



Mu Sigma

Pharmaceutical Industry Overview

Do The Math

Chicago, IL
Bangalore, India
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Proprietary Information

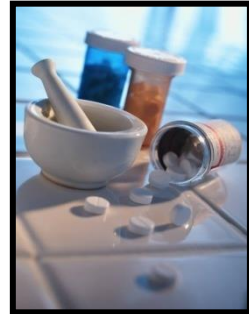
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Within This Training Module

- ▶ Quick Look on Industry Trends and Stakeholder Interactions
- ▶ Aerial View on Global Pharmaceutical Industry
- ▶ US Pharmaceutical Market Review

Aerial view on healthcare industry

- Bulk Drugs
- Tablets/Capsules
- Parenterals – IM/IV
- Creams/Gels



Pharmaceutical

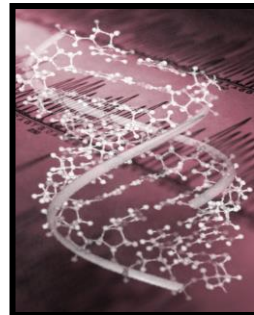


Medical Technology

- Diagnostic Equipments
- Surgery Equipments
- Insulin Pens
- Asthma Devices

Healthcare Industry

- Protein Engineering
- Tissue Culture
- Gene Cloning
- Fermentation



Biotechnology



Healthcare Services

- Hospitals
- Diagnostics
- Medicare / Medicaid
- Business Consulting

Snap shot of our clients

1

2

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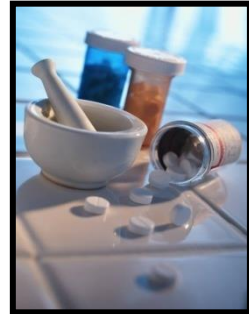
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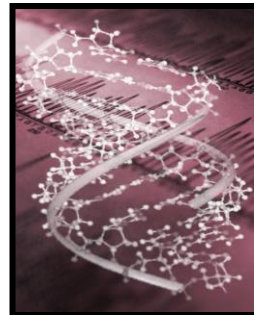


Pharmaceutical



Medical Technology

Healthcare Industry



Biotechnology



Healthcare Services

24

1

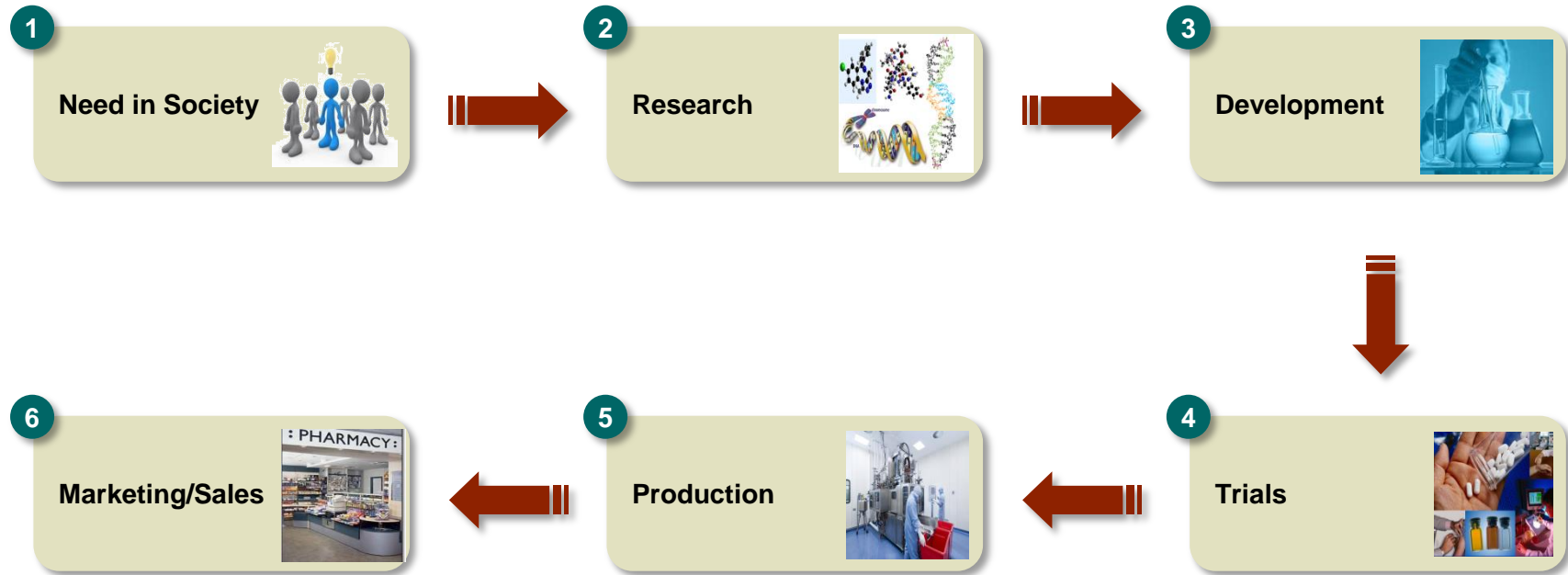
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● Top 50 Pharmaceutical Companies, December 2010

