



Global
Pharmaceutical
Market Outlook:
2015



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—Division of Sorento—

Global pharmaceutical market outlook: 2015

Quantification of the impact of multiple dynamics and examining the spending and usage of medicines in 2015, globally and for specific therapy areas and countries

Introduction

- The future level of global spending on medicines has implications for healthcare systems and policy makers across developed and emerging economies
- Key decision makers share the common goals of **improving health outcomes**, while **controlling costs** and **expanding access** to more of their citizens
- Past spending growth offers few clues to the level of growth to expect through 2015
 - Unprecedented dynamics are at play — including historically **high levels of patent expiry, rapid expansion of demand for medicines** in the world's fastest growing economies, **fewer new medicines** reaching patients, and more moderate uptake of those that do become available
 - These dynamics are driving **rapid shifts in the mix of spending between branded products and generics**; and between spending in the **major developed countries and those 17 high growth emerging countries referred to as 'pharmerging'**



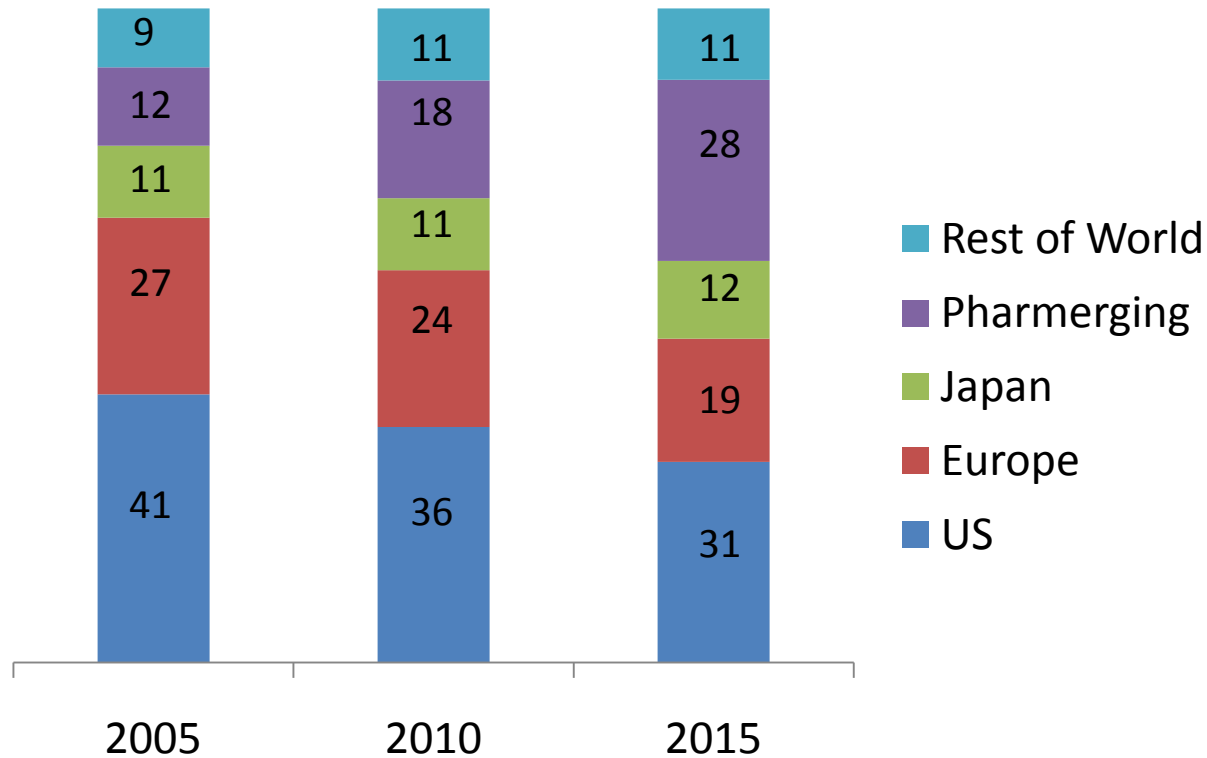
Global market scenario

- **Spending on medicines** which was estimated at \$856 bn in 2010, is expected to reach nearly \$1,100 bn in 2015, reflecting a **slowing growth rate** of 36% over the five year period compared to 6.2 % annual growth over the past five years
- A distinct shift is also expected in the market shares across the globe, with the US and Europe share of global spending declining
- Meanwhile, **17 high growth emerging markets (pharmerging)** including China, **India**, Brazil, Russia and Mexico will contribute 28 per cent of total spending by 2015, up from only 12 per cent in 2005



