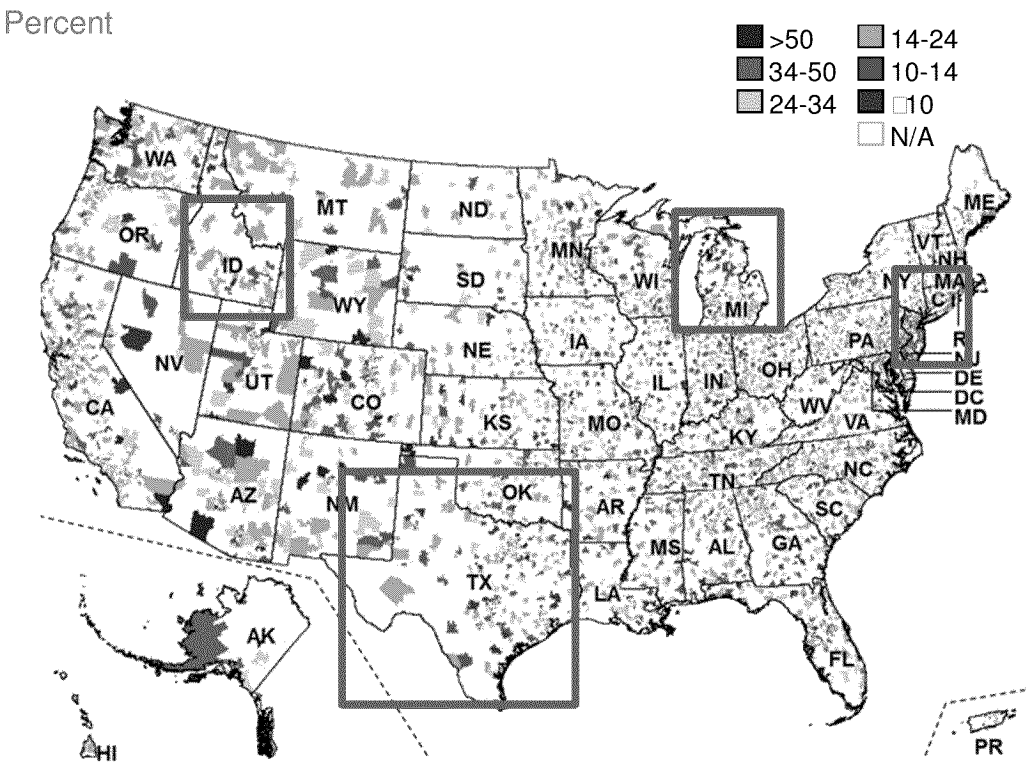
There is also substantial variability in Oxycontin share of ERO market by state

PRELIMINARY

Oxycontin share of ERO market by zip, 2012[1]



- There are potentially state level factors influencing OxyContin market share

States with highest & lowest OxyContin share of ERO market, 2012

State	Oxy Share	Gx Share
Highest		
Rhode Island	43	50
New Jersey	41	47
Connecticut	41	47
D.C.	37	52
Minnesota	37	60
Lowest		
Nevada	14	74
Michigan	16	77
Mississippi	17	71
Texas	18	68
Idaho	18	72
US Average		
US	24	65

1 April 2012 to March 2013

SOURCE: IMS

In states where OxyContin has low share of ERO market, generics have higher share

2012[1] share of ERO market, highest and lowest share states
Percent

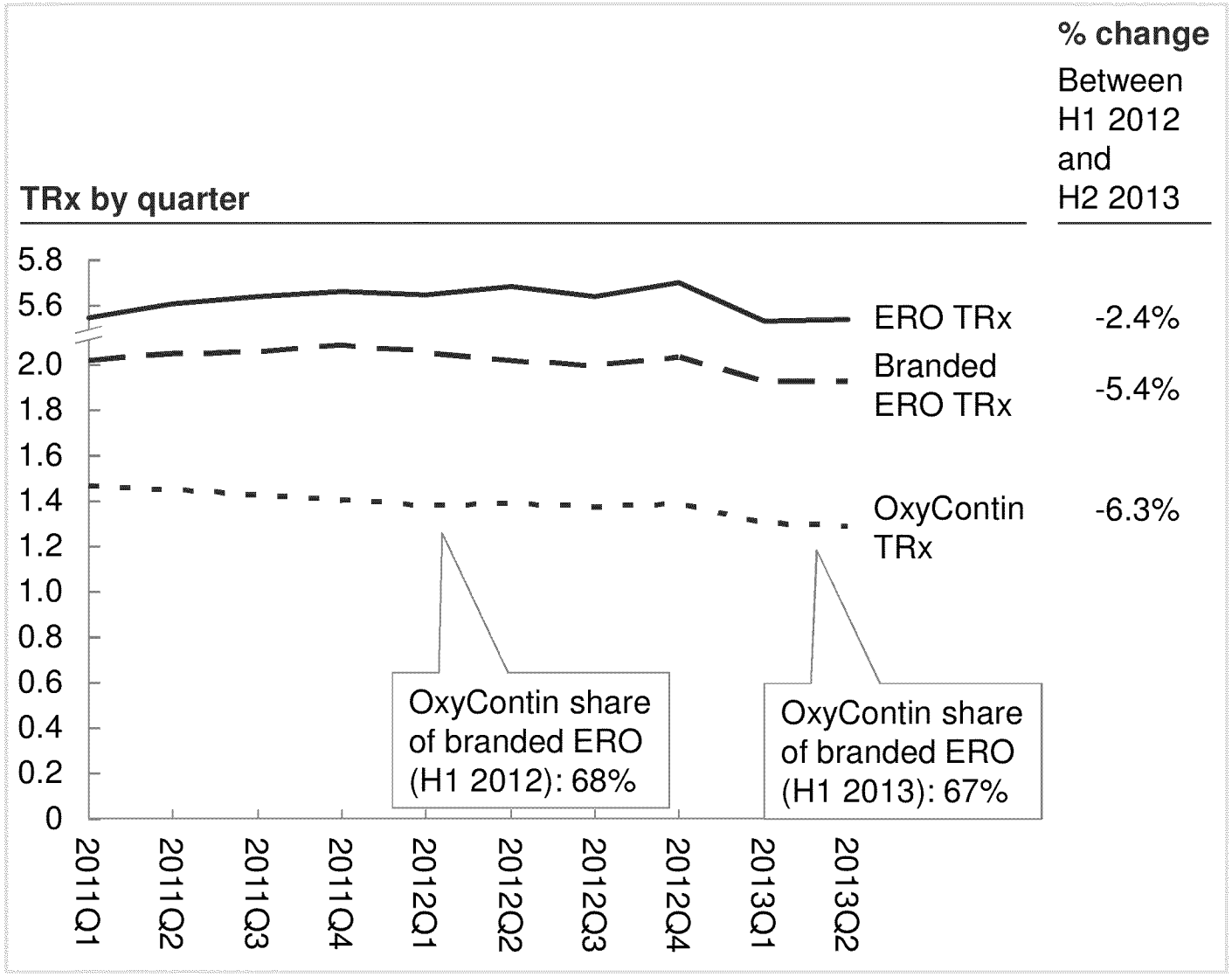
	State	All Other Branded	BUTRANS	OPANA ER	OXYCONTIN	Generic
Highest Share of ERO	RI	3%	2%	2%	43%	50%
	NJ	6%	2%	4%	42%	47%
	CT	6%	2%	4%	41%	47%
	DC	5%	3%	3%	37%	52%
	MN	1%	1%	1%	37%	60%
Avg		4%	2%	3%	40%	51%
Lowest Share of ERO	NV	4%	1%	7%	14%	74%
	MI	4%	1%	3%	16%	77%
	MS	6%	2%	5%	17%	71%
	TX	6%	5%	4%	18%	68%
	ID	5%	3%	2%	18%	72%
Avg		5%	2%	4%	17%	72%
	All 50 States	5%	2%	4%	24%	65%

- In states where OxyContin has low share of ERO market, generics have higher share
- **Among states where OxyContin has low share of ERO:**
  - **NV** and **MS:** Opana share of market is above national average
  - **TX** and **ID:** Butrans share of market is above national average

