially sign the Trans-Pacific Partnership (TPP) Agreement [1]. The agreement cannot become effective until at least six countries with a collective GDP of more than 85 percent of the GDP of the original 12 signatories ratify the text using domestic legal procedures [1]. Although President Barack Obama and the Office of the US Trade Representative have repeatedly emphasized the importance of this agreement in contributing to economic growth and jobs creation [2], foreign policy experts believe that it will take substantial political effort to get the trade agreement through the US Congress. For example, the leading Democratic and Republican candidates in the current presidential race have come out strongly against the TPP, expressing concern that the agreement might offshore jobs and reduce American wages [3, 4]. Pushback in the US against signing the TPP has also been endorsed by US-based special interest groups in labor, environment, and health [5]. These groups are concerned about the ability of corporations to use new procedures created by the TPP to challenge regulations aimed at protecting the environment, labor rights, or public health [6].

Although the TPP covers traditional areas of trade policy such as tariffs, financial services, and telecommunications, one of its 30 chapters relates to intellectual property [7], including an entire section devoted to pharmaceutical products. Thus, the TPP has

the potential to affect signatory countries' citizens' access to medicines in a number of ways.

Paying for Medicines

Citizens living in TPP member countries who rely on [lower-priced prescription medicines](#) are poorly served by the particular portions of the agreement that favor the financial interests of pharmaceutical manufacturers and, more specifically, by language within the agreement that targets how drug reimbursement decisions are made by national health care authorities.

Currently, the systems used to determine prescription drug reimbursement vary widely across TPP member countries. To give a concrete example, let us consider how two member countries, Australia and the US, deal with the problem of providing reimbursement for high-cost chemotherapy agents for advanced-stage breast cancer using widely differing approaches to pharmaceutical pricing. In the US, while most women who have HER2/neu receptor-positive metastatic breast cancer might receive coverage for prescription drug treatment with the chemotherapy agent trastuzumab through their health insurers, many are also responsible for substantial out-of-pocket payments [8]. This type of breast cancer is a good example to consider in the context of prescription drug costs because breast cancer affects a large number of women who live within TPP member countries [9] and because overall survival can be improved with targeted treatments such as [trastuzumab](#) [10]. In 2014, the average Medicare beneficiary paid \$5,971 out-of-pocket for a year's supply of trastuzumab [11]. By contrast, under Australia's national Pharmaceutical Benefit Scheme (PBS), the maximum patient copayment for trastuzumab was A\$38.30 (approximately \$29.60 in US dollars) [12]. Australia's PBS leverages its single-payer status to negotiate substantial discounts for expensive drugs like trastuzumab.

The TPP might alter how individual member countries make national reimbursement decisions for pharmaceutical products [13], possibly leading to higher prices in countries with strong pharmaceutical price regulation policies and practices. A provision called the "Annex on Transparency and Procedural Fairness for Pharmaceutical Products and Medical Devices" allows manufacturers opportunities to challenge reimbursement decisions made by national health care authorities. For example, if a national health care authority decides that a new drug product is not a good use of national resources and recommends against listing the product on the national formulary, the drug's manufacturer could request an internal or independent review [14]. Critics of the TPP believe that this annex is directed at member countries with centralized national institutions that set [pharmaceutical prices](#), such as Australia and New Zealand. For example, if the TPP were to be implemented in its current form in Australia, manufacturers of prescription medications with very high list prices could have another way to challenge unfavorable listing recommendations made by the Pharmaceutical

Benefits Advisory Committee, which makes reimbursement recommendations based upon a drug's comparative effectiveness and safety, overall budgetary impact, and value [15].