● Top 50 Biotech Companies, August 2009

● Top 10 Health Insurance Companies, 2008

Pharmaceutical Value Chain



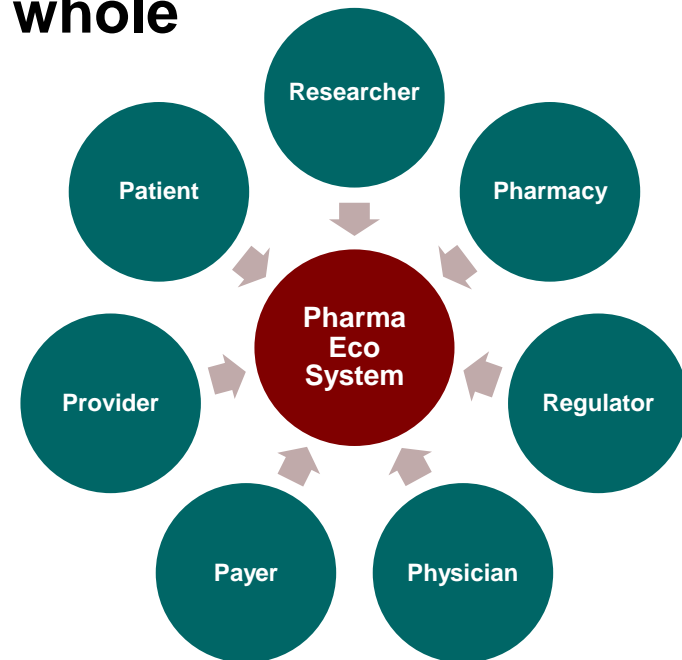
The pharmaceutical marketplace is changing dramatically, with huge implications for the industry as a whole

Pharmaceutical Industry Trends

We identified eight major trends reshaping pharmaceutical marketplace

1. The burden of chronic disease is soaring: prevalence of chronic diseases like diabetes, cardio, oncology is growing everywhere.
2. Increasing consolidation in retail pharmacy market is increasing pressure on profit margins.
3. Healthcare policy-makers and payers are increasingly mandating or influencing what doctors can prescribe.
4. The boundaries between different forms of healthcare are blurring.
5. The markets of the developing world, where demand for medicines is likely to grow most rapidly over the next 13 years, are varied.
6. Many governments are beginning to focus on prevention rather than treatment, although they are not yet investing adequately in pre-emptive measures.
7. The regulators are becoming more vigilant.
8. Pay-for-performance is on the rise: A growing number of healthcare payers are measuring the pharmacoeconomic performance of different medicines.

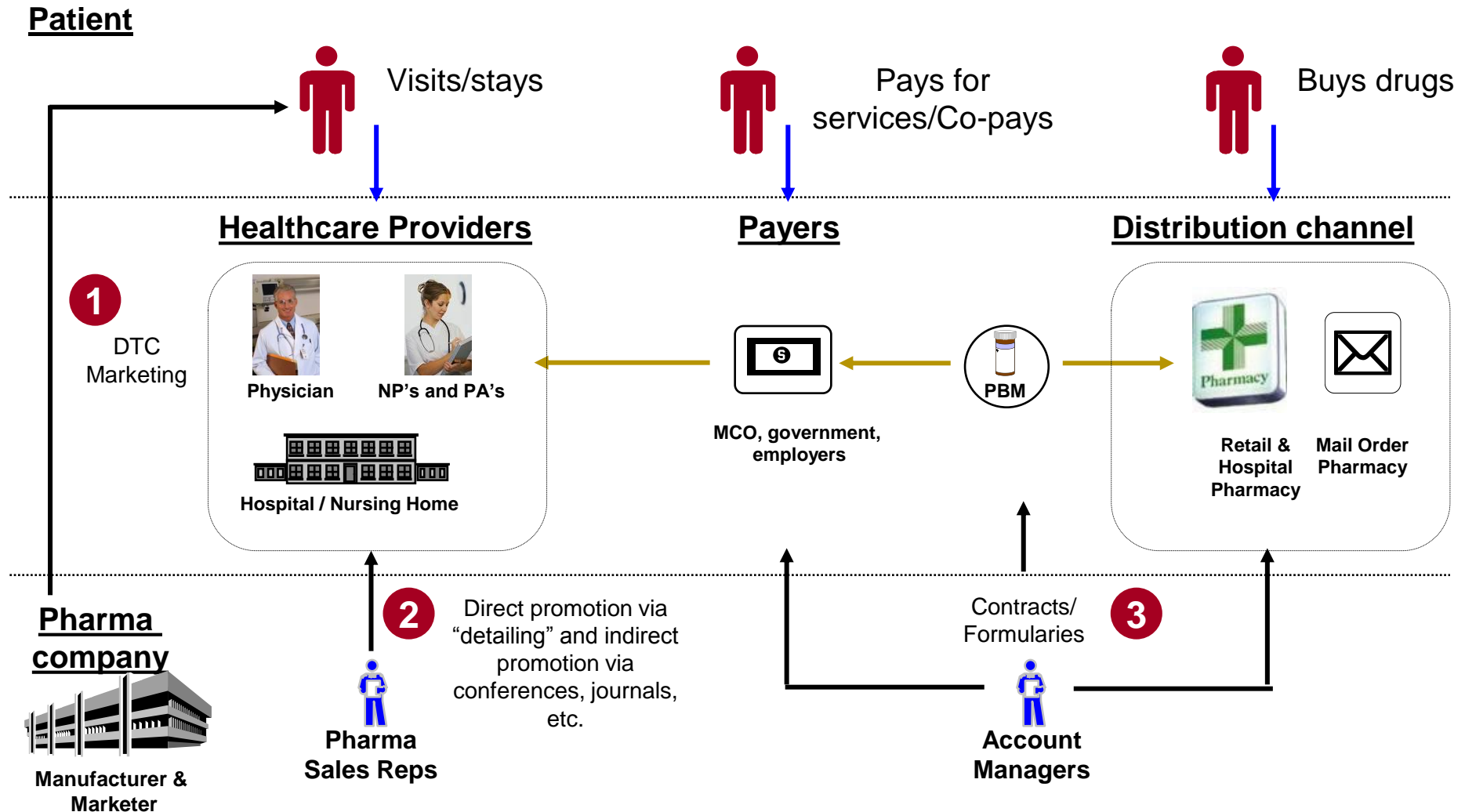
These trends are influencing stakeholders in deciding whether a new product is innovative.



