Insight Brief

Optimizing Regulatory Lifecycle Management

Realize the full value of your products and portfolio.

MICHAEL KARDAS
Vice President, Regulatory and Drug Development Solutions, IQVIA

Table of contents

Introduction

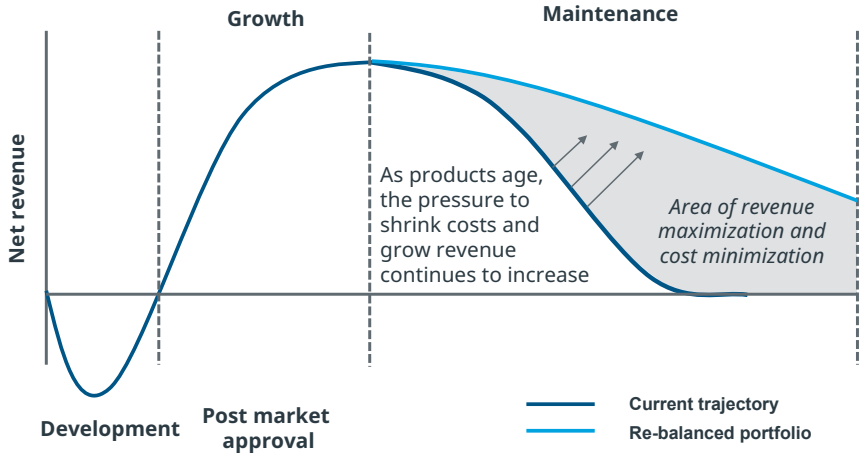
A pharmaceutical treatment or device can be available to patients in the marketplace for decades. From first market approval through product innovations such as new indications, formulations, and second brands, every milestone in that lifecycle will be shaped by regulatory requirements. If a medicine's sponsor wants to maximize the impact of the product on patients, providers and their own bottom line, they need to proactively make regulatory affairs part of their lifecycle planning strategy.

Regulators act as a checkpoint at every critical milestone on the product journey. When companies build regulatory strategy into the product's lifecycle plan, they can optimize value, reduce risk, control costs and ensure compliance — from development through product management.

Such long-term planning is fairly common among the largest pharmaceutical companies, but small and emerging biopharma companies may lack the experience, expertise or resources to develop a comprehensive regulatory affairs strategy that can evolve with the product. This unplanned approach can create unexpected delays and potentially derail the long-term revenue potential of the product.

Such losses can be avoided when companies think through the product lifecycle during development to identify the regulatory expectations at every key milestone. This can help them proactively capture relevant safety and efficacy data to meet future global and local requirements.

The Lifecycle of a Medicine



A proactive regulatory strategy helps optimize value, reduce risk control costs and ensure compliance.

Regulatory lifecycle planning

At each step in this journey, the value of the medicine will evolve from its entry point when it first hits the market, through expanded new uses and indications, to lower levels of value as patents expire and new competitors enter the market.

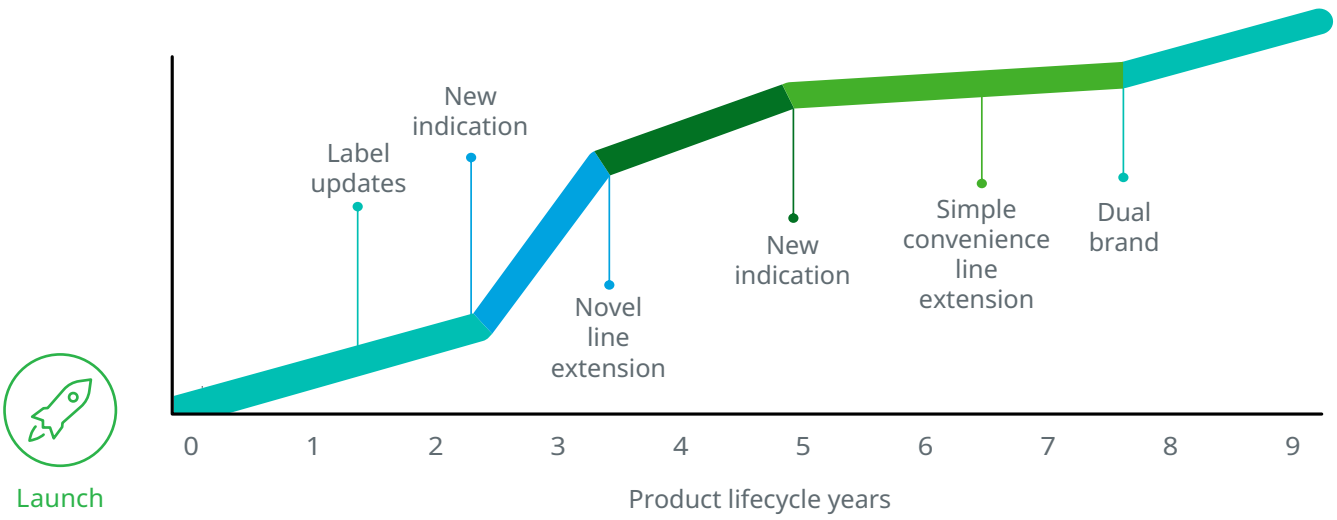
Lifecycle management planning begins 2–3 years before approval and launch