Similarly, the TPP's "Annex on Transparency and Procedural Fairness for Pharmaceutical Products and Medical Devices" might be invoked if the US should ever decide to establish a comprehensive national formulary or central authority to negotiate prescription drug prices on behalf of its citizens. For example, if future Congressional authority were to be granted to allow the Centers for Medicare and Medicaid Services (CMS) to use its collective market power on behalf of all [Medicare Part D](#) prescription drug plan sponsors, CMS would also have to provide manufacturers two opportunities to challenge unfavorable reimbursement decisions. First, an internal review could be requested. If the unfavorable recommendation remained valid after the internal review, the TPP could guarantee manufacturers the ability to request an independent review of CMS's decisions by some external body (the composition of the body and its standards for review are not currently defined under US or international law) [14].

The "Annex on Transparency and Procedural Fairness for Pharmaceutical Products and Medical Devices" also contains language that favors manufacturers over governmental or other payers in negotiating drug prices. For example, while the rules, methodologies, principles, and guidelines used in listing decisions must be publicly disclosed, information considered confidential or proprietary by manufacturers will remain undisclosed [14]. This type of information could include measures of the costs associated with research and development—i.e., clinical trial or manufacturing costs—as well as proposed discounts or rebates on international list prices. Therefore, while the annex might make it easier for manufacturers to navigate the various reimbursement processes in TPP member countries, its protection of manufacturers' marketing information does not help ministries of health or other national health care authorities obtain lower drug prices.

Generic Competition

The TPP would hamper access to lower-priced medicines in member countries by delaying generic competition through expansions in patent-based and non-patent forms of intellectual property protection. The TPP would allow a greater variety of patents stemming from the original pharmaceutical patent in countries that might otherwise not permit them. It would also extend existing patent terms and other intellectual property protections such as those on clinical trial (test) data.

Expansion of patentability. First, the agreement specifically expands the scope of patentability to include new methods of use for existing pharmaceutical products [7], allowing patent systems to extend market exclusivity for six or seven years after the patents on the active ingredient expire [16]. Methods of use patents are widely employed in the US to try to forestall generic competition on brand-name drugs. For

example, one review of patents relating to the HIV protease inhibitor combination ritonavir/lopinavir in the US found 210 patents and applications relating to peripheral aspects of the product, including 31 covering methods of use [17]. Such patents, obtained at various points after the drugs were in development, had the potential to delay generic competition on the drug for more than 12 years after the expiration of the original patent on the active ingredient.

Extension of patent terms. Additionally, the TPP agreement requires member countries to grant patent term extensions for “unnecessary” delays by the local patent office and for delays associated with the drug approval process [7]. In the US, patent term extensions were enacted into law as part of a compromise agreement negotiated under the 1984 Hatch-Waxman Act [18], in which brand-name manufacturers received market exclusivity extensions for up to five years to account for time spent in drug development, while generic manufacturers were allowed to file abbreviated applications for drugs to streamline their market entry. This finely struck balance between the interests of brand-name and generic manufacturers has been credited with helping stimulate the remarkable growth and success of the US pharmaceuticals market for both branded and generic products over the subsequent decades [19]. While the TPP imposes on other member countries portions of US pharmaceutical law intended to protect brand-name innovation, it does not provide to all member countries incentives similar to the US’s abbreviated process for generic drug approvals, thereby favoring patent exclusivity over broad access to lower-priced generic drug products.

Extension of non-patent forms of intellectual property protection. The TPP would require signatory countries to consider as trade secrets all [clinical trial data](#) submitted to regulatory agencies supporting a drug product’s claims of safety and efficacy [7]. The practice of protecting test data generated from clinical trials (sometimes called data exclusivity) is controversial because it reinforces prescription drug patent monopolies. Since the term of data protection runs independently of the term of patent protection, a prescription drug product may therefore remain insulated from competition due to data exclusivity despite the expiration of the patent. Test data protection can also prevent generic competitors from “inventing around” pharmaceutical patents and offering lower-cost versions of the drug.