Company Challenges

- ▶ Identifying and assessing business opportunity (i.e. medical / disease potential) for target markets
- ▶ Prioritization of product indications
- ▶ Identify customer needs, define / quantify treatment gaps and unmet needs
- ▶ Explore future market dynamics and optimize marketing mix & ROI
- ▶ Deriving business insights from ever changing market environment
- ▶ Validate positioning, develop branding and test communications

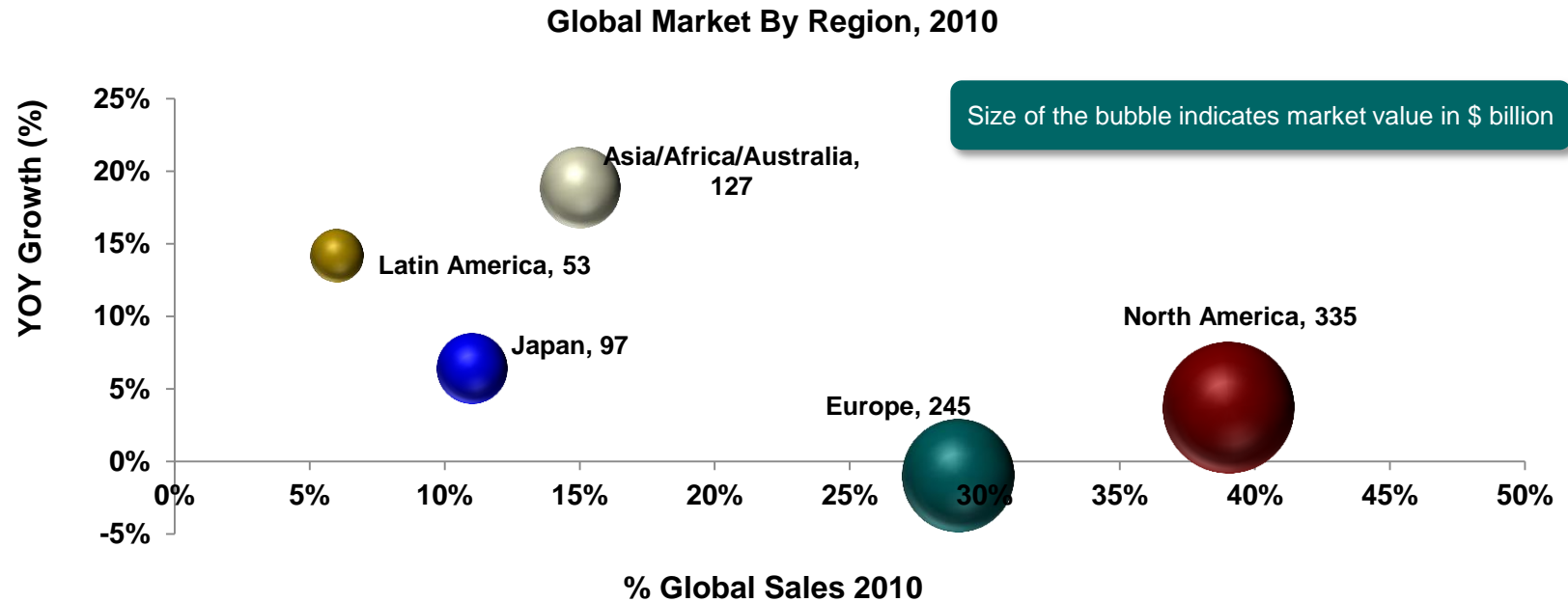
In the US, the pharmaceutical company promotes/ markets its products to the patient, provider and the payer



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Global Pharmaceutical Market



Global Market Size	2010	2009	2008	2007	2006
Total Market Size \$ billion	856	808	781	717	647
YOY Growth Rate	6%	3%	8%	9%	7%

Source: IMS Health Market Prognosis, March 2011

Top 20 Global Corporations, 2010

Rank	Corporations	2010 Revenues (\$ billion)	2009 Revenues (\$ billion)
1	Pfizer	55.60	57.04
2	Novartis	46.80	38.46
3	Merck & Co	38.47	38.96
4	Sanofi-aventis	35.87	35.52
5	AstraZeneca	35.53	34.43
6	GlaxoSmithKline	33.66	34.97
7	Roche	32.69	32.76
8	Johnson & Johnson	26.77	26.78
9	Abbott	23.83	19.84
10	Lilly	22.11	20.31
11	Teva	21.06	15.95
12	Bayer	15.66	15.71
13	Amgen	15.53	15.04
14	Bristol-Myers Squibb	14.98	14.11
15	Boehringer Ingelheim	14.59	15.27
16	Takeda	12.98	14.34
17	Daiichi Sankyo	9.80	8.78
18	Novo Nordisk	9.72	8.59
19	Eisai	8.76	8.13
20	Otsuka	8.73	7.88