Product launch

A product launch normally follows a regulatory approval based on a single indication, targeting a specific population with an initial dosage form. This initial market application process will focus on gaining approval for primary indications and support for the launch label. Normally a handful of strategic markets are targeted, therefore, the initial launch only represents a small percentage of the regulatory applications that a product will require to fully cover the globe. Nonetheless, it is among the most important for the long-term commercial success of a product.

When planning for a market launch, sponsors need to consider which markets they will want to access to be sure they are gathering the necessary clinical data during development to meet local requirements for the therapeutic area for the application. This can affect what data is collected, where trials are conducted, and what populations of patients are included in the research. Understanding the data expectations of every relevant regulatory authority, and the typical timelines required for approval, helps sponsors optimize their initial launch strategy and timeline.

Shape of a Hypothetical Lifecycle Management Strategy and Plan



Labeling updates and line extensions

An important cornerstone for regulatory lifecycle management is having a continued clinical development program that matures with the product. Post approval, sponsors will continue to gather both clinical data and real-world evidence to support long-term outcomes, along with the potential for new indications and medical uses, and the impact of any new regulatory guidance. Of special interest is the clinical evaluation for use in children and, to that end, health authorities continue to update their pediatric guidance.

Sponsors need to consider how label changes will impact their market authorization application and commercialization in all markets and how changes to the manufacturing process, location, supply chain, etc., will be impacted by regulatory review. Whether these choices are made to reduce costs, improve yields, or to accommodate new dosage forms or routes of administration, they are considered significant regulatory events for a medicine. Before approving any changes, regulators will want to see proof of a reliable supply chain, contingency plans for supply chain issues, and how formulation and patient needs will be met in the new environment.

New brand launches

A new brand launch can be a huge milestone for a medicinal product, changing its pharmaceutical trajectory and revenue potential.

Some of the most successful products in the marketplace are second brand launches. These include Novartis' everolimus, which was originally launched as AFINITOR to treat advanced kidney cancer in 2009. A year later, it was branded as Zortress for the prevention of transplant rejection, and continues to be a significant source of revenue for Novartis despite reaching its patent expiration.[1] And Merck's finasteride, which was first launched as PROSCAR to treat enlarged prostate in 1992, was later branded as Propecia to treat male pattern hair loss. The second brand generated about $400 million in revenue annually prior to reaching its patent cliff in 2013,[2] and they continue to generate more than $100 million in annual revenues.[3]

There are a lot of regulatory requirements associated with achieving a new brand, including the need for targeted safety and efficacy data supporting clinical trial results. It is critical that regulatory planning be considered in conjunction with the clinical evolution of the product to accelerate collection of necessary data so developers can expedite delivery of the new brand to market.

Dual Branding: Some Drugs With the Same Active Ingredient and Formulation are Approved With Dual Trademarks