Global market scenario

Shifting Pattern in Global markets : 2005 - 2015



Source : IMS Market Prognosis, Apr 2011

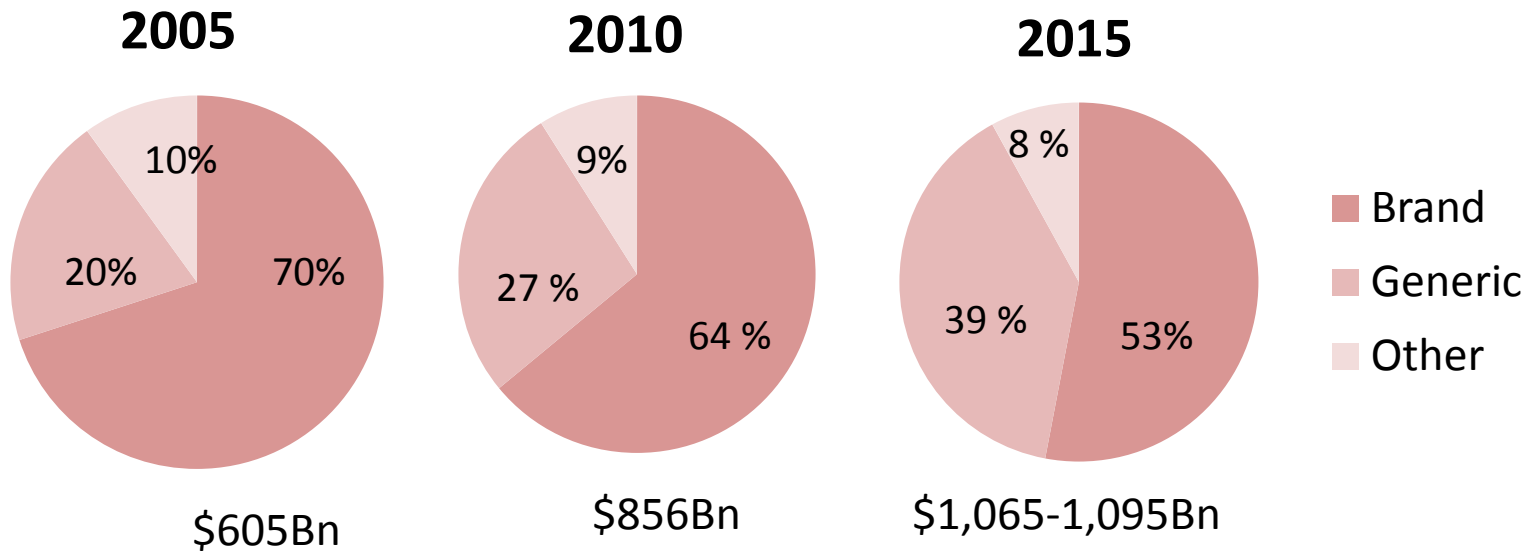
Global market scenario

- The next five years will also see an accelerating shift in **spending toward generics**, rising to 39 % of spending in 2015, up from 20 % in 2005
- On the other hand, **share of patented brands** which accounted for nearly 70 per cent of global pharmaceutical spending in 2010 are **expected to decline** to 53 per cent in 2015, on account of patent expiries, mainly in the developed markets

Rapid growth in pharmerging markets is largely from spending on generic drugs which will contribute to the rise in the generic share of spending