Global Top 20 Therapeutic Classes, 2010

Rank	Therapeutic Classes	2010 Revenues (\$ billion)	2009 Revenues (\$ billion)
1	Oncology	55.97	52.37
2	Lipid Regulators	36.40	35.28
3	Respiratory Agents	35.93	33.60
4	Anti-diabetics	34.43	30.41
5	Anti-ulcerants	27.97	29.61
6	Angiotensin II Antagonists	26.63	25.21
7	Antipsychotics	25.41	23.25
8	Autoimmune Agents	20.71	17.96
9	Anti-depressants	20.22	19.42
10	HIV Antiviral	15.43	13.76
11	Platelet Aggregation Inhibitors	15.24	14.60
12	Vitamins & Minerals	12.97	11.95
13	Anti-epileptics	12.55	12.99
14	Narcotic Analgesics	12.01	11.23
15	Cephalosporin & combination	11.47	10.59
16	Non-narcotic Analgesics	10.99	10.91
17	Vaccines	10.97	10.69
18	Erythropoietin	10.60	10.83
19	Anti-rheumatic, Non-steroidal	10.15	9.67
20	Multiple Sclerosis	9.84	8.71

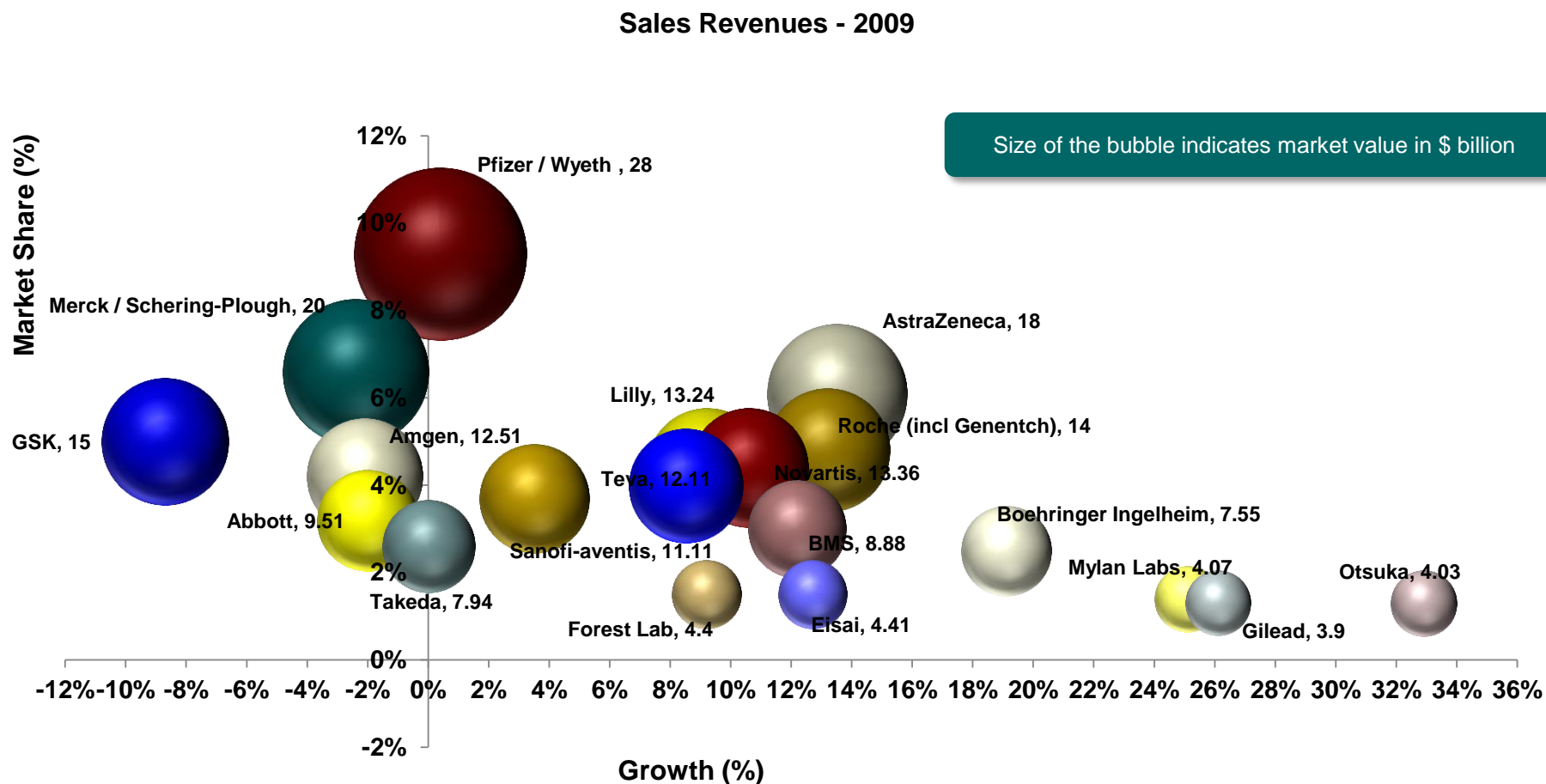
Global Top 20 Global Products, 2010

Rank	Products	2010 Revenues (\$ billion)	2009 Revenues (\$ billion)
1	Lipitor (Pfizer)	12.66	13.29
2	Plavix (Sanofi-aventis)	8.81	9.10
3	Seretide (GSK)	8.47	8.10
4	Nexium (AstraZeneca)	8.36	8.24
5	Seroquel (AstraZeneca)	6.82	6.01
6	Crestor (AstraZeneca)	6.80	5.38
7	Enbrel (Amgen)	6.17	5.86
8	Remicade (J&J)	6.04	5.45
9	Humira (Abbott)	5.96	5.03
10	Zyprexa (Eli Lilly)	5.74	5.36
11	Avastin (Roche)	5.53	5.01
12	Singulair (Merck)	5.47	4.99
13	Abilify (BMS)	5.43	4.67
14	MabThera (Roche)	5.03	4.68
15	Lantus (Sanofi-aventis)	4.69	4.02
16	Aricept (Eisai)	4.43	4.02
17	Actos (Takeda)	4.31	4.12
18	Lovonex (Sanofi-aventis)	4.28	4.58
19	Herceptin (Roche)	4.16	3.91
20	Diovan (Novartis)	4.15	3.93