Manufacturer	Brand 1	Indication	Initial FDA approval	Brand 2	Indication	Initial FDA approval
AMGEN	Prolia (denosumab)	Osteoporosis	2010	XGEVA (denosumab)	Prevention of skeletal-related events in bone metastases	2010
NOVARTIS	AFINITOR (everolimus)	Advanced kidney cancer	2009	Zortress (everolimus)	Prevention of organ transplant rejection	2010
LILLY	Cialis (tadalafil)	Erectile dysfunction	2003	ADCIRCA (tadalafil)	Pulmonary arterial hypertension	2009
PFIZER	Viagra (sildenafil)	Erectile dysfunction	1998	Revatio (sildenafil)	Pulmonary arterial hypertension	2005
NOVARTIS	Reclast (zoledronic acid)	Osteoporosis	2001	Zometa (zoledronic acid)	Treatment of skeletal-related events in bone metastases	2002
LILLY	Sarafem (fluoxetine hcl)	Premenstrual dysphoric disorder	1987	Prozac (fluoxetine hcl)	Depression	1999
MERCK	PROSCAR (finasteride)	Benign prostatic hyperplasia	1992	Propecia (finasteride)	Male pattern hair loss	1997
UPJOHN	Loniten (minoxidil)	Hypertension	1979	Rogaine (minoxidil)	Male pattern hair loss	1988

1 https://www.thepharmaletter.com/article/generic-zortress-launches-in-us-market#:~:text=It%20is%20marketed%20in%20this,in%20%24485%20million%20in%202019
2 https://www.cbsnews.com/news/why-mercks-hair-loss-drug-could-make-its-income-statement-go-um-limp/#:~:text=Merck%20earns%20about%20%24400%20million%20a%20year%20in%20revenue%20from%20Propecia
3 https://www.gminsights.com/industry-analysis/finasteride-market

End of lifecycle

When a product begins to lose market share or hits its patent expiration there are a number of strategic moves that a sponsor may take, including considering a generic version of the medicine, market authorization transfers to a new sponsor, or product withdrawal from a market. Periodic submissions are required throughout the lifecycle of a product, from the very first day it is approved to the day it is taken off the market.

During this product phase, sponsors need to consider the exclusivity period for the medicine in all markets where it is commercialized, and what regulatory tools can complement lifecycle planning, including pediatric research, patent extensions and supplemental protection certificates. Identifying these tools ahead of time can extend both the patient access to the branded medicine, as well as revenue potential for a product by many months.

For example, in 2017, the U.S. Food and Drug Administration (FDA) granted United Therapeutics a six-month extension for pediatric exclusivity on its patent for ADCIRCA to treat pulmonary arterial hypertension, the day before the patent was set to expire. At the time, ADCIRCA, which United Therapeutics acquired from Eli Lilly, represented nearly one fourth of the biotech company's revenue, or roughly $372.2 million in sales.[4]

4 https://www.bizjournals.com/washington/news/2017/11/21/united-therapeutics-gets-much-needed-reprieve-with.html

Operating model challenges

Life sciences organizations' existing operating models for regulatory are often strained by the demands of bringing new and innovative medicines to market, while at the same time complying with requirements for expansion of their approved medicines into new markets, all the while managing increasing regulatory complexity and maintaining compliance in different geographies.

They face increased requirements and expectations from health authorities and more complex submissions that require local knowledge and a depth of expertise. A regulatory lifecycle management strategy ensures that sponsors are looking at their research and market decisions through the lens of regulatory affairs. This perspective results in more robust end-to-end oversight, ensuring companies capture the necessary data to achieve timely compliance and avoid costly launch and renewal delays that can significantly impact product revenue.

There are many ways to optimize the value of a medicine from a regulatory perspective, but it all requires planning for regulatory affairs in conjunction with evolving clinical research to support label expansion and new product launches. When these efforts occur concurrently, life sciences companies are better positioned to maximize performance across the product lifecycle and ensure optimal commercialization of the brand(s).

Identifying regulatory tools ahead of time can extend both the patient access to the branded medicine as well as revenue potential.

To learn more about IQVIA's Regulatory Lifecycle Management solutions, please contact us at: IQVIA.com/contact.

Visit iqvia.com/regulatorycompliance today.

About the author

MICHAEL KARDAS
Vice President, Regulatory and Drug Development Solutions,
IQVIA

Michael Kardas, PharmD is Vice President and Global Head of the Regulatory Affairs and Drug Development team at IQVIA. Dr. Kardas has over 20 years of experience in the Biopharma industry and provides oversight of a team that provides expert regulatory and drug development services to biopharmaceutical companies on the development of their asset. He earned his B.A. degree in Biology from College of the Holy Cross and completed his Doctor of Pharmacy degree from the University of Connecticut.

CONTACT US
4820 Emperor Boulevard
Durham
NC 27703
United States
iqvia.com