Global market scenario

Spending by Segment



Source : IMS Market Prognosis, Apr 2011



Key drivers of change

- All of the increase in spending on brands - both new and existing - will be offset by patent expiries which will reduce **brand spending** by \$120 billion through 2015
- **Innovative products** are expected to be launched which will bring important new treatment options to patients with cancer, diabetes, thrombosis and debilitating diseases of the central nervous system
 - Of particular note are the products for diabetes that are expected to bring new options to patients
- Additional important **new therapies** with orphan drug designations or narrow indications are also expected, but will not be a major driver of increased spending
- Only **spending on generics will increase** in developed markets over the next five years
- In high growth emerging markets, spending will increase by \$150 bn, as **improved access and strengthening economies drive higher demand**, primarily for generic drugs

Policy-driven changes and impacts through 2015

- Significant policy changes, made in 2010, will have **longer-term impacts on the spending and usage of medicines** across many countries including the passage of the Affordable Care Act in the US, a sweeping reform of Japan's unique every-other-year price-cut system, and several new reforms to rebalance spending priorities in each major European market
- Important steps were also taken in the US and Europe in the development of scientific guidelines for the **approval of biosimilars**

Key therapy areas

- Spending on most therapies will grow at slower rates—or even decline—through 2015
- **Specialty medicines will experience continued growth** in the medium term driven by novel mechanisms, improved efficacy and relatively large patient populations, leading to **increased uptake of these high-value medicines**
- Global spending on **diabetes** will increase by 47% over the next five years, accompanying increased prevalence of type II diabetes and treatment rates especially in countries such as China, India, Mexico and Brazil. **Greater use of oral antidiabetic agents is expected** due to their convenience and efficacy.

Key therapy areas

- Global **oncology** spending will reach \$ 75 bn by 2015, rising at a much slower rate than in the past five years
 - Some major products will be exposed to generic competition, and new products, with the potential to extend lives, will add treatment options in several major tumours, but will not contribute to significantly higher spending
- Annual spending growth through 2015 will slow to 25% for **asthma and COPD** medicines compared to nine per cent growth over the past five years
- Spending on **lipid regulators** will fall to \$31 billion in 2015 from \$37billion in 2010
- Patent expiries will limit **angiotensin inhibitors** growth to 14% over the next five years compared to 12% over the prior five year period

New products

- Some innovative research products to be launched are expected to drive markets (especially in the developed markets) in the next few years which will span disease areas like arrhythmia, autoimmune diseases, diabetes, hepatitis C, lupus, melanoma, multiple sclerosis, osteoporosis, thrombosis and prostate cancer
- However, some of the gains from the launch of these innovative products will be offset by the **patent expiry of existing brands**, like Lipitor, Plavix, Nexium, etc

Selected Product Launches 2009-2013

Disease area	Launched	Upcoming
Arrhythmia	Brinavess(vernakalant) Multaq(dronedarone)	
Autoimmune	Simponi(golim umab) Stelara (ustekinumab)	Tofacitinib (JAK inhibitor)
Diabetes	Nesina(alogliptin, DPPIV) Onglyza (saxagliptin, DPPIV) Victoza (liraglutide, GLP-1)	Bydureon (exenatide, GLP-1) Canagliflozin (SGLT2) Lixisenatide (GLP-1) Tradjenta (linagliptin, DPPI)
Hepatitis-C		Victrelis (boceprevir, NSS-4A PI) Incivek (telaprevir, NSS-4A PI)
Lupus	Benlysta(belimumab)	
Melanoma	Yervoy(ipilim umab)	Vem urafenib
Multiple sclerosis	Ampyra (fampiridine ,oral) Gilenya (fingolimod, oral)	Laquinim od(oral) Ocrelizum ab Teriflunomide(oral)
Osteoporsis	Prolia (denosum ab)	
Thrombosis/ Acute coronary syndrome	Brilique(ticagrelor, P2T) Effient(prasugrel, Xa) Pradaxa(dabigatran etexilate, Xa)	Eliquis(apixaban, Xa)
Prostate Cancer	Firm agon(degarelix) Jevtana(cabazitaxel) Provenge(sipuleucel-T)	Zytiga(abiraterone acetate)