Some public health proponents also oppose data protection for pharmaceuticals because the costs of clinical trials are often subsidized by public sources. For example, in the US, 50 percent of qualifying clinical trial costs for drugs intended for rare diseases (designated by the Food and Drug Administration [FDA] as [“orphan drugs”](#)) are subsidized by tax credits to manufacturers [20]. The purpose of the Orphan Drug Act was to incentivize the development of new treatments for rare diseases. However, in recent years its scope has broadened as the number of new prescription drugs approved under orphan indications grew. In 2014, 18 of the 41 newly approved FDA drugs were for

orphan indications, as were 7 of the 10 bestselling drugs that year [21]. Under the TPP, most if not all of these drugs will receive some form of test data protection, even though US taxpayers directly supported the critical clinical work on which the data were generated. Manufacturers seeking to sell lower-cost generic versions of these drugs in member countries will be unable to do so until the data exclusivity term expires.

Trial data protection has important implications for generic competition and patient safety. In the US, under the Hatch-Waxman Act, generic manufacturers may receive marketing approval for their products after demonstrating bioequivalence against a reference product, while relying on the original product's previously submitted trial data as proof of safety and efficacy [18]. Being able to reference previously conducted trials allows generic manufacturers to offer their products less expensively and in a more timely fashion than if they had to repeat costly clinical trials demonstrating safety and efficacy. The need to repeat clinical trials because of data protection rules for the sake of generic drug approval is also ethically questionable [22]. The Declaration of Helsinki [23] protects human subjects from unnecessary risk during experimental research; this is particularly applicable to patients if the trials require a placebo or control arm. Thus the TPP might impede access to drugs for lower income people by increasing the costs associated with generic entry.

Although previous international agreements, such as Article 39 of the Trade Related Aspects of Intellectual Property Protections ([TRIPS Agreement](#)) [24] have also required trial data protection, the TPP establishes a higher international standard by requiring specific numbers of years of trial data protection for pharmaceuticals. More specifically, the TPP requires five years of data protection for each new pharmaceutical product, three years for data requiring new clinical information, and between five and eight years for data relating to biologic products [7]. The TPP defines biologics as products containing, at a minimum, "protein[s] produced using biotechnology processes" for use in humans [7]. Such products include insulin, erythropoietin, filgrastim, growth factors, and monoclonal antibodies such as trastuzumab or infliximab. Although the US currently protects test data for biologics for 12 years [25], a majority of TPP member countries have no pre-existing regulations protecting trial data specifically for biologic drugs [26]. Thus the TPP creates a new norm in many countries with regards to test data protection for biologics and may contribute to maintaining high biologic drug prices in the future [26].

Conclusion

Although the TPP was originally intended to enhance countries' economies and reduce international tariffs, the agreement could reduce access to medicines by extending effective patent terms and reducing generic competition. It extends portions of US pharmaceutical and regulatory laws to the other 11 member countries, while omitting some important public health safeguards with respect to streamlining generic

competition. From disclosure requirements to trial data protection, the agreement seems to favor manufacturers and inventors' rights over public health needs. If the TPP is implemented in its current form, it will be more difficult to get generic drugs or follow-on biologic products to the market in signatory countries while, at the same time, it may make brand-name medications more expensive.

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Jing Luo, MD, is an instructor of medicine at Harvard Medical School in the Division of Pharmacoepidemiology and Pharmacoeconomics at Brigham and Women's Hospital in Boston. He trained in primary care internal medicine at Yale New Haven Hospital. His research interests include access to medicines, pharmaceutical drug pricing, and pharmaceutical regulation.

Aaron S. Kesselheim, MD, JD, MPH, is an associate professor of medicine at Harvard Medical School and a faculty member in the Division of Pharmacoepidemiology and Pharmacoeconomics in the Department of Medicine at Brigham and Women's Hospital in Boston. At Brigham and Women's, Dr. Kesselheim leads the Program On Regulation, Therapeutics, And Law (PORTAL), an interdisciplinary research core focusing on intersections among prescription drugs and medical devices, patient health outcomes, and regulatory practices and the law. Dr. Kesselheim is a Greenwall Faculty Scholar in Bioethics and is also supported by the Laura and John Arnold Foundation and the Harvard Program in Therapeutic Science.

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ISSN 2376-6980**