1 April 2012 to March 2013

SOURCE: IMS

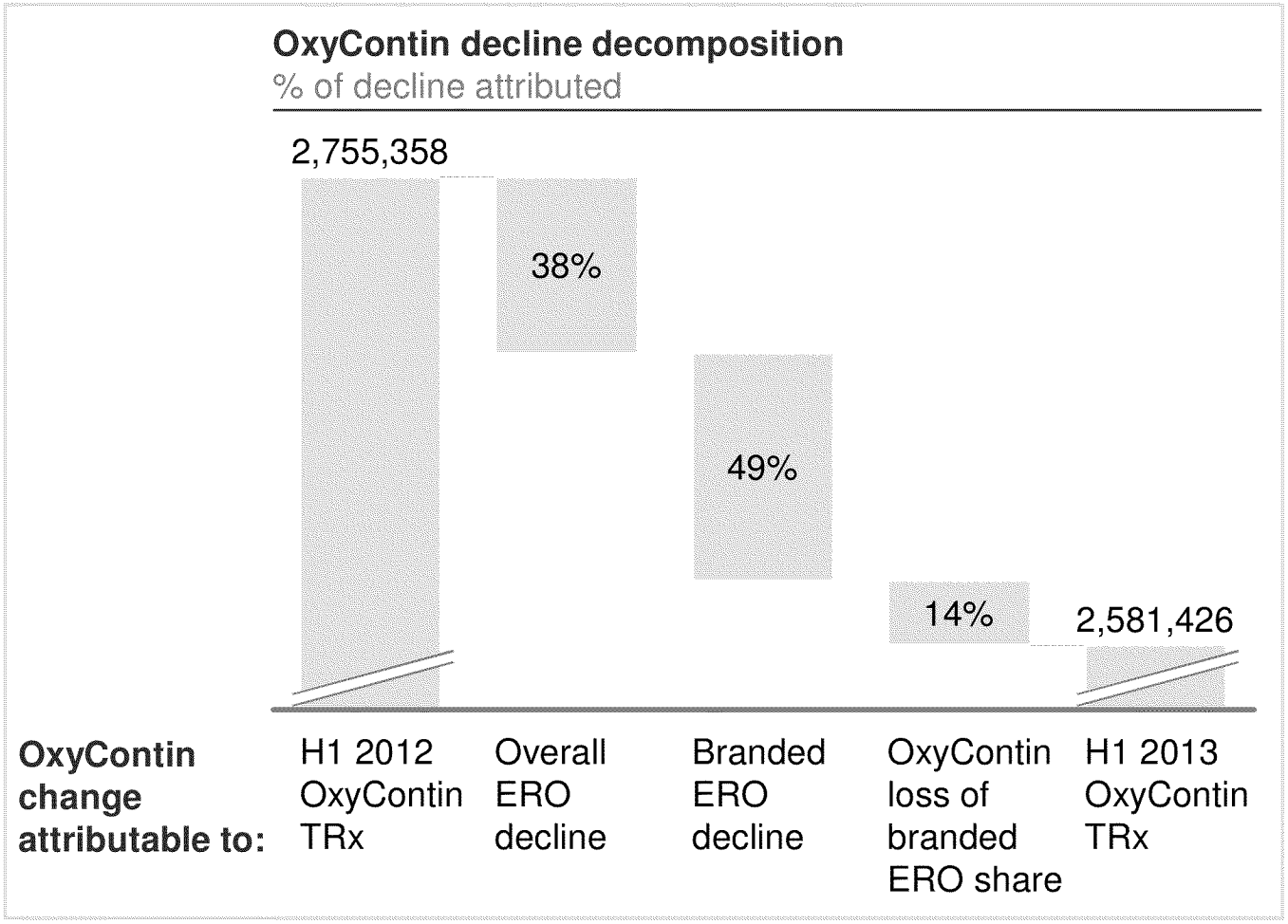
OxyContin's decline has been faster than decline of branded ERO products



OxyContin decline has been faster than overall ERO market and branded ERO market, indicating that OxyContin has lost share of branded EROs

SOURCE: IMS

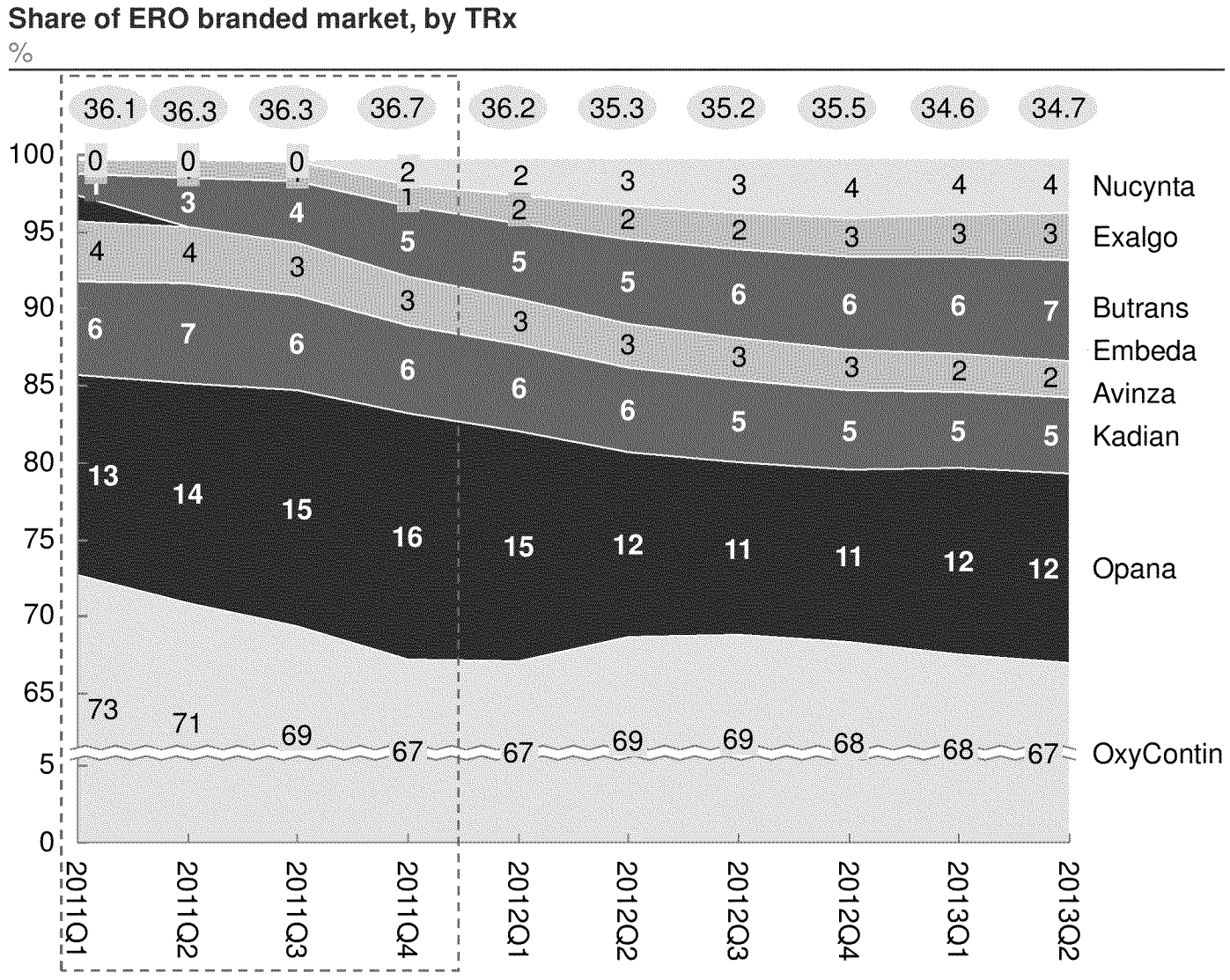
OxyContin's recent decline can largely be attributed to decline in branded ERO market



While OxyContin has lost share of branded ERO, the largest portion of OxyContin's decline can be attributed to overall decline in ERO and branded ERO

SOURCE: IMS

While branded drugs overall lost share in the ERO market, OxyContin also lost share to other branded products



Branded share of ERO market

Period of reformulation introduction and OxyContin generics exiting market

- OxyContin share of branded EROs has fallen from 73% to 67%
- Butrans, Exalgo, and Nucynta have increased share of the branded ERO market