Source: IMS Institute for Healthcare Informatics; Apr, 2011



Major Patent expiries by country by year

Protection expiry year	US		Japan	UK	France	Germany
2011	Lipitor Advair Diskus Zyprexa	Levaquin Xalatan Femara	Actos	Lipitor Zyprexa Clexane Xalatan Femara	Zyprexa Xalatan Femara	Clexane Zyprexa Xalatan Femara
2012	Plavix Seroquel Singulair	Actos Lexapro Diovan	Seroquel	Seroquel Singulair	Singulair	Seroquel
2013	Oxycontin Aciphex	Zometa Xeloda	Aricept Diovan Plavix	Seretide Xeloda	Seretide Xeloda	Xeloda
2014	Nexium Cymbalta	Copaxone Celebrex	Abilify	Abilify Celebrex	Abilify Celebrex	Abilify Celebrex
2015	Abilify Gleevec	Namenda	Alimta Spiriva	Spiriva Alimta	Alimta Spiriva	Spiriva Alimta

Source: IMS market Prognosis; Apr, 2011

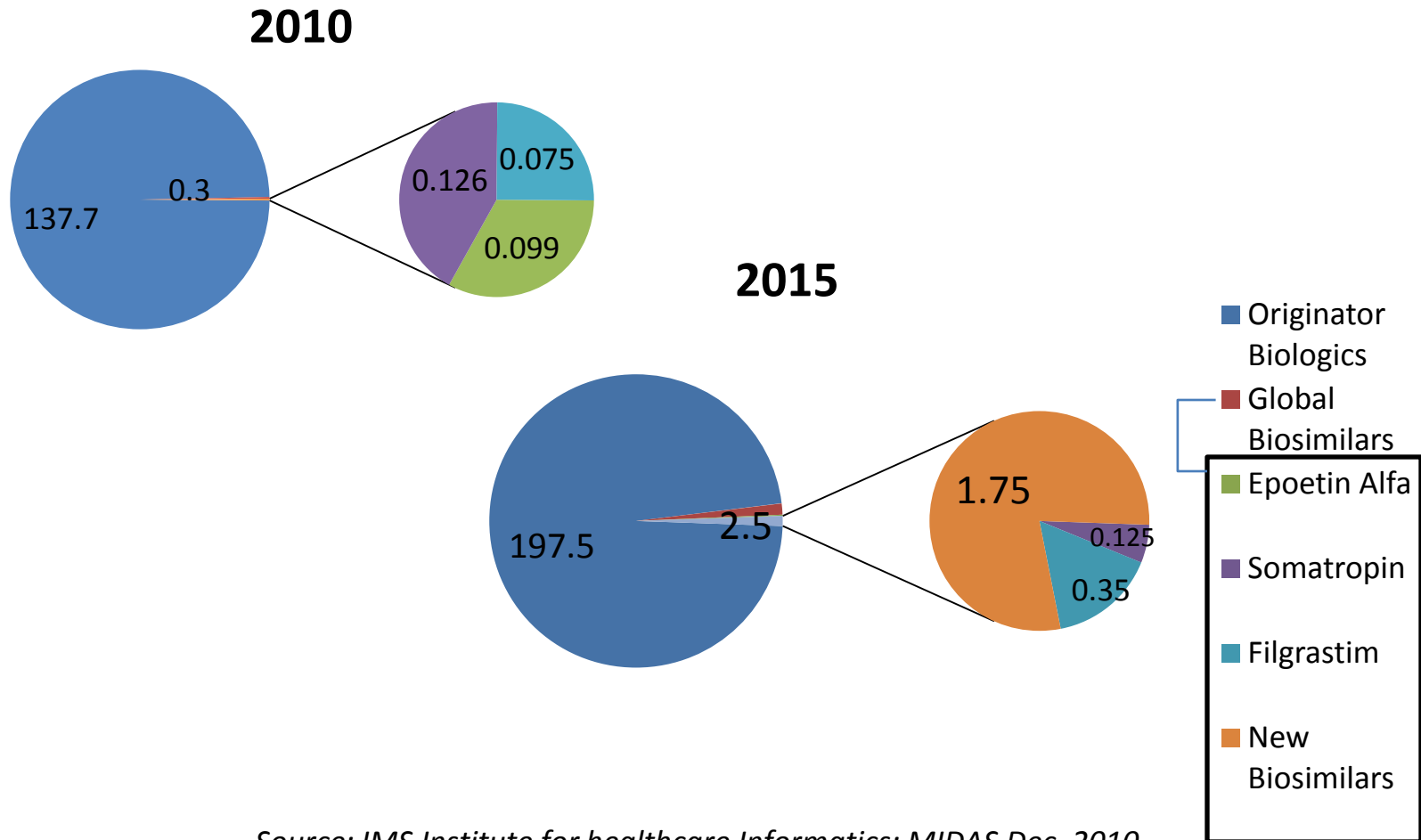
Chart Notes: Largest products with protection expiries in the 2011-2015 period listed in descending order by country sales in 2010 in constant US\$ at Q4 2010 exchange rates. International product names shown except for Advair and Diskus in the US.