Within This Section

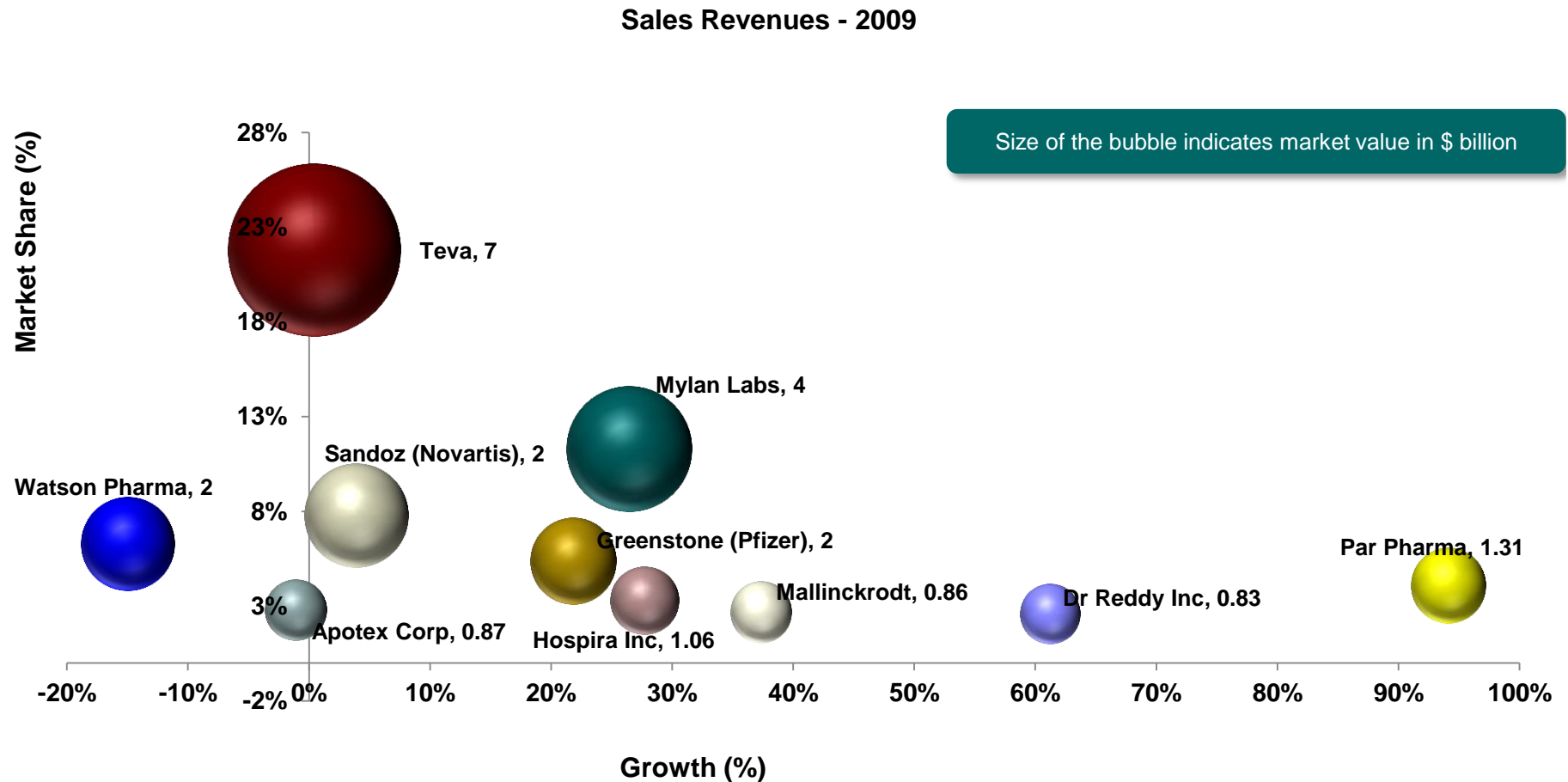
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Many leading corporations with weak or negative growth



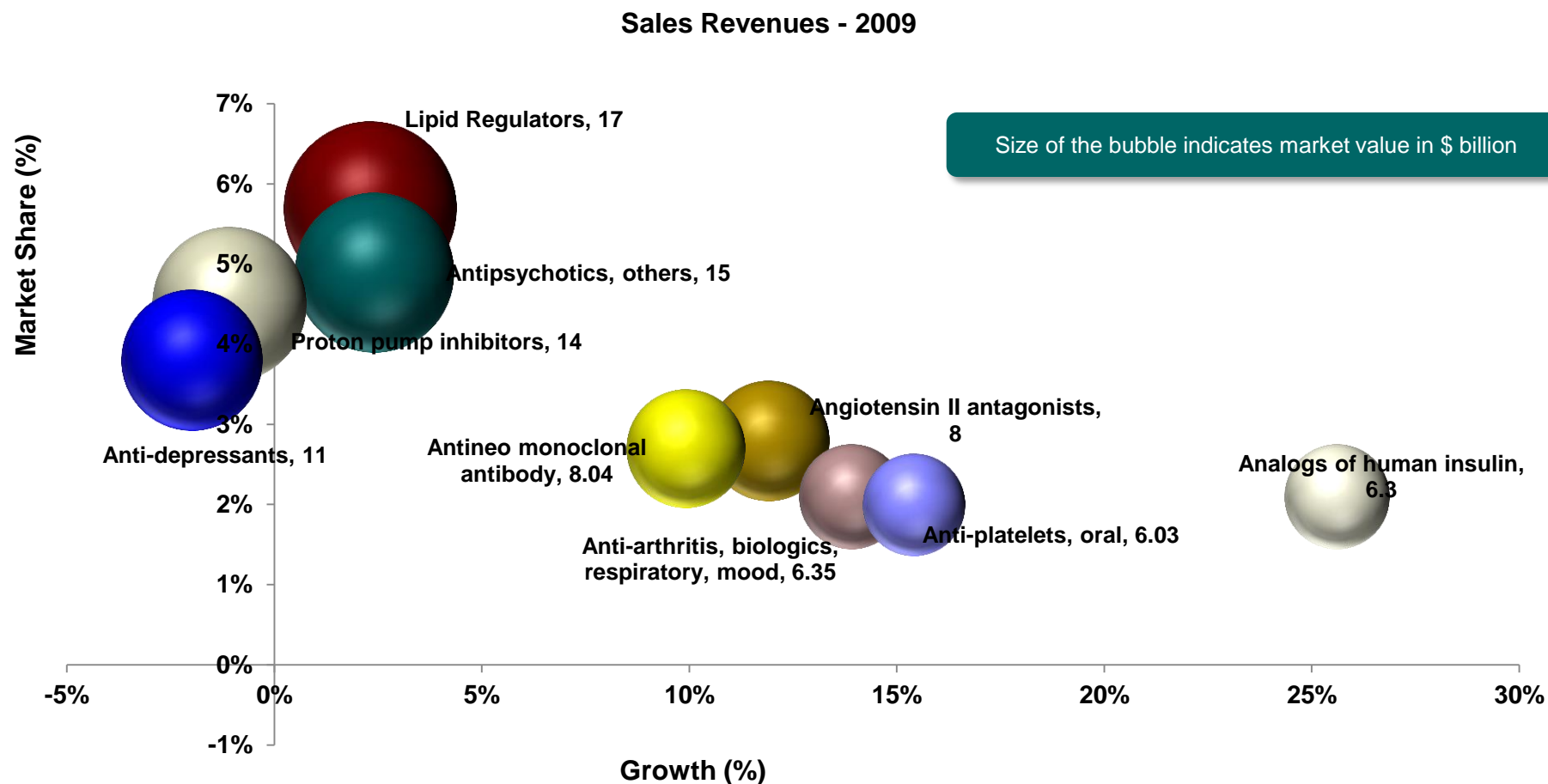
Source: The U.S. Pharmaceutical Market in Review and Preview, Doug Long VP Industry Relations IMS Health, March 9, 2010

Sales growth for top 10 generic companies



Source: The U.S. Pharmaceutical Market in Review and Preview, Doug Long VP Industry Relations IMS Health, March 9, 2010

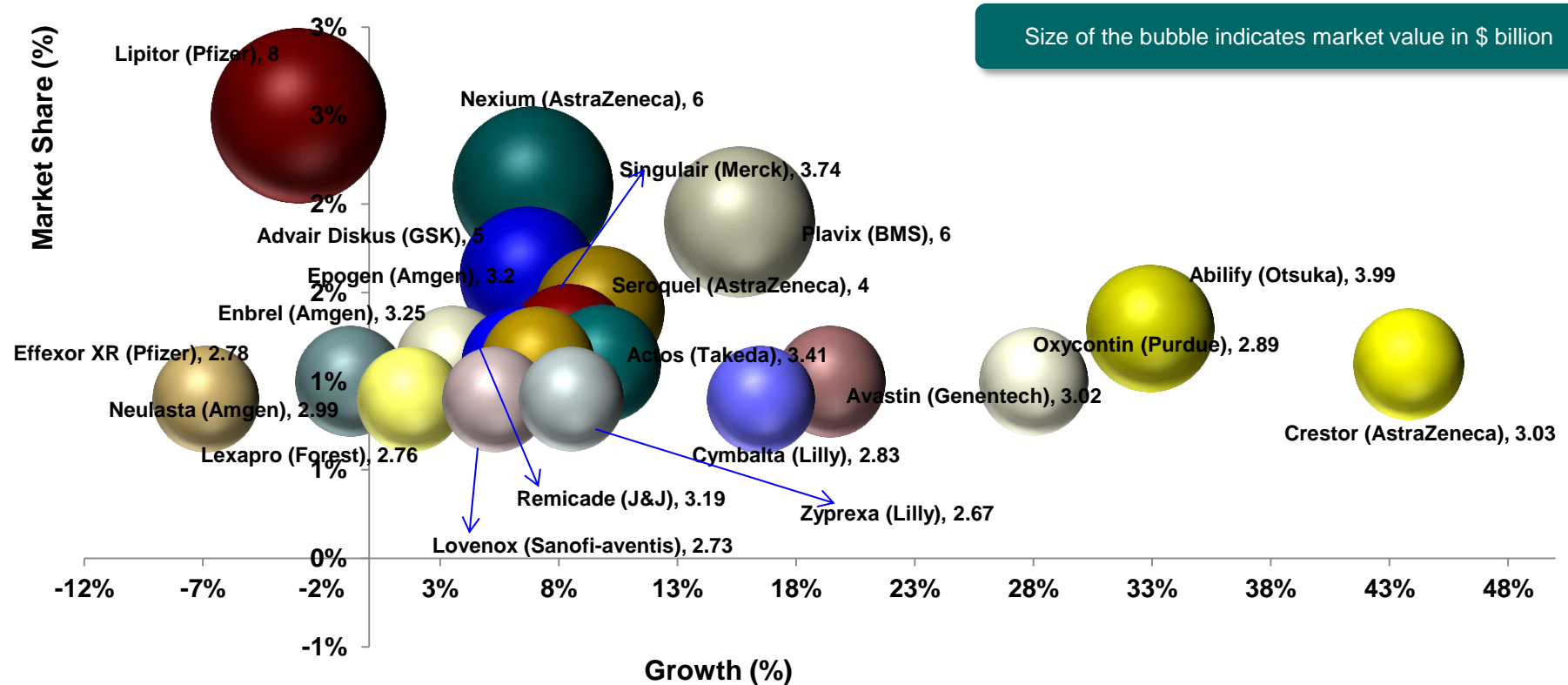
Sales of leading therapy class



Source: The U.S. Pharmaceutical Market in Review and Preview, Doug Long VP Industry Relations IMS Health, March 9, 2010

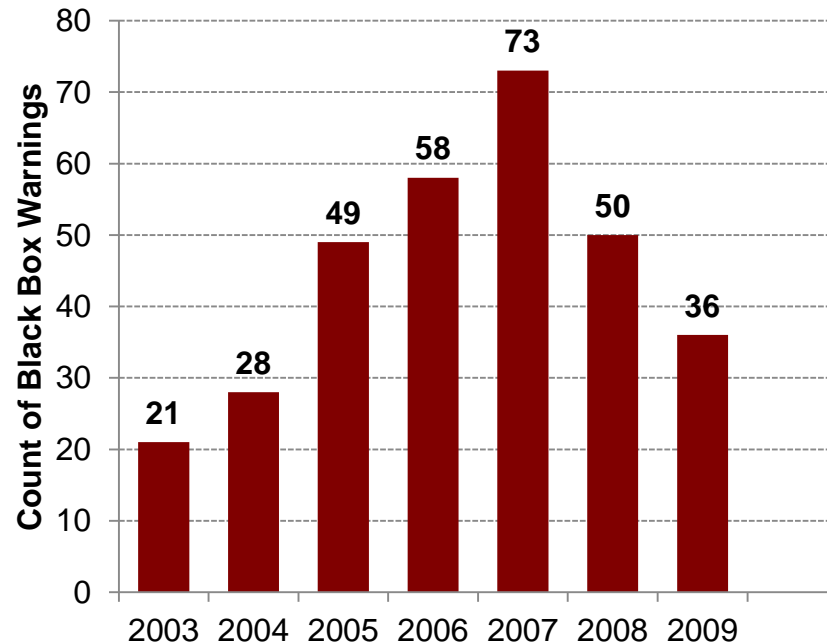
Sales of leading products

Sales Revenues - 2009



Source: The U.S. Pharmaceutical Market in Review and Preview, Doug Long VP Industry Relations IMS Health, March 9, 2010

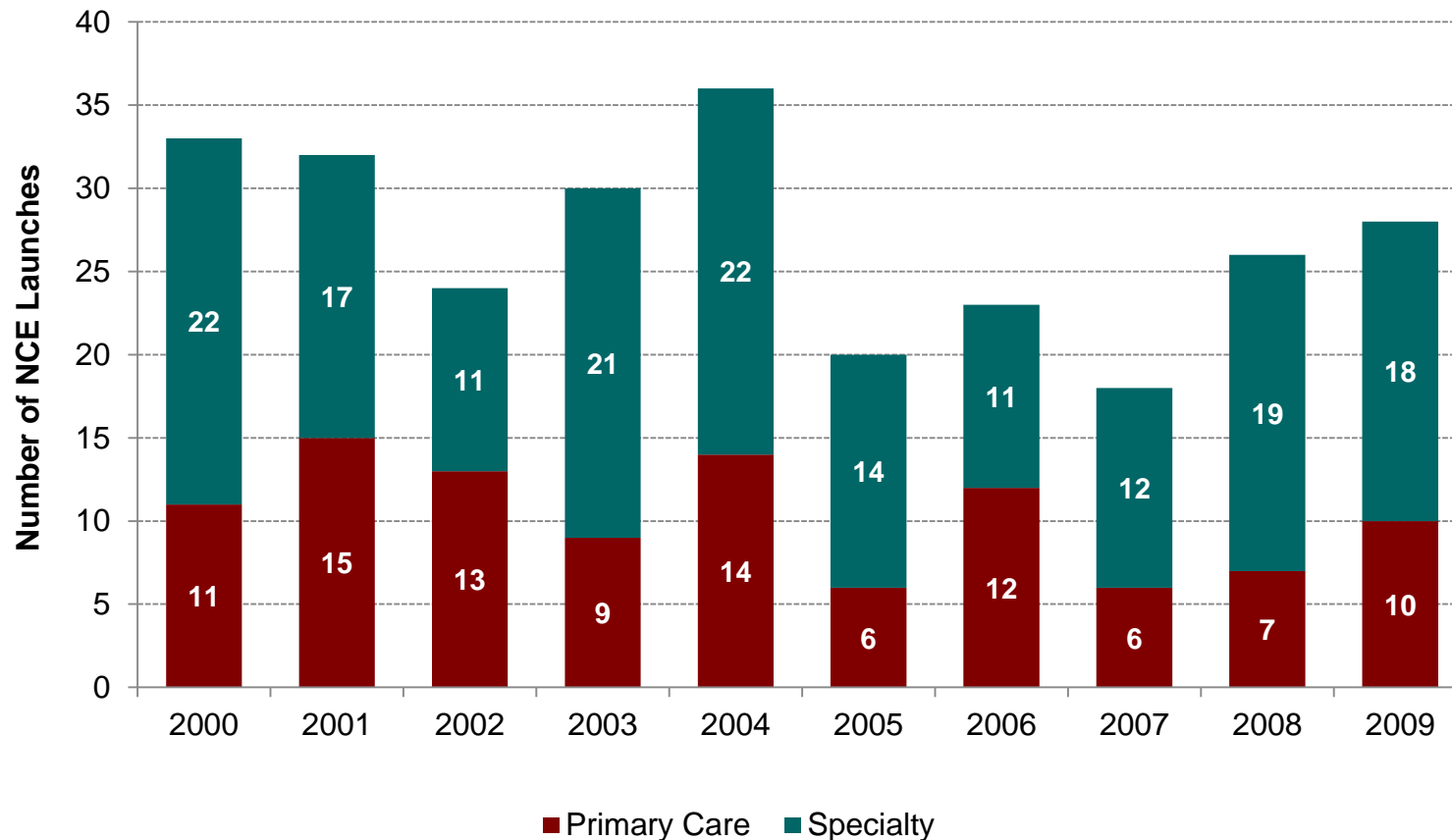
Black box warnings have declined after a peak in 2007



- ▶ Major boxed warnings in 2009
 - Raptiva (withdrawn in EU and US)
 - Chantix, Wellbutrin for smoking cessation
 - Cimzia, Remicade for autoimmune disease

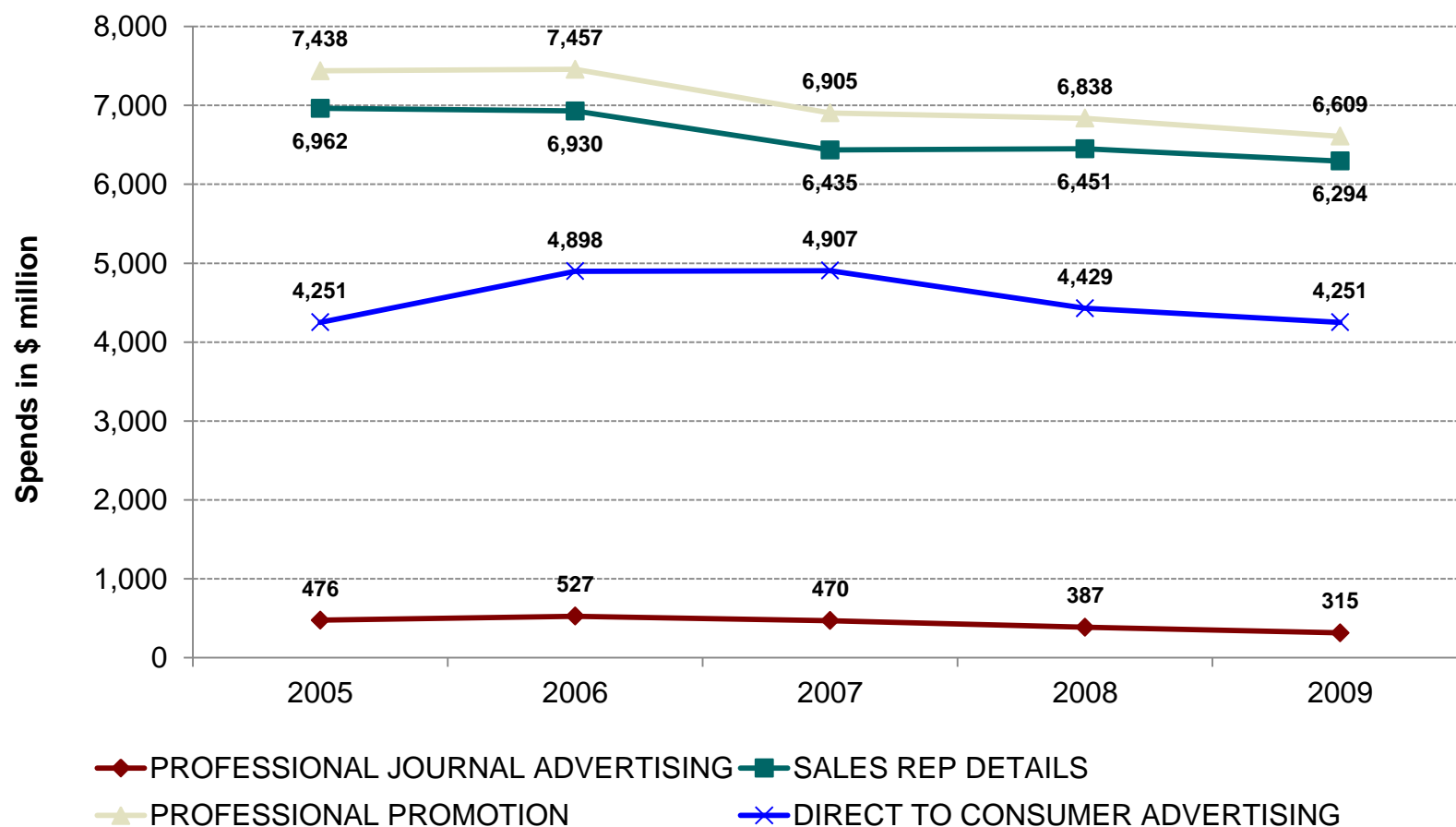
Source: The U.S. Pharmaceutical Market in Review and Preview, Doug Long VP Industry Relations IMS Health, March 9, 2010

NCE launches have reset at 20-30 per year and mainly specialist driven products



Source: The U.S. Pharmaceutical Market in Review and Preview, Doug Long VP Industry Relations IMS Health, March 9, 2010

Spending on consumer advertising drops along with other promotions methods



Source: The U.S. Pharmaceutical Market in Review and Preview, Doug Long VP Industry Relations IMS Health, March 9, 2010



Thank You

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