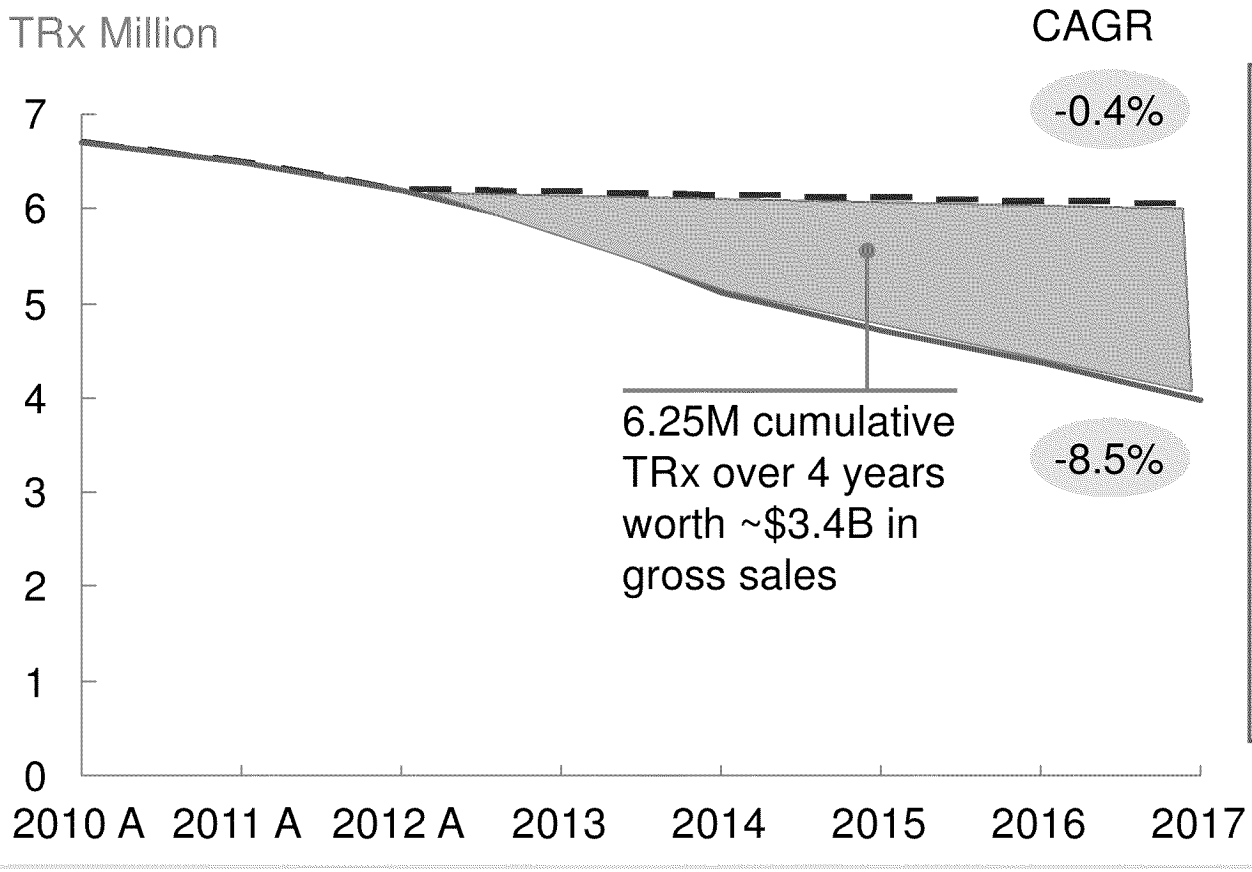
SOURCE: IMS

Maintaining a constant share of the forecasted branded ERO market would be worth ~$3.4B of revenue over 4 years

Forecast @ constant share of branded ERO market

Purdue forecast[1]

Projected OxyContin TRx

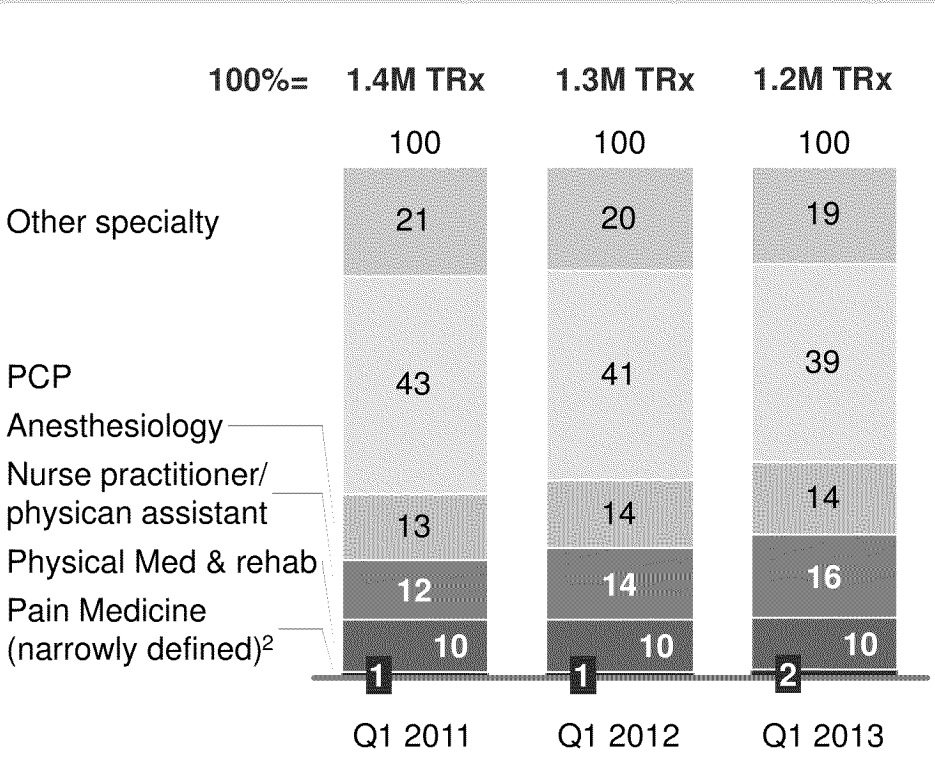


- 2012-17 external forecast growth rates
  - All Opioids: 1.8%
  - EROs: -0.4%
  - Branded EROs: -0.4%
  - OxyContin: -8.5%
- How much can be captured/retained by Oxy? At what cost?

SOURCE: Cowen and Company "Therapeutic Categories Outlook" report, October 2012, Purdue mid-year revised forecast, Purdue mid-year update 2013 forecast; McKinsey analysis

NPs and PAs are growing quickly, while PCPs are one of the fastest declining segments

OxyContin % TRx by prescriber specialty



2011-13 TRx CAGR (%)	Number of prescribers 2012 (% Purdue Reach)	TRx/prescriber (2012)
-11	68,400 (12%)	15
-10	92,724 (31%)	24
-2	4,842 (66%)	153
11	30,206 (25%)	26
-4	4,976 (57%)	111
5	373 (73%)	207

- Nurse practitioner/assistant TRx growing at double-digit rates[1]
- PCPs are one of the fastest declining segments of the market
- Narrowly defined pain specialists account for <2% of TRx

1 NPs can prescribe controlled substances in 41 states
2 Does not include pain medicine as a subspeciality

SOURCE: IMS; NP Central; Team analysis

OxyContin has high share of ERO market among orthopedic specialists, surgeons, and rheumatologists

PRELIMINARY

2011 2012

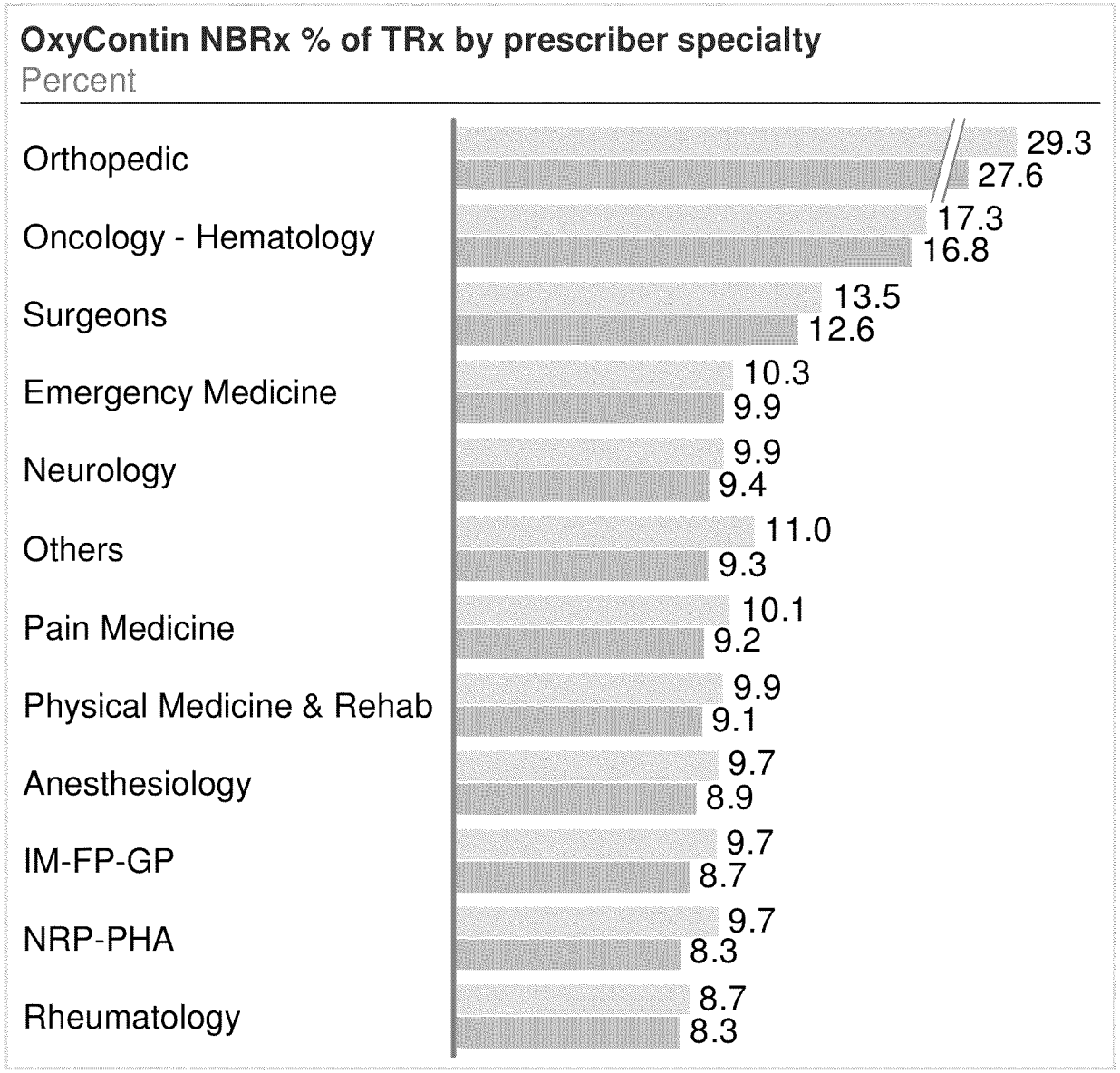
2012 OxyContinTRx[1]	OxyContin's share of ERO market by prescriber specialty	2011	2012
227	Orthopedic	61	58
79	Surgeons	34	32
90	Rheumatology	30	28
105	Oncology – Hematology	28	27
272	All others	26	25
27	Geriatric	25	25
2,132	IM-FP-GP	26	24
1	Neurology	27	24
39	Psychiatry	25	24
141	Neurology	25	24
811	NRP-PHA	24	24
38	Emergency medicine	24	24
548	Physical medicine & rehab	24	23
4	Pallative medicine	23	22
79	Pain medicine	20	20
735	Anesthesiology	20	19

1 E.g., total Rx written by that specialty, in thousands

SOURCE: IMS

There is variability in NBRx share of TRx by specialty

PRELIMINARY



- Orthopedic and Oncology-Hematology, and Surgeons have the highest NBRx % share of overall TRx
- NP/PA segment has a very low NBRx % of TRx
- Average NBRx share of TRx across all specialties was **9.4%** in Q4 2012 – Q1 2013, down from **10.4%** Q4 2011 – Q1 2012

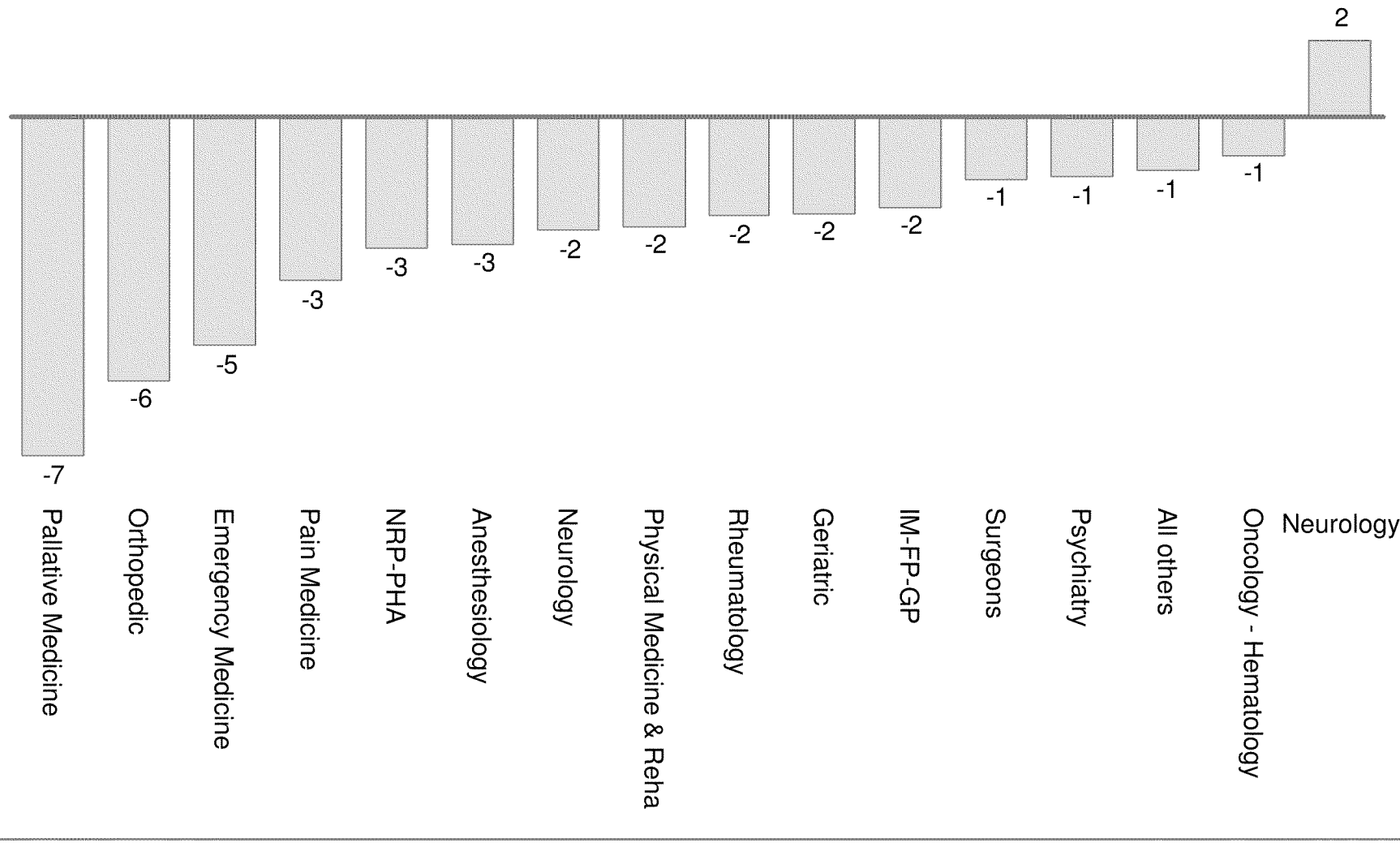
Last Modified 9/13/2013 11:49 AM Eastern Standard Time

Printed 9/13/2013 12:29 PM Eastern Standard Time

SOURCE: IMS

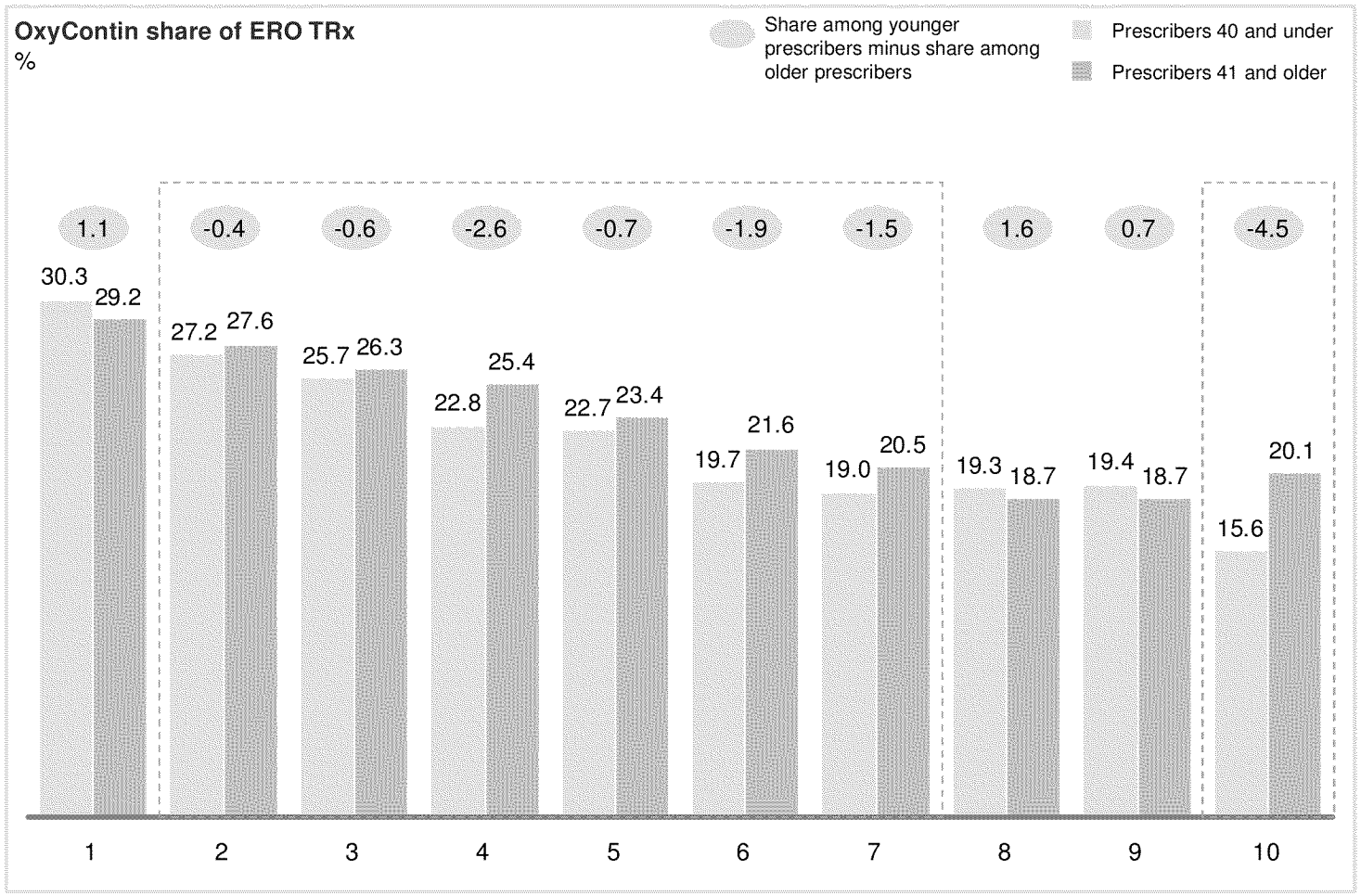
Pallative medicine, orthopedic, and emergency medicine experienced the largest decline in OxyContin tablets/TRx in the last year

% Change in Units/TRx by Specialty, 1H 2012 vs 1H 2013



SOURCE: IMS

OxyContin tends to have a lower share of ERO among younger prescribers, even after controlling for decile



- If OxyContin had same share of ERO among younger prescribers as older prescribers, this would imply ~20k incremental scripts or $6.9mn in net revenue
- However, bigger challenge may be that younger prescribers with different prescribing habits will eventually fill the market

Note:ERO decile and OxyContin share of ERO is based on Jan-Jun 2013 data. AMA and AOA profile information is not comprehensive and does not cover all HCPs who have prescribed for ERO in the last 6 months.

SOURCE: IMS; AMA; AOA; Purdue marketing team; Teamanalysis

Prescribers report writing for fewer pills and lower strengths, and increasingly referring patients to pain specialists

Prescribers are writing for **fewer pills and lower strengths, and increasingly referring patients to pain specialists…**

- "I try to use more long-acting opioids (to reduce pill count) and **try to prescribe fewer pills and lower strengths**… because it's less to worry about… less potential for addiction and diversion"- *Primary care physician in Family Practice*
- "[There's] increased review of physician practice. **Many of my colleagues are hesitant and prescribe less**. I do too. **I just don't want to take up with the task**" – *Family Practitioner*
- "**Made decision about 9 months ago to funnel patients to pain clinics** for patients taking medication for chronic use"- *Primary care physician in larger practice*

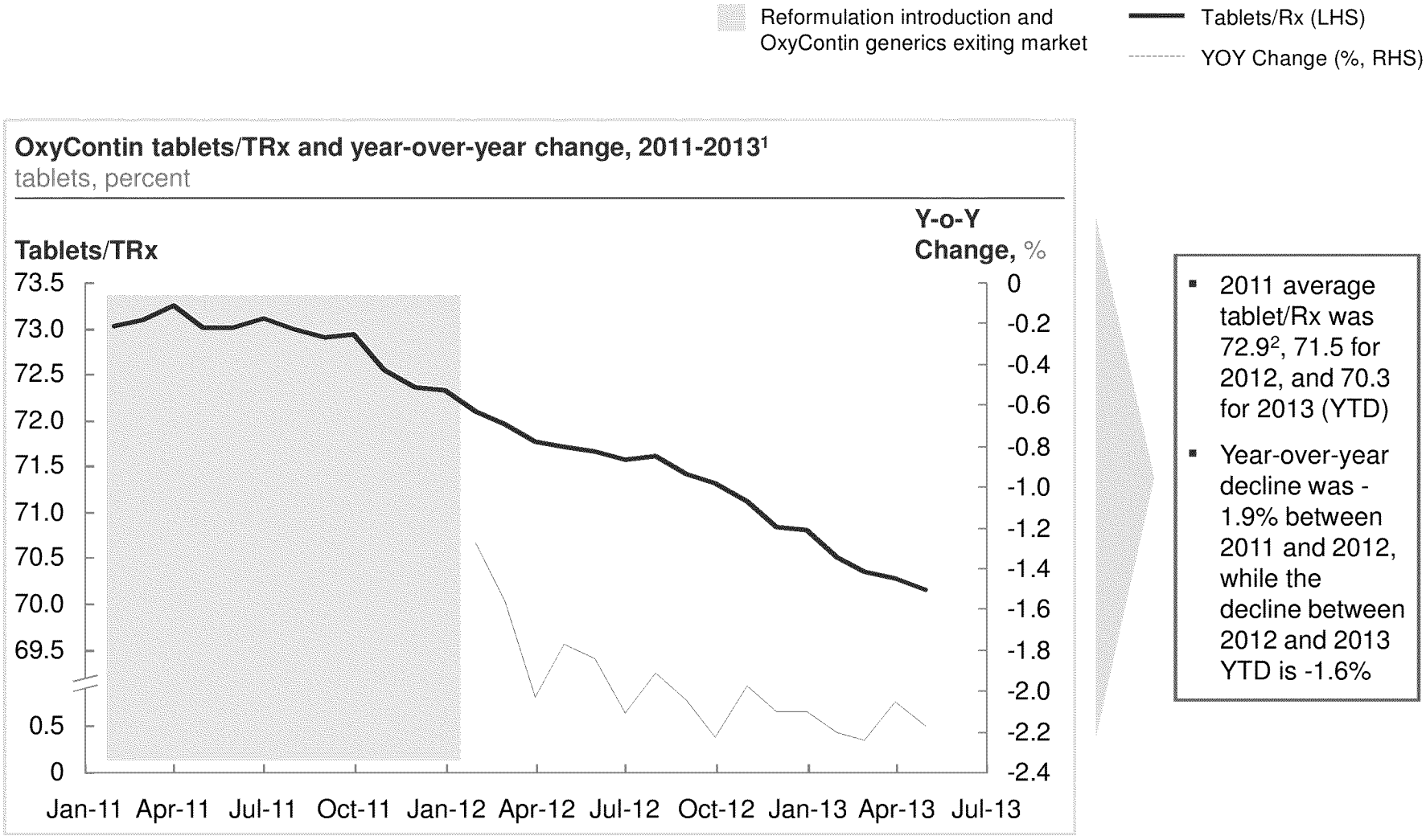
… because managing **opioid patients takes increasing amount of time and resources due to pharmacy issues, managed care access and fear of legal consequences/ DEA**

Pharmacy issues	▪ "I think [pushback from pharmacies] does impact my prescribing behavior… I will think I don't want to prescribe this because I'm going to get pushback … then I will prescribe something that will get less push back… **a different drug and/or lower doses**" – *Primary care physician in small group practice*
Managed care access	▪ "Cost is a main driver of deciding what drug to prescribe to patients…Outpatients are still largely driven by cost and tiers, which makes **prescribing generics and narcotics the easier choice**" – *Primary care physician*
Legal/ DEA concerns	▪ "There seems to be a **growing trend of referrals to pain specialists** today- Doctors **prescribe lower doses of narcotics**, and **even pain specialists move away from opiates**. This is likely driven by increased media attention, high abuse rates, and prescribers fearing regulatory and legal complications" – *Medical Director of major pain center*

Note: Full prescriber interview summaries are available in the appendix

SOURCE: Prescriber interviews

Tablet per prescription has fallen steadily over the past two years



- 2011 average tablet/Rx was 72.9[2], 71.5 for 2012, and 70.3 for 2013 (YTD)
- Year-over-year decline was -1.9% between 2011 and 2012, while the decline between 2012 and 2013 YTD is -1.6%

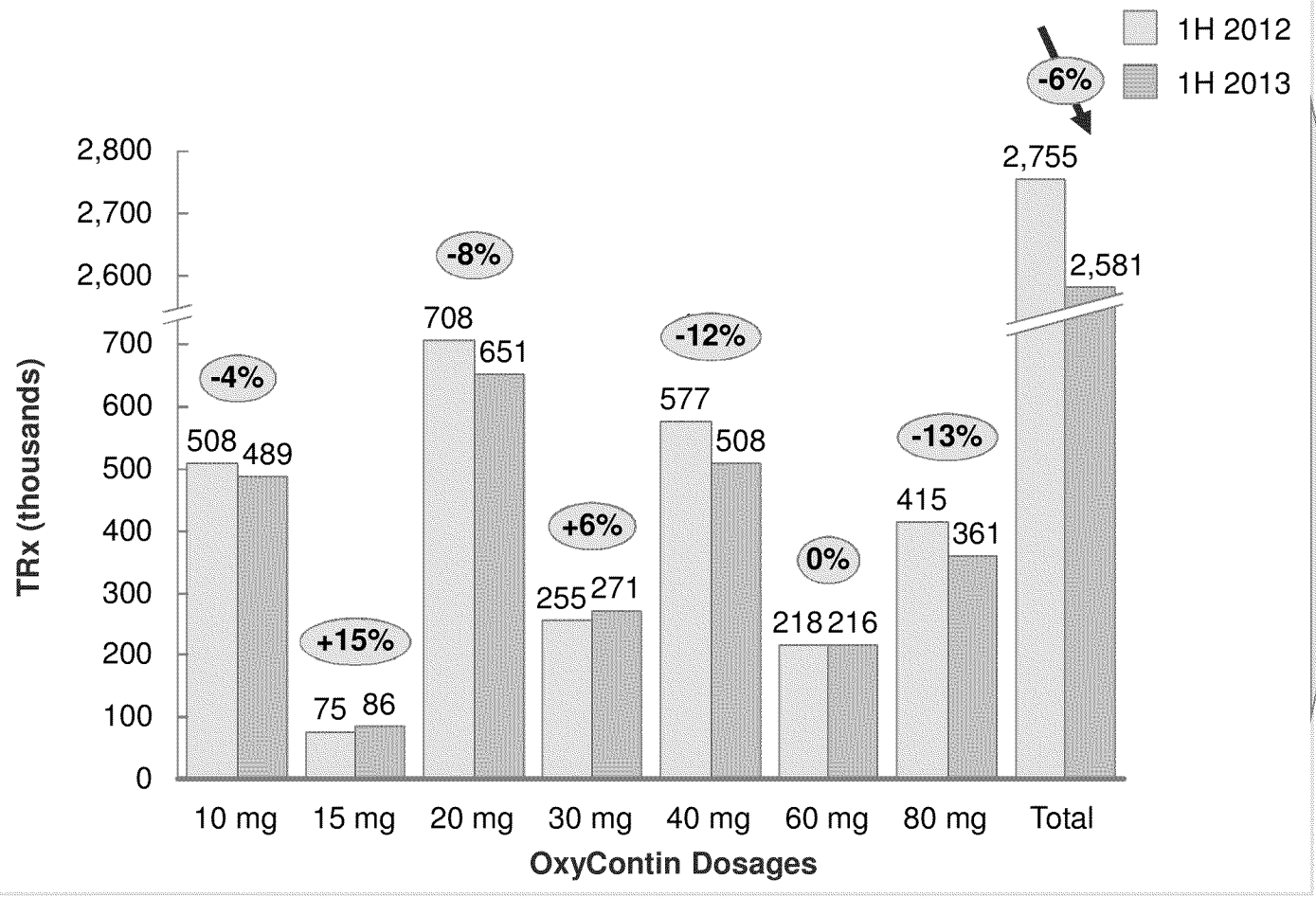
1 Data from Jan 2011 to April 2013

2 January to December calendar year, same applies for 2012 figure

SOURCE: IMS

High dosage prescriptions are falling at a faster rate compared to low dosage prescriptions

OxyContin TRx by dosage, 1H 2012 vs 1H 2013

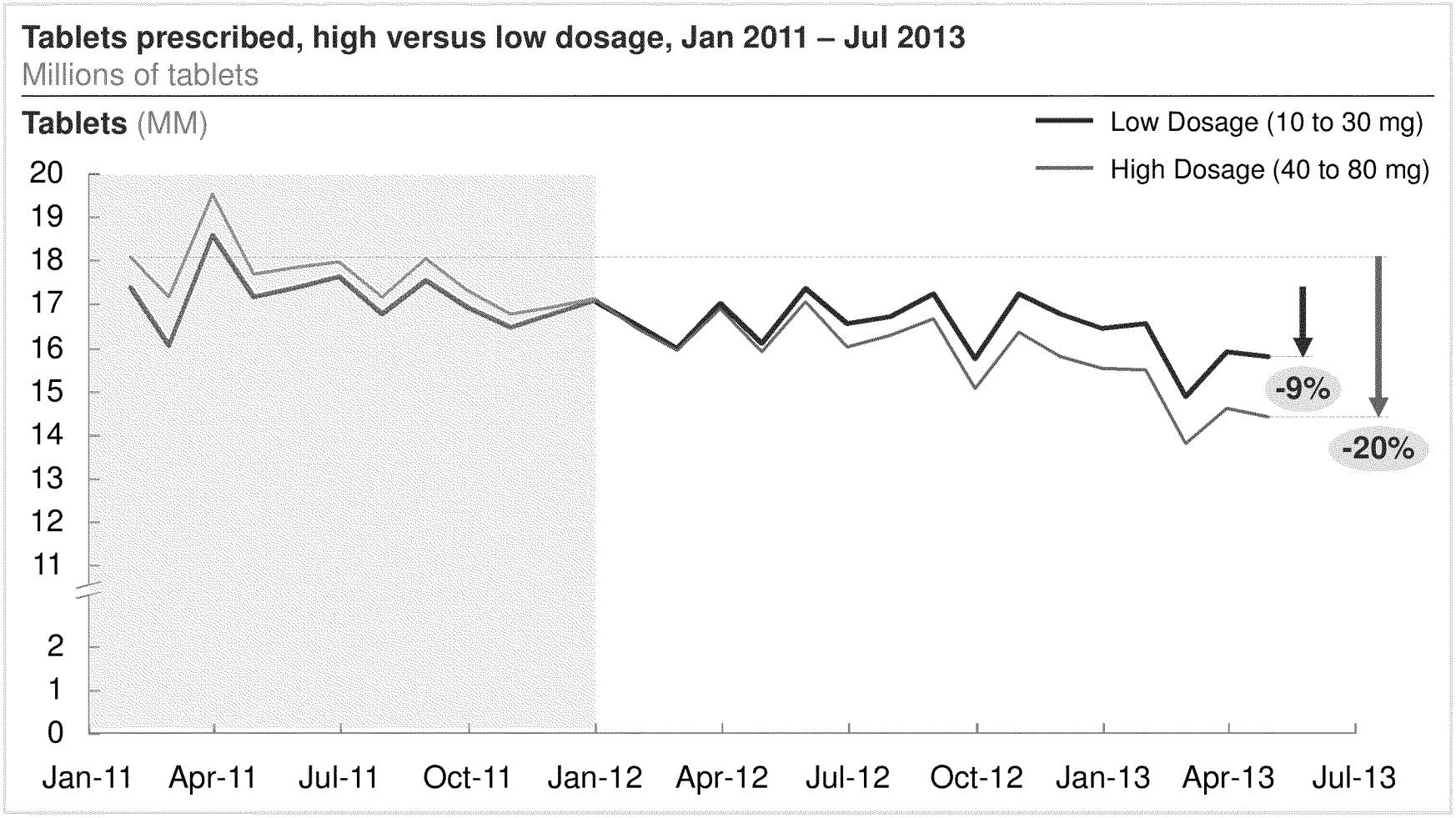


- 80 mg and 40 mg prescriptions are declining most rapidly
- 15 mg and 30 mg prescriptions have the highest rate of growth
- Low dosages (10-30 mgs) declined at 3%, while high dosages (40-80 mgs) declined at 10%

SOURCE: IMS

Tablets with higher dosage are declining at a highe rate compared to low dosage tablets

Reformulation introduction and OxyContin generics exiting market

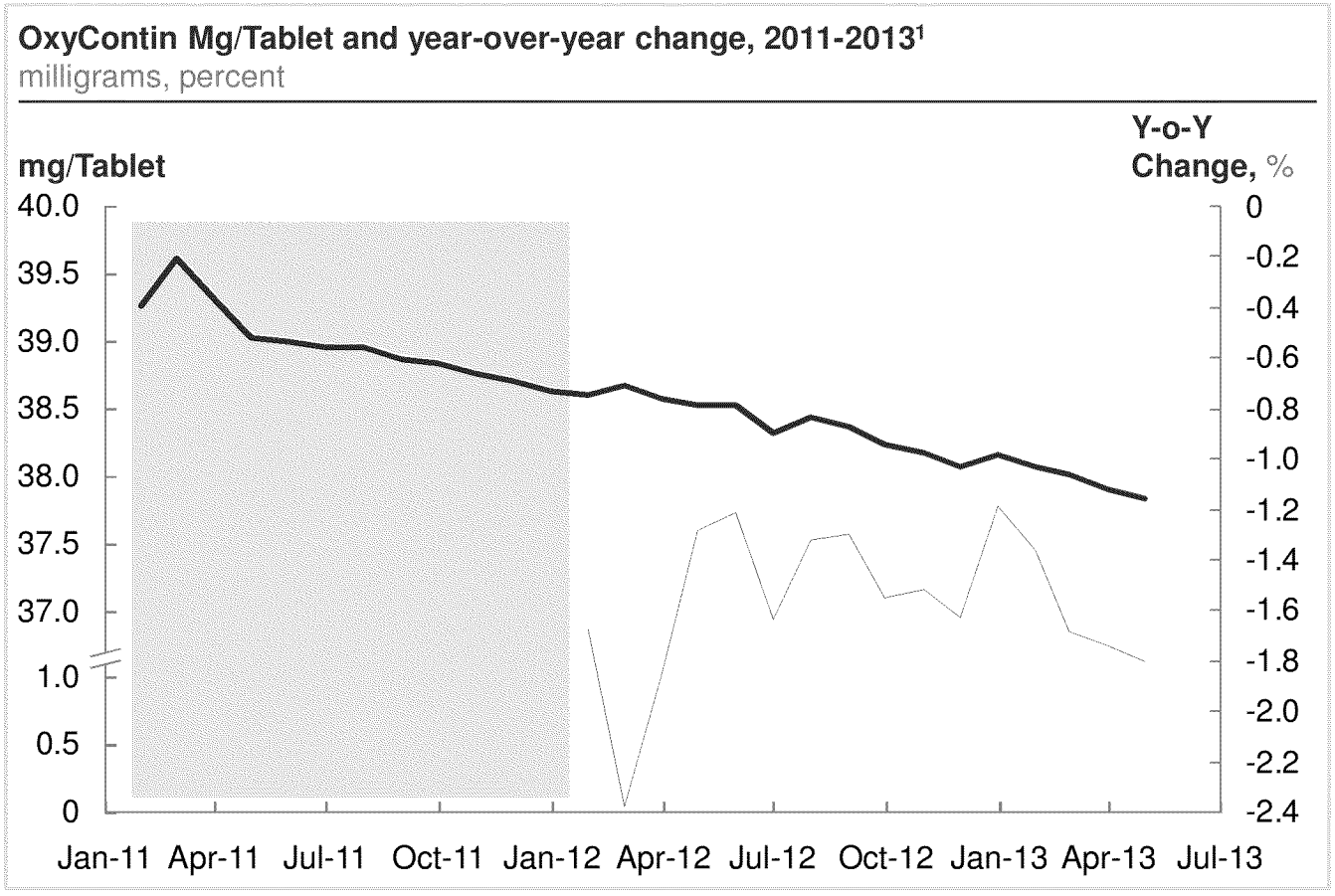


Last Modified 9/13/2013 11:49 AM Eastern Standard Time

Printed 9/13/2013 12:29 PM Eastern Standard Time

SOURCE: IMS

Milligram per tablet has fallen steadily over the past two years, with rate of decline remaining relatively constant in the past year



- Average mg/tablet was 39.0 for 20112, 38.4 for 2012, and 38 for 2013 (YTD)
- Rate of decline of average mg/tablet was -1.6% between 2011 and 2012, and -1.1% between 2012 and 2013 (YTD)

1 Data from Jan 2011 to April 2013

2 January to December calendar year, same apples for 2012 figure

SOURCE: IMS

Tablets per prescription declined in 47 states, even those with a TRx increase

	Tablets (mn)			TRx			Tablets/ TRx		
State	H1 2012	H1 2013	% change	H1 2012	H1 2013	% change	H1 2012	H1 2013	% change
FL	11.7	9.7	-17%	164,196	139,348	-15%	71.2	69.3	-3%
NV	1.6	1.3	-16%	20,779	17,896	-14%	77.5	75.3	-3%
KY	2.8	2.4	-14%	42,523	37,013	-13%	66.1	65.1	-2%
RI	1.2	1.0	-14%	16,149	14,203	-12%	72.1	70.5	-2%
NM	1.5	1.3	-13%	20,278	18,291	-10%	72.3	69.6	-4%
OH	8.5	7.4	-13%	120,769	107,151	-11%	70.4	68.9	-2%
WA	4.8	4.2	-13%	69,738	61,510	-12%	68.5	67.8	-1%
WV	1.0	0.9	-12%	15,529	13,636	-12%	66.7	66.5	0%
TX	7.6	6.7	-12%	98,162	86,656	-12%	77.8	77.2	-1%
UT	1.9	1.7	-12%	26,238	23,763	-9%	72.2	70.0	-3%
CO	4.6	4.0	-12%	70,162	62,989	-10%	65.2	64.2	-2%
OR	3.4	3.0	-12%	48,787	43,368	-11%	70.7	70.3	-1%
AZ	6.9	6.1	-11%	90,549	82,124	-9%	76.0	74.2	-2%
HI	0.7	0.6	-11%	10,614	9,574	-10%	69.0	67.8	-2%
IA	1.3	1.2	-11%	19,919	18,091	-9%	65.9	64.4	-2%
MI	5.2	4.7	-11%	68,249	61,550	-10%	76.5	75.7	-1%
CA	18.5	16.6	-11%	218,838	201,602	-8%	84.6	82.1	-3%
MN	4.0	3.6	-10%	61,036	56,581	-7%	64.9	62.8	-3%
WI	5.2	4.7	-10%	72,739	66,266	-9%	71.5	70.5	-2%
VT	0.4	0.4	-9%	6,842	6,172	-10%	61.0	61.2	0%
IL	3.7	3.4	-9%	53,903	50,036	-7%	69.2	67.8	-2%
KS	2.3	2.1	-9%	34,857	32,296	-7%	66.6	65.5	-2%
ME	1.3	1.2	-8%	18,780	17,757	-5%	68.3	66.3	-3%
MT	0.8	0.8	-8%	12,662	11,770	-7%	64.8	63.9	-1%
ND	0.4	0.3	-8%	6,090	5,612	-8%	59.9	59.8	0%
IN	4.7	4.4	-7%	65,539	63,080	-4%	72.1	69.6	-3%
GA	4.3	4.0	-7%	63,725	59,739	-6%	67.6	67.2	-1%
MO	4.9	4.6	-7%	70,566	67,082	-5%	69.6	68.3	-2%
OK	3.7	3.4	-7%	51,173	48,529	-5%	71.4	70.4	-1%
AL	3.7	3.5	-6%	54,750	52,548	-4%	68.4	66.8	-2%
NE	0.9	0.9	-6%	14,895	14,308	-4%	62.8	61.5	-2%
WY	0.4	0.4	-6%	6,203	5,939	-4%	65.8	64.6	-2%

	Tablets (mn)			TRx			Tablets/ TRx		
State	H1 2012	H1 2013	% change	H1 2012	H1 2013	% change	H1 2012	H1 2013	% change
LA	2.0	1.9	-5%	28,669	27,962	-2%	68.8	66.7	-3%
ID	0.9	0.9	-5%	13,670	12,819	-6%	66.5	67.1	1%
SD	0.6	0.5	-5%	8,395	8,263	-2%	66.9	64.3	-4%
MS	1.1	1.1	-5%	16,288	15,755	-3%	68.3	67.0	-2%
NH	1.5	1.4	-5%	23,275	22,277	-4%	63.7	63.2	-1%
NY	10.9	10.3	-5%	140,208	137,538	-2%	77.7	75.2	-3%
PA	11.3	10.8	-5%	161,796	156,234	-3%	70.1	69.0	-2%
CT	4.1	3.9	-5%	56,894	55,493	-2%	72.3	70.8	-2%
TN	6.1	5.8	-4%	85,140	84,941	0%	71.6	68.7	-4%
NJ	7.9	7.5	-4%	114,460	112,143	-2%	68.7	67.3	-2%
MD	4.2	4.1	-4%	60,452	59,344	-2%	70.2	68.7	-2%
DC	0.4	0.4	-3%	6,767	6,680	-1%	61.3	60.0	-2%
NC	7.5	7.3	-3%	104,418	104,941	1%	72.2	69.7	-3%
VA	4.3	4.1	-3%	60,577	60,926	1%	70.2	67.9	-3%
AR	1.6	1.6	-3%	24,576	23,257	-5%	66.2	68.2	3%
SC	2.9	2.8	-3%	40,849	41,017	0%	70.6	68.5	-3%
AK	0.5	0.5	-2%	6,958	6,903	-1%	70.2	69.6	-1%
MA	4.7	4.7	-1%	67,588	67,549	0%	69.9	69.0	-1%
PR	0.1	0.1	3%	2,934	2,874	-2%	46.0	48.5	6%
DE	0.9	1.0	8%	14,209	15,709	11%	66.5	65.3	-2%
Grand Tot	197.8	181.2	-8%	2,755,391	2,581,457	-6%	71.8	70.2	-2%

Last Modified 9/13/2013 11:49 AM Eastern Standard Time

Printed 9/13/2013 12:29 PM Eastern Standard Time

- **TRx has decreased in 46 of states** while units/TRx has decreased in every state except Idaho, Arkansas, and Puerto Rico
- States with the **highest percentage decrease in TRx are Florida, Nevada, Kentucky, and West Virginia**

SOURCE: IMS

Contents

Findings on messaging and positioning

PRELIMINARY

- **Opioids overall are still viewed as effective and necessary class of painkillers**, though side effects and addiction are concerns

- Key themes from prescriber interviews on abuse deterrents include:
  - Prescriber awareness of abuse deterrence and label change is mixed
  - Opinions on impact/efficacy of abuse deterrence var
  - Most prescribers are concerned about abuse, but attempt to establish measures to protect themselves
  - Concerns remain that technology does not address oral abuse
  - Less informed prescribers ask for additional information and education around abuse deterrent formulations

- Existing market research suggests that **most physicians do not feel that reformulation positively impacts their prescribing behavior**, and that **diversion, abuse and regulatory concerns continue to weigh on prescribers**

Opioids overall are still viewed as effective and necessary class of painkillers, though side effects and addiction are concerns

"Short term use of opiates is highly efficacious, however concerns about safety arise for longer-term use"

- Medical Director of major pain center

"If you remove opioids totally from the picture there's no way to treat a lot of types of pain patients"

– Anesthesiologist and pain specialist

"Opioids are often the preferred choice for long-term treatment, as side effects for NSAIDs can be more severe"

– Primary care physician

"Very good, strong medications, very good relief, only problem is they don't want them to be first line of treatment"

– Medical Director of major pain center

Note: Full prescriber interview summaries are available in the appendix

SOURCE: Prescriber interviews

Awareness of abuse deterrence and impact on prescribing varies amongst prescribers (1/3)

Key themes	Supporting evidence
Prescriber awareness of abuse deterrence and label change is mixed	▪ "I am only vaguely aware of abuse deterrence"- *Primary care practitioner* ▪ "In the end it doesn't really hurt anyone, to the extent that I understand the technology" – *Private practitioner and assistant professor at large medical school* ▪ "I know (abuse deterrent reformulations) exist"- *Family practitioner* ▪ "For some people (abuse deterrence) probably matters, such as first time prescribers and non-specialists, but for specialists, (the label change) probably doesn't make much of a difference because they were already aware of the reformulation (before the label change)- *Anesthesiologist and Head/Neck surgeon* ▪ "I knew already since 2010 about (OxyContin's abuse deterrence), so the new labeling doesn't make big difference" – *Physical Rehabilitation and Pain specialist*
Most prescribers are concerned about abuse, but attempt to establish measures to protect themselves	▪ "(Concern about abuse) hasn't changed that much, because (prescribers in practice) follow preferred and recommended guidelines- *Chief of Interventional Spine and Pain Management at major hospital* ▪ "(Abuse is) main concern in every practice…and we need (abuse monitoring) resources because of the nature of our practice" – *Pain specialist in private practice* ▪ "I'm always worried about (abuse) and definitely see it"- *Internist* ▪ "If I get an inkling, I check immediately and warn the patient" – *Family doctor in family group practice* ▪ "I worry about diversion…same thing for Adderall, valium, etc…"- *Family practitioner in private practice*

SOURCE: McKinsey prescriber interviews

Awareness of abuse deterrence and impact on prescribing varies amongst prescribers (2/3)

Key themes	Supporting evidence
Opinions on impact/efficacy of abuse deterrence vary	▪ "Abuse deterrence is a good thing…I would choose abuse deterrent drugs every time, if patient insurance covers it" – *Anesthesiologist and Pain Management Physician at major hospital* ▪ I had extremely curtailed the prescription for OxyContin, but now that I see the clinical difference, I am much more comfortable writing for it"- *Private practitioner with pain management fellowship* ▪ "It's a win-win for everyone, as long as the price is ok" – *Physician at major hospital* ▪ "(I would) certainly (prescribe abuse deterrent formulations)…you never know who you're dealing with"- *Internist* ▪ "(OxyContin reformulation is a) much better reformulation…but having said that, many pain doctors are still humans and suffer from emotional inhibition bc of all the bad press it had, bc it still has the name OxyContin"- A*nesthesiologist with fellowship in pain management* ▪ "(Abuse deterrent formulations) are good faith effort to show reasonable response to the abuse issues"- *Chief of Interventional Spine management at large hospital* ▪ "These are (nonetheless) control substances, whether they can be abused or not, we have to assume they are abused"- *Family practitioner in private practice*

SOURCE: McKinsey prescriber interviews