Global biologics spending

- **Global biologic spending** was \$138 bn in 2010, compared to \$311 million for biosimilars.
 - Much of the global biologics spending is concentrated in the US
 - **Biosimilar spending** is concentrated in Germany and other European markets, which adopted approval guidelines earlier and now account for over 80 % of global biosimilars spending
- Europe's approval guidelines for monoclonal antibodies, expected later this year, will add new molecules to this competitive space through 2015.
- The US approval pathway, included in the Affordable Care Act, grants 12 years of market exclusivity to originator biologics.
- New biosimilars are expected to enter the US market by 2014, including epoetin alfa and filgrastim, which currently have proved biosimilars only outside the US.

Global biologics spending



Source: IMS Institute for healthcare Informatics; MIDAS Dec, 2010



Global country rankings

Global country rankings:

- Rankings of the top five countries will remain unchanged between 2010 and 2015
- Among the top 20 countries, the big gainers in rank between 2010 and 2015, will be Venezuela (+8), Argentina (+6), and India (+4)

India market scenario :

- The Indian pharma market is forecasted to grow at a CAGR of 15.9 per cent (± 4.0 per cent) between 2010 and 2015, doubling in five years to Rs 119677 crore.

2010 - 2015: Market Performance by Trade Channels			
	% Contribution		% CAGR
	2010	2015	2010 - 2015
Retail Sector	75	71	14.6
Hospital Sector	8	11	23.3
Dispensing Doctors	5	5	15.9
Unaudited Sectors*	12	14	17.8
* Market not captured by IMS			
Source: IMSMarket Prognosis, September 2011			

Global country rankings

Rank	2005	Index
1	US	100
2	Japan	36
3	France	14
4	Germany	14
5	Italy	9
6	UK	7
7	Spain	7
8	Canada	7
9	China	6
10	Brazil	5
11	Mexico	4
12	Australia	4
13	Korea	3
14	Turkey	3
15	India	2
16	Russia	2
17	Netherlands	2
18	Belgium	2
19	Poland	2
20	Greece	2

Rank	2010	Index
1	US	100
2	Japan	33
3	China	13
4	Germany	13
5	France	13
6	Italy	9
7	Brazil	8
8	Spain	7
9	Canada	7
10	UK	7
11	Russia	4
12	India	4
13	Australia	4
14	Mexico	4
15	Korea	4
16	Turkey	4
17	Poland	2
18	Netherlands	2
19	Belgium	2
20	Greece	2

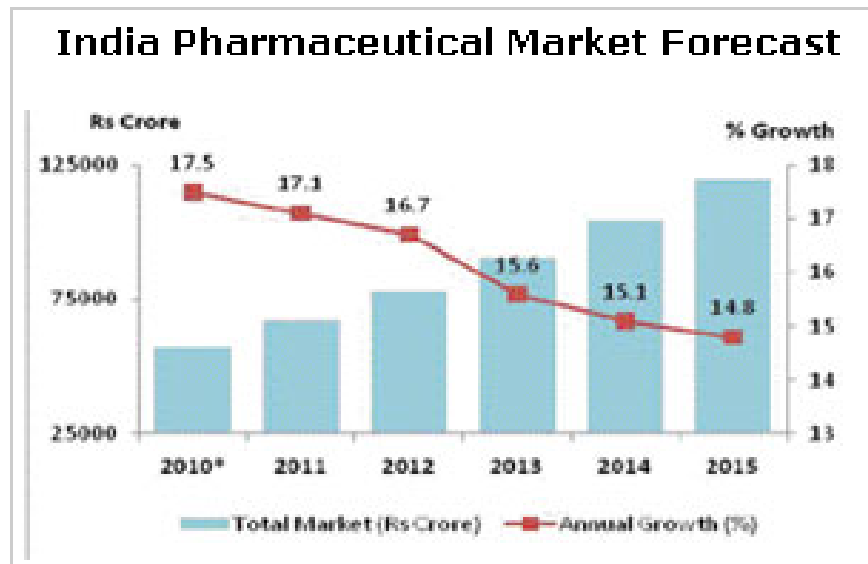
Rank	2015	Index
1	US	100
2	Japan	36
3	China	31
4	Germany	14
5	France	13
6	Brazil	12
7	Italy	9
8	India	8
9	Spain	8
10	Russia	7
11	Canada	6
12	UK	6
13	Venezuela	6
14	Turkey	5
15	Korea	5
16	Australia	4
17	Mexico	4
18	Argentina	3
19	Poland	3
20	Belgium	2

Chart Notes: Ranking in all years based on spending in constant US\$ at Q4 2010 exchange rates. Index in each year based on ratio of country spending to US sales (in constant US \$) in the year.   Change in ranking over 5 years



Market Forecast

- **Market value calculated at ex-manufacturer price level:** The hospital sector is expected to grow strongly and increase its share from eight % in 2010 to 11 % in 2015, while the **retail sector** (though growing in double digit figures) will post a corresponding decline
- **Indian Pharmaceutical Market Forecast**



Key growth drivers

- **Macro economic factors driving the market during the 2010-2015 period, are primarily**
 - robust economic growth
 - greater marketing penetration into extra-urban and rural areas
 - epidemiological changes, with a rapid increase in chronic, age-related disorders
 - continuing rapid expansion of the private hospital sector
 - increased government spending on improvements in healthcare infrastructure
- On the other hand one factor that may impact the market trend negatively, is increasing regulation of drug prices, with the possibility of a greater number of drugs included in the Drug Price Control Order (DPCO)

Therapy forecast

Market forecast for the top 10 therapies, for the period 2010-2015

210 - 2015: Top Ten Therapy Forecast				
Therapy	Market Share %			CAGR 2010 - 2015
	2010	2015	Change	%
A ALIMENTARY TRACT & METABOLISM	25.0	25.2	0.2	15.7
J SYSTEMIC ANTI-INFECTIVES	20.3	19.9	-0.4	15.1
C CARDIOVASCULAR SYSTEM	10.9	11.5	0.6	16.8
R RESPIRATORY SYSTEM	8.6	8.3	-0.3	14.7
N CENTRAL NERVOUS SYSTEM	7.2	7.4	0.2	16.3
M MUSCULO-SKELETAL SYSTEM	5.8	5.3	-0.5	13.2
D DERMATOLOGICALS	4.8	4.8	0.0	15.4
G G.U. SYSTEM & SEX HORMONES	4.5	4.7	0.2	16.5
B BLOOD + B.FORMING ORGANS	4.4	4.4	0.0	15.6
L ANTINEOPLAST + IMMUNOMODULATORS	0.9	1.0	0.1	17.5

Source: IMS Market Prognosis. September 2011



Therapy forecast

- These 10 classes accounted for **92.3 %** of the market in 2010 and are expected to still account for 92.3 % in 2015
- Changing epidemiological factors are resulting in a rapid increase in chronic age-related diseases is driving growth of cardiovasculars, followed by CNS, genito-urinary drugs and alimentary tract and metabolism class (including anti-diabetics)
- **Oncology drugs**, in spite of a relatively lower base show the highest compounded annual growth rate of 17.5 % over the period 2010-2015
- **Musculo-skeletal drugs**, followed by systemic anti-infectives and respiratory drugs shows the maximum decline in market shares, even as they post healthy double-digit growths, over the period 2010-2015



Source

- Express Pharma
 - *The Global Use of Medicines: Outlook Through 2015*
 - *IMS Institute for Healthcare Informatics (May 2011)*
 - *IMS Market Prognosis, April 2011 & September 2